Factors affecting the professional functioning of health care workers during the COVID-19 pandemic: A cross-sectional study

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Abstract

Aim: To examine personal and organisational factors related to professional functioning of nurses and physicians during the COVID-19 pandemic.

Background: Exposure to COVID-19-related stressors has been associated with lower self-reported professional functioning among health care workers.

Methods: A cross-sectional study among 115 hospital workers during the COVID-19 pandemic in Israel was designed to explore (a) personal professional functioning, (b) clarity of guidelines, (c) work organisation by the management, and (d) health care workers’ feeling of contribution to a global effort.

Results: A feeling of contribution to a global effort while treating patients with COVID-19 mediated the relationships between work organisation by the management and professional functioning ($\beta = .05, p < .05$). The clarity of guidelines for routine procedures ($\beta = .21, p < .05$) and a feeling of contribution to a global effort ($\beta = .34, p < .01$) positively predicted professional functioning of nurses and physicians during COVID-19 pandemic ($R^2 = .19, p < .01$).

Conclusions: In order to achieve optimal functioning of health care workers in an emergency, managers should provide clear guidelines and promote workers’ feelings of contribution to a global effort.

Implications for Nursing Management: The provision of clear guidelines and protocols is essential for efficient emergency management. Expressing appreciation for health care workers and providing positive feedback may improve professional functioning.

Keywords
COVID-19, guideline clarity, health care workers, professional functioning, work management
1 | INTRODUCTION

On 11 March 2020, the World Health Organisation declared COVID-19 to be a pandemic (WHO, 2020a). Since then, many countries have experienced a series of epidemiologic waves of COVID-19 infections. By the end of March 2022, more than 486 million cases and more than 6.1 million deaths due to COVID-19 had been reported worldwide (Johns Hopkins University & Medicine, 2020). The percentage of health care workers (HCWs) who tested positive for COVID-19 was 51.7%, with 15.1% being hospitalized and 1.5% dead (Gholami et al., 2021). Between January 2020 and May 2021, around 115,500 out of the 135 million HCWs employed in human health and social activities lost their life due to COVID-19 (WHO, 2021). At the beginning of the pandemic, hospitals became hot zones for COVID-19 treatment and transmission, and the volume of health care workers who contracted the disease led to a shortness of available manpower (Brindle & Gawande, 2020). US nursing homes whose staff contracted COVID-19 were more likely to experience shortages of licensed nurses and nurse aides and to be unable to fulfil the requirements of infection control (Xu et al., 2020).

1.1 | Professional functioning of health care workers during the COVID-19 pandemic

Exposure to COVID-19-related stressors was reported to be associated with mental health problems and a decrease in self-reported professional functioning among front-line HCWs in Australia and China (Hendrickson et al., 2020; Kang et al., 2020). Among nursing managers in mental health centres in Israel, the professional functioning focus changed from managerial to more clinical roles (Kagan et al., 2021). However, there is still a gap in knowledge concerning the factors that affect the professional functioning of health care professionals during a pandemic.

In general, functioning is defined as performing or being able to perform one’s regular function (Thefreedictionary.com, 2014). In this study, the personal professional functioning refers to the performance of a variety of professional activities and roles by nurses and physicians during the COVID-19 pandemic.

1.2 | Effect of management on the professional functioning of health care providers

A study in a hospital in China reported that an emergency nursing management approach, leading to effective manpower mobilization, personnel training, supply of personal protective equipment (PPE), and motivating nurses to make a significant contribution, was associated with the provision of effective care to all hospitalized COVID-19 patients (Wu et al., 2020). At the same time, health care managers encountered various challenges during the COVID-19 pandemic that had a serious and direct impact on HCW functioning and quality of care. Among these challenges were severe staff shortages caused by the unwillingness of HCWs to work under conditions with insufficient testing and a lack of personal protective equipment (Grabowski & Mor, 2020), as well as by their suffering from COVID-19 symptoms and being quarantined at home (Barnett & Grabowski, 2020). Other problems included a critical shortage of ICU beds and ventilators (Vincent & Creteur, 2020), a massive influx of patients (Robert et al., 2020), non-optimal shift work scheduling, which affected the physical and psychological well-being of workers (Gao et al., 2020), and a lack of appropriate professional experience among the staff (Bambi et al., 2020).

Management is defined as the act or manner (dictionary.com, 2022b). In this study, the management of health workers during the COVID-19 pandemic refers to handling the staff response to the pandemic, directing health provision by the staff, and to providing staff with the training, protections, rights, and tools necessary to undertake their roles. We found no studies in the literature on management functioning as perceived by their subordinates, and on the relationships between management functioning and the personal professional functioning of health care providers during the COVID-19 pandemic.

1.3 | Effect of clear clinical and administrative guidelines on the professional functioning of health care providers

Guidelines provided by managers are an important factor in the effective and professional functioning of staff. The nursing home staff cited education and training on prevention and control measures as most important strategies for coping with the COVID-19 pandemic (Zhao et al., 2021). Similarly, sufficient education and preparation supported nurses’ confidence in their ability to cope during this period (Nowell et al., 2021). At the same time, health care workers in the UK noted the presence of changing and inconsistent guidelines and limited training during the COVID-19 pandemic (Vindrola-Padros et al., 2020). In addition, nurses caring for patients with COVID-19 in the US described inadequate preparation and lack of information and direction for caring for patients, including how to provide COVID postmortem care (Kellogg et al., 2021). Similarly, the lack of guidelines for COVID-19 management was among the difficulties noted by infectious disease physicians (Park et al., 2020).

Guidelines are usually defined as a guide to, or indication of, a future course of action (dictionary.com, 2022a). In this study, guidelines were defined as clinical recommendations provided to the health care staff by the hospital management concerning the treatment of patients with COVID-19 and their families, risk assessment, infection prevention and control precautions, as well as administrative directives such as the isolation of patients with suspected or confirmed COVID-19. We found no studies that examined the association between the perceived clarity of guidelines and personal professional functioning among nurses and physicians treating COVID-19 patients.
1.4 | Effect of feelings experienced by health care providers on professional functioning

Previous studies demonstrated that positive emotions significantly predict the efficiency of individual performance in the workplace (Sahu & Srivastava, 2017). In contrast, feelings such as burnout, exhaustion, doubts about continuing in the nursing profession, feeling unappreciated, and experiencing injustice and ignorance, led to decreased motivation and performance among nurses during the COVID-19 pandemic (Cengiz et al., 2021).

Feelings are defined as an emotional state or reaction (https://www.merriam-webster.com, 2022). In this study, health care workers’ feelings were defined as the emotional responses of the participants to their working experience during the COVID-19 pandemic. We found no studies that examined the association between feelings experienced by nurses and physicians and their personal professional functioning during the COVID-19 pandemic.

The purpose of the current study was to examine the association between the clarity of guidelines, management functioning, and feelings while treating patients with COVID-19, and the personal professional functioning of nurses and physicians working with confirmed/suspected COVID-19 patients in a tertiary medical centre in Israel. The results of this study could be used to inform guidelines designed to improve the professional functioning of health care workers during a future pandemic.

2 | METHODS

2.1 | Design

This was a cross-sectional study.

2.2 | Setting and participants

In response to the COVID-19 pandemic, the medical centre diverted eight internal medicine wards comprising six internal medicine, one neurology, and one thoracic medicine department, to the treatment of COVID-19. The selection was based on the availability of an intensive care unit for the treatment of mechanically ventilated patients, and of staff trained to treat such patients. During the first two waves of the COVID-19 pandemic in Israel, one ward in the hospital was designated for patients suspected of having COVID-19. Following verification of the COVID-19 diagnosis, patients were transferred from the ward for “suspected” to two COVID-19 dedicated internal division wards that cared for COVID-19-verified patients. This situation lasted 2 to 3 months, after which the functions were transferred to another three wards out of the eight originally selected.

The convenience sample consisted of 115 health care workers (97 nurses and 18 physicians) working in a tertiary medical centre. The sample size was based on methodological and statistical considerations. Specifically, according to the G*Power 3.1.9.2 program for power analysis (Faul et al., 2009), for a medium effect size of .15, an alpha error probability of .05, desired power of .80, and six predictor variables, the minimum sample size required for linear multiple regression is 98 participants.

2.3 | Data collection

The study was approved by the ethics committee of the medical centre where the study took place (approval number 0113-20 WOMC). A research assistant who did not work in any of the internal division wards distributed questionnaires between March and July 2020, a period that included two waves of the COVID-19 pandemic in Israel. The questionnaire was distributed to 185 nurses and 90 physicians who had participated in the 2- to 3-month rotation of care of confirmed and suspected patients with COVID-19. Nurses and physicians who provided informed consent were given a questionnaire to complete. The response rate was 52.4% and 20% for nurses and physicians, respectively. The distributed material also contained information describing the purposes of the study and a guarantee of the respondents’ anonymity and data confidentiality.

2.4 | Tools

The self-administered questionnaire was comprised of five parts that examined: (a) perceived personal professional functioning, (b) clarity of managerial guidelines, (c) respondents’ feelings while treating patients with COVID-19, (d) perception of management functioning, and (e) sociodemographic characteristics. The authors constructed the sections (b), (c), (d), and (e) in accordance with recommendations for questionnaire design (Krosnick, 2018; Rattray & Jones, 2007). A panel of experts comprising five senior nurses (three internal medicine department head nurses, one medical centre administration senior nurse, and another senior nurse who is an expert in hospital functioning during disaster) examined the validity, comprehensibility, and feasibility of the questionnaire. Prior to the distribution of questionnaires, a pilot was conducted among ten nurses working at three different internal wards. Some of the questions were subsequently modified according to the pilot participants’ comments. In order to test the factor structure empirically, an exploratory factor analysis (EFA) was performed on all questionnaires. Kaiser–Meyer–Olkin (KMO), Bartlett’s test of sphericity (BTS) chi-square, and principal component analysis with Promax rotation with an eigenvalue greater than 1 were performed and the results are presented below.

a. Perceived personal professional functioning was examined by a tool used previously by the authors (Kagan et al., 2017; Melnikov et al., 2013) (Appendix S1, Part 2). The original scale consisted of eight statements related to the perception of personal professional functioning of the respondent, with four positively scored and four reverse scored. The answers ranged on a scale from 1 (absolutely
disagree) to 5 (absolutely agree). A higher mean score indicates a higher level of perceived professional functioning. The original factor analysis of four positively and four reversed worded items led to the production of two distinct concepts: good professional functioning and worse professional functioning. According to van Sonderen et al. (2013) and Zhang et al. (2016), the reversed worded items may not introduce the conceptual differences, at the same time, thereby introducing a response bias that poses a threat to the validity of the scale (van Sonderen et al., 2013; Zhang et al., 2016). For this reason, four reversed worded items were excluded from the analysis. The KMO of the four remaining positively scored items was .68, with BTS chi-square 117.37, p < .001, and was judged appropriate. One factor with an eigenvalue of 2.34 explained 58.4% of the variance. The items had a significant factor loading, ranging from .76 to .81. The one factor structure comprised the factor named “Personal professional functioning” (four items). Examples of these items are: “I quickly organised myself to handle any situation on the ward” and “Even after a few hours of work, I am functioning well.” Cronbach’s alpha for the factor “Personal professional functioning” was .76.

b. Clarity of managerial guidelines was examined by a questionnaire constructed by the members of the expert panel (Appendix S1, Part 3). Items were designed to assess the degree of comprehensibility and clarity of management guidelines distributed by the hospital administration during the COVID-19 pandemic in Israel. The scale consisted of 12 statements and respondents were asked to rate their agreement regarding guideline clarity, on a scale of 1 (absolutely unclear) to 5 (absolutely clear). The higher the mean score, the higher the clarity of the organisational guidelines and instructions for the participants. The KMO was .81, BTS chi-square 1044.74, p < .001. Two factors with eigenvalues of 2.02 and 6.45 explained 65.13% of the variance. The items had a significant factor loading, ranging from .67 to .9. The two factor structure comprised Factor 1 (five items), named “Clarity of guidelines for routine treatments,” item example: “Clinical care of patients with COVID-19,” and Factor 2 (seven items), named “Clarity of guidelines for advanced treatments,” item example: “Clinical care of patients with COVID-19 whose medical condition is deteriorating.” Cronbach’s alpha for Factor 1 “Clarity of guidelines for routine treatments” was .80 and for Factor 2 “Clarity of guidelines for advanced treatments” .92, and the value for the whole scale was .91.

c. Management functioning was examined by a 9-item tool used previously by the authors (Melnikov et al., 2019) and adapted for the current study (Appendix S1, Part 4). The items in this tool examined different aspects and outcomes related to work management and organisation of senior managers, as well as leadership and emotional support provided to the staff during the COVID-19 pandemic. The possible answers ranged on a scale from 1 (absolutely disagree) to 5 (absolutely agree). A higher mean score indicates a more positive perception of hospital and ward management functioning. The KMO was .84, BTS chi-square was 596.72, with

| TABLE 1 | Sociodemographic data (n = 115) |
|---------|---------------------------------|
| Variable | Number (%)                      |
| Gender   |                                 |
| Men      | 38 (33.0)                       |
| Women    | 77 (67.0)                       |
| Profession |                                |
| Nurses   | 97 (84.3)                       |
| Physicians | 18 (15.7)                    |
| Full/part-time: nurse number (%) |              |
| Full-time | 87 (75.7)                       |
| Part-time | 23 (20.0)                       |
| Missing  | 5 (4.3)                         |
| Education |                                |
| RN       | 13 (11.3)                       |
| RN BA    | 59 (51.3)                       |
| RN MA    | 20 (17.4)                       |
| MD       | 18 (15.7)                       |
| Other    | 2 (1.7)                         |
| Missing  | 3 (2.6)                         |
| Current place of work |                                |
| Dedicated COVID-19 ward | 26 (22.6)                        |
| Ward with patients with suspected COVID-19 | 41 (35.7)                        |
| Non-COVID-19 ward | 42 (36.5)                       |
| Missing  | 6 (5.2)                         |
| Frequency of the work in dedicated/suspected COVID-19 wards |              |
| Every shift | 48 (41.7)                       |
| Sometimes | 55 (47.8)                       |
| Never entered | 9 (7.8)                            |
| Missing  | 3 (2.6)                         |
|Volunteered to work in dedicated/suspected COVID-19-wards |              |
| Yes      | 24 (20.9)                       |
| No       | 87 (75.7)                       |
| Missing  | 4 (3.5)                         |
| COVID training participation |                                 |
| Yes      | 80 (69.6)                       |
| No       | 31 (27.0)                       |
| Missing  | 4 (3.5)                         |
| Age in years: mean (SD), median, range |        |
| 40.0 (10.2), 40, 23–63 |
| Seniority in years: mean (SD), range |              |
| 16.6 (11.7), 1–44 |

p < .001. Two factors with eigenvalues of 1.85 and 4.76 explained 73.9% of the variance. The items had a significant factor loading, ranging from .72 to .9. The two factor structure was composed of Factor 1, named “Emotional management” (three items) which assessed the management ability to be aware of, and constructively handle, employees’ emotional reactions to the situation.
example: “In my department debriefing meetings take place in order to allow staff members to vent their feelings.” and Factor 2, named “Work organisation” (six items), which assessed factors including the ability of the management to plan, organise, and manage the allocation of responsibilities in the department, including the provision of counselling and leadership, item example: “The division of roles among the staff members during the COVID-19 pandemic is clear.” Cronbach’s alpha for Factor 1 “Emotional management” was .88 and for Factor 2 “Work organisation” .90, and the value for the whole scale was .89.

d. Respondents’ feelings about their work during the COVID-19 pandemic was examined by a 12-item tool constructed by the focus group (Appendix S1, Part 5). The items in this tool examined possible feelings experienced by nurses and physicians while treating patients with COVID-19. The possible answers ranged from 1 (absolutely disagree) to 5 (absolutely agree). A higher mean score indicates more positive feelings. The KMO was .75, BTS chi-square was 472.24, with \( p < .001 \). Two factors with eigenvalues of 2.43 and 3.88 explained 52.5% of the variance. The items had a significant factor loading, ranging from .55 to .89. The two factor structure comprised Factor 1, named “Emotional detachment from patient” (7 items), item example: “Lack of empathy towards the patient,” and Factor 2, named “A feeling of contribution to a global effort” (5 items), item example: “A sense of appreciation by society.” Cronbach’s alpha for Factor 1 “Emotional detachment from patient” was .82 and for Factor 2 “A feeling of contribution to a global effort” was .72, and the value for the whole scale was .74.

e. Demographic characteristics included age, gender, profession, managerial position, and job seniority (Table 1).

2.5 | Statistical analysis

Descriptive statistics and differences between the variables were reported using means (M) and standard deviations (SD) for continuous variables, and percentages for categorical variables. Pearson’s correlation was performed to examine the relationships between study variables. Multivariable linear regression was performed to explore the dependent variable variance. In the current study, Work organisation by the management was conceptualized as the independent variable (IV), A feeling of contribution to a global effort as a mediator, and Personal professional functioning as the dependent variable (DV). A mediator is defined as a variable that accounts, in whole or in part, for the relationship between the IV and DV (Baron & Kenny, 1986). Mediator analysis was performed using the bootstrap statistical method, with “A feeling of contribution to a global effort” entered as mediator to the mediation model (Hayes, 2017; Preacher & Hayes, 2008). The significance of the indirect effect of the IV (Work organisation by the management) on the DV (Personal professional functioning) was examined through the mediator (A feeling of contribution to a global effort).

2.6 | The mediation hypotheses

The effect of work management on personal professional functioning occurs directly and indirectly via a mediator (A feeling of contribution to a global effort):

Hypothesis 1. Better Work organisation by the management (IV) is associated with better Personal professional functioning (DV).

Hypothesis 2. Better Work organisation by the management (IV) is associated with higher values for A feeling of contribution to a global effort (M).

Hypothesis 3. Higher values for A feeling of contribution to a global effort (M) are associated with better Personal professional functioning (DV).

3 | RESULTS

3.1 | Participant characteristics

A total of 115 participants completed the questionnaires: 97 (84.3%) nurses, 77 (67%) women, and 59 (51.3%) with a Bachelor of Science in Nursing (BSN) Degree. Participants’ ages ranged between 23 and 63, with a mean age of 40 (SD = 10.2). The mean seniority at work was 16.6 (SD = 11.7) years, with a range of 1 to 44 years. Eighty (69.6%) participants took part in COVID-19 training provided by the medical centre (Table 1).

3.2 | Descriptive statistics and differences between groups

The mean scores (all scales on the range 1 to 5) of the main study variables for the whole sample were as follows: Personal professional functioning – 3.87 (SD = .81); 1. Clarity of guidelines: 1a. Clarity of guidelines for routine procedures – 4.04 (SD = 1.23), 1b. Clarity of guidelines for advanced procedures – 4.46 (SD = 1.85); 2. Management functioning: 2a. Work organisation – 2.77 (SD = 1.1), 2b. Providing emotional support to the staff – 2.92 (SD = 1.17); 3. Respondents’ feeling while treating patients with COVID-19: 3a. Emotional detachment from the patient – 2.35 (SD = 98), 3b. A feeling of contribution to a global effort – 3.29 (SD = .58).

Analysis of full or part time work found that full time workers rated their personal professional functioning significantly higher, than part-time employees, \( M = 3.96, SD = .81 \) versus \( M = 3.53, SD = .78 \), \((108) = 2.28, p = .03\). People who had participated in the COVID-19 training provided reported significantly higher management functioning (“Work organisation factor”) than those who had not, \( M = 3.02, SD = .97 \) versus \( M = 2.19, SD = 1.04 \), \((103) = 3.85, p < .001\). Compared with participants who worked all their shifts in the COVID-19
ward, those who worked there only intermittently reported a lower clarity of guidelines, “advanced procedures factor,” M = 3.86, SD = 1.19 versus M = 4.95, SD = 2.15, t(107) = 3.16, p = .001. There were no significant differences between participants with respect to other socio-demographic or professional (nurses vs. physicians) variables.

3.3 | Relationships between variables

The results of correlation analyses between main study variable are presented in Table 2. Clarity of guidelines for routine procedures, A feeling of contribution to a global effort, and Work organisation by the management were positively associated with Personal professional functioning. Clarity of guidelines for both routine and advanced procedures were negatively associated with feelings of emotional detachment from patient. Clarity of guidelines for both routine and advanced procedures were positively associated with emotional support provided by the management.

3.4 | Multivariable linear regression analysis

Multivariate linear regression analysis was performed to explore the contribution of main study variables to the explanation of personal professional functioning of nurses and physicians. The results (Table 3) revealed that Clarity of the guidelines for routine procedures and A feeling of contribution to a global effort positively predict Personal professional functioning and explain 19% of the dependent variable variance.

3.5 | Mediation analysis

The results of the mediation model based on 5000 bootstrap analyses indicated that Work organisation (IV) significantly predicted A feeling of contribution to a global effort (M; path a; β = .12, 95% CI .01–.22). A feeling of contribution to a global effort (M) significantly predicted Personal professional functioning (DV; path b; β = .45, 95% CI, .19–.71). Work organisation (IV) together with A feeling of contribution to a global effort (M; a \times b) significantly predicted Personal professional functioning (β = .05, 95% CI .001–.15, Figure 1). No significant correlation was found between Work organisation (IV) and Personal professional functioning (DV; direct effect, path c; β = .13, 95% CI .01–.27). The bootstrapping results revealed a significant total effect (path c; β = .18, 95% CI .04–.33, Table 4).

4 | DISCUSSION

The clarity of guidelines for routine procedures and a feeling of contribution to a global effort positively predicted the personal professional functioning of nurses and physicians. In addition, a feeling of contribution to a global effort served as a mediator of the relationships between work organisation by the management and personal professional functioning.
This last finding is in accordance with previous reports that practical support provided to nurses by the state, society, and hospitals contributed to an increased motivation that enabled nurses to treat COVID-19 patients regardless of other concerns (Jia et al., 2021). Nurses involved in the COVID-19 rescue task reported that support from the hospital leaders and colleagues caused them to feel safer, and increased their courage and motivation to combat the COVID-19 pandemic (Sheng et al., 2020). It seems that in this study, the general engagement of the public, colleagues and hospital managers in fighting the pandemic boosted nurses’ and physicians’ morale, sense of meaning, and a feeling of contribution to a global effort which raised their motivation and improved professional functioning.

Our results also indicated that a feeling of contribution to a global effort was positively associated with personal professional functioning. This observation is in line with the results described by Okediran et al. (2020), where health care workers responding to a call to responsibility, expressed optimism regarding the management of COVID-19 patients, and felt that their contribution made patients feel better (Okediran et al., 2020). Working during the pandemic was reported to promote a sense of camaraderie and feeling of community among UK health professionals caring for people with COVID-19 (Baldwin & George, 2021). Jetly et al. (2020) likened the global effort in dealing with the COVID-19 to a “home front” scenario in which a military mission-focused approach with clear objectives and responsibilities leads health care workers to defend their home (Jetly et al., 2020). Similarly, the association between a feeling of contribution to a global effort and professional functioning seen in the current study may reflect the focus on protecting the “home front.”

In the current study, one of the items of the factor “A feeling of contribution to a global effort” was “the sense of pride.” Committed COVID-19 nurses working with COVID-19 patients expressed satisfaction in knowing that they were able to contribute to the fight with global pandemic and this gave meaning to their work (Lee & Lee, 2020). UK health professionals expressed a similar sense of pride in their ability to fight against the pandemic, and as a result felt better prepared to face such challenges in the future (Baldwin & George, 2021). Tracy and Robins (2007) distinguished two forms of pride: authentic pride, which is typically based on specific accomplishments, and hubristic pride, which is more related to narcissism and shame (Tracy & Robins, 2007). In the current study, the participants were apparently filled with a sense of authentic pride based on the accomplishment of treating patients with COVID-19, which then led to better professional functioning. In this context, Weidman et al. (2016) also demonstrated that authentic pride leads to improved performance (Weidman et al., 2016). Another item of the factor “A feeling of contribution to a global effort” was “A sense of appreciation by the environment,” where a previous study demonstrated that “to be appreciated” and “to receive recognition” were among factors motivating health sector workers (Dieleman et al., 2003). Nurses who cared for COVID-19 patients expressed pleasure in the support they received from social media, and from patients’ goodwill, respect, and gratitude, as well as from a reward and welfare system designed to support and motivate nurses (Sun et al., 2020). Similarly, during a MERS-CoV outbreak, the health care workers reported that positive attitudes expressed by colleagues had the biggest impact in reducing stress, but that they also appreciated the extra financial compensation and recognition provided by the hospital (Khalid et al., 2016). In the current study, it seems that a sense of being appreciated may explain the better professional functioning reported by the respondents. It is therefore important for hospital and health care administrators and nursing leaders to provide health care workers with mental and physical rewards so that positive feedback and reinforcement is given, as well as monetary remuneration and welfare support.

Personal professional functioning was positively associated with the clarity of guidelines. Previous reports have noted that unclear guidelines issued during an emergency situation or crisis may adversely affect the functioning of frontline health care workers. Specifically, ambiguous or otherwise unclear guidelines added to health care workers’ confusion about the protocols of infection prevention and control to be followed when dealing with SARS, H1N1, Middle East respiratory syndrome (MERS), tuberculosis, or seasonal influenza.
Unclear guidelines early in the COVID-19 pandemic are thought to have contributed to lower rates of rehabilitation of COVID-19 survivors after in-hospital invasive mechanical ventilation (Musheyev et al., 2021). The frequently changing guidelines regarding personal protective equipment that were issued in the UK during the COVID-19 pandemic generated confusion and distrust among frontline health care workers (Hoernke et al., 2021). On March 19, 2020, the World Health Organisation issued a guidance called “Coronavirus disease (COVID-19) outbreak: rights, roles, and responsibilities of health workers, including key considerations for occupational safety and health” (WHO, 2020b). Unfortunately, while the guidance included general guidelines, it did not address specific situations. For example, although the responsibility to provide adequate infection prevention and control and personal protection supplies was imposed on employers and managers (WHO, 2020b), in practice, a worldwide lack of personal protective equipment made it impossible to follow the guidelines. This led to a prolonged period of multiple reuse of equipment, in parallel with development of methods for cleaning and disinfecting equipment without knowing its effectiveness, and the use of manually prepared masks that had not passed a quality check (Chua et al., 2020). The uniqueness of the current situation is that since COVID-19 is a new pathogen, guidelines did not exist during the early stages of the pandemic. In similar future scenarios, we would recommend the WHO and national health authorities to publish evidence- and research-based information about the causative agent and to update the defence and care guidelines for health care providers on a regular basis. Furthermore, current practical guidelines updated on the base of existing knowledge and a review of recent studies should be published on a regular schedule for the benefit of health care professionals.

### 5 | STUDY LIMITATIONS

Among the main limitations is the fact that this was a cross-sectional study, and it is therefore impossible to determine causal relationships. In addition, since the sample was a convenience sample and was relatively small, the results may not necessarily be representative. Specifically, the study was performed in a single medical centre, which may limit the generalization of the current results.

### 6 | CONCLUSION

The results of the study provide empirical evidence regarding factors associated with personal professional functioning of nurses and physicians in a tertiary general hospital during the COVID-19 pandemic in Israel. A feeling of contribution to a global effort mediated the relationships between work organisation by the management and personal professional functioning. The clarity of guidelines for routine procedures and a feeling of contribution to a global effort positively predicted the personal professional functioning of nurses and physicians.
7 | IMPLICATIONS FOR NURSING MANAGEMENT

In an emergency, it is essential to provide health care workers with clear guidelines, instructions, and standard operating procedures in order to optimize their professional functioning. It may be useful to adapt similar protocols to those employed in ER triage, where all health care workers are aware of their specific responsibilities. Another recommendation is the appointment of a pandemic coordinator whose responsibility would be to provide information and support to the health care staff. Moreover, positive actions should be taken to maintain health care workers’ feeling of contribution to a global effort, sense of meaning, and morale during an emergency. Specifically, the recommendations for nursing management are to appraise workers of what is happening and provide them with positive feedback and reinforcement. Such workers are likely to maximize their efforts on behalf of their ward and hospital. These actions may help to raise health care staff motivation and improve professional functioning.

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CONFLICT OF INTEREST

The authors declared no conflict of interest.

ETHICS STATEMENT

The study was approved by the Ethics committee of the Wolfson Medical Center, Holon, Israel, where the study took place (Approval number 0113-20 WOMC).

DATA AVAILABILITY STATEMENT

We allow to share the supporting information.

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