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Effects of workplace support on nurses' mental health: Evidence from the COVID-19 pandemic

Emre Yildiz[1]*, Menevse Yildirim[2], Seyda Seren Intepeler[3]

[1]Department of Quality Management, Dokuz Eylul University Hospital, Izmir, Turkey, [2]Department of Nursing Management, Mugla Sıtkı Kocman University, Mugla, Turkey, [3]Department of Nursing Management, Dokuz Eylul University, Nursing Faculty, Izmir, Turkey

ABSTRACT

Introduction: Crises such as natural disasters, epidemics, and famine have occurred throughout human history. Nurses' mental health is negatively affected in times of crisis, such as pandemics. Workplace support needs should be met to protect and improve nurses' mental health. Therefore, the research was conducted to determine the workplace support and mental health status of nurses during crisis periods and to examine the effects of nurses' perceived workplace support on their mental health with the example of the COVID- 19 pandemic.

Methods: A descriptive, cross-sectional research design was used. This study was conducted with nurses working at a university hospital (n = 417). Data were collected using a descriptive characteristics form, the perceived workplace support scale, and the mental health continuum-short form. Data analysis was undertaken using descriptive statistics and a linear regression analysis. In addition, the Strengthening the Reporting of Observational Studies in Epidemiology reporting guideline checklist was used.

Results: The nurses' perceived workplace support score was found to be 110.95 ± 21.65 (min: 33, max: 60). In the evaluation of the mental health status of the participants, the mean scores were determined to 34.31 ± 16.53 (min: 0, max: 70). The nurses' perceived workplace support explained 15% of the variance in their mental health status.

Conclusion: Nurses' perceived workplace support significantly influenced their mental health during crisis periods, highlighting the importance of using available organizational, supervisor, and coworker support resources. Nurses can maintain their mental well-being by increasing awareness of and effectively utilizing these resources. Managers can enhance resilience and overall mental health through structured interventions such as peer support programs and organizational initiatives. Policymakers can promote a resilient nursing workforce by integrating workplace-support strategies into crisis preparedness plans and health policies, ultimately benefiting both nurses and patient care outcomes.

Keywords: Mental health; nurses; nursing; pandemics; workplace

INTRODUCTION

Crisis periods, such as natural disasters, pandemics, and famine, have posed significant problems throughout human history and have presented unique challenges for frontline healthcare professionals. In addition to such emergencies, critical issues, e.g., climate change and population movements, also increase the vulnerability of society and healthcare professionals (1). The COVID-19 pandemic, the biggest crisis experienced in recent times, has directly or indirectly affected all sectors worldwide. The pandemic has resulted in a greater crisis in healthcare institutions due to its unexpected and unforeseen nature and the need to provide healthcare to the entire population (2). Statistical data indicate that even in its 3rd year, the COVID-19 pandemic continues to be an urgent and important public health problem that threatens global health (3). The World Health Organization is still actively observing and assessing the impacts of the COVID-19 pandemic (3).

Nurses, who constitute the largest group of healthcare providers, have been at the forefront of every intervention and have experienced great difficulties during the COVID-19 pandemic (4,5). These difficulties include increased quantitative and emotional work demands, a shortage of medical supplies, especially personal protective equipment, constant exposure to isolated, high-risk, and infected patients, and anxiety and ethical dilemmas about not only their own health but also the potential transmission of the virus to their families (4,6,7). In addition to the sense of helplessness (8), emotional exhaustion and depersonalization, and negative mental health indices of anxiety, depression, and stress (6), nurses still need support the ongoing difficulties management of the process within their workplace (4,5,9). Studies have determined that the psychosocial stress of healthcare workers increased during the COVID-19

*Corresponding author: Emre Yildiz, Department of Quality Management, Dokuz Eylul University Hospital, Izmir, Turkey.
E-mail: emre.pamuk@deu.edu.tr

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FACULTY OF HEALTH STUDIES

process (10), and 50.4% showed symptoms of depression, 44.6% anxiety, 34% insomnia, and 71.5% distress (11) Therefore, concerns are increasing about the effects of the COVID-19 pandemic, especially on the mental health of the healthcare workforce (12). During times of crisis, such as pandemics, which require difficult decisions and involve extreme pressure and stress, nurses may experience adverse effects on their mental health, including emotional, social, and psychological well-being, and they may feel the need to seek assistance to cope with the challenges they face (13,14). As a solution to this call for help, many countries, institutions, and associations have published guidelines, provided videos, and offered support to healthcare professionals and the public to urgently and promptly respond to the mental health needs of individuals affected by the pandemic (12,15-17). Institutional managers have also supported employees by implementing flexible working hours, offering additional nurse scheduling, displaying tolerance, especially in relation to child care, and ensuring communication by sharing daily updates on the ongoing processes (18). Furthermore, it has been of particular importance for healthcare professionals to receive support from the healthcare team in the form of collegiality (17). Ensuring that supervisors meet the support needs of nurses is of utmost importance to enable them to effectively manage the ongoing consequences of the pandemic. Evaluating the adequacy of support and mental health status during crisis periods is a priority in determining the strategies that supervisors will follow. With the assumption that support at the organizational level alone is not sufficient and supervisor and coworker support should also be offered for the mental well-being of employees, this study aimed to determine nurses' perceived workplace support (organizational, supervisor, and coworker support) and mental health status during crisis periods, taking the COVID-19 pandemic as an example, and explore the impacts of nurses' perceived workplace support on their mental health. The research questions identified by the researchers were:

1. What is the level of workplace support (organizational, supervisor, and coworker support) perceived by nurses during the COVID-19 pandemic?
2. What is the mental health status of nurses during the COVID-19 pandemic?
3. How does nurses' perceived workplace support predict their mental health during the COVID-19 pandemic?

The hypotheses identified by the researchers are as follows:

$H1_1$. The level of workplace support (organizational, manager, and coworker support) perceived by nurses during the COVID-19 pandemic is high

$H1_2$. The mental health status of nurses during the COVID-19 pandemic is low

$H1_3$. The perceived workplace support of nurses predicts their mental health during the COVID-19 pandemic.

METHODS

This study was conducted with a descriptive, cross-sectional design and employed the Strengthening the Reporting of Observational Studies in Epidemiology guideline checklist for cross-sectional studies.

The population of the research consisted of nurses working in all units of a university hospital (n = 1039). The objective was to reach the entire population without using any sampling method. During the data collection procedure, the research was conducted with 417 nurses who agreed to participate in the study and completed the data collection forms. Thus, the response rate was 40.13%. To assess the adequacy of the sample size for the research, G Power v. 3.1.9.2 software was used, and the power of the study was calculated at the 95% confidence level and α = 0.05. Based on the number of participants being 417, the power level of the study was determined to be 1.000. Being above 80%, this power level indicated that the sample size was sufficient. Data were collected between April 2021 and June 2021. This 3-month period saw the highest number of cases in the country in 2021, marking the third wave of the pandemic.

Research data were collected using a descriptive characteristics form, perceived workplace support scales, and the Mental Health Continuum-Short Form (MHC-SF).

This form contained 15 questions to determine nurses' age, gender, education level, marital status, number of individuals in their household, duration of employment in the institution, years of profession, working status in pandemic units, work shift, number of patients cared for in a shift before and during the pandemic, history of COVID-19 infection and isolation due to high-risk contact, contemplation of leaving work before and during the pandemic, and perceived general health.

Under the heading "workplace support," the following three scales were utilized: the Perceived Organizational Support Scale, the Supervisor Support Scale, and the Coworker Support Scale.

The Perceived Organizational Support Scale was used to determine nurses' perceptions of the support they received from the institution they worked for. The original scale was developed by Eisenberger et al. (1986) and consists of 36 items. Giray and Sahin (2012) performed the validity and reliability study of the scale and created a new 12-item version of the scale, which was also utilized in the current study (19,20). The scale consists of an equal number of positive and negative statements. Items 2, 6, 7, 8, 9, and 11 contain negative statements and are reverse-scored.

The Supervisor Support Scale was employed to assess the level of supervisor support that nurses perceived in their workplace. This 11-item scale was developed by Giray and Sahin (2012) and contains no reverse-scored items (20).

The Coworker Support Scale consists of nine items compiled from the scales available in the literature by Giray and Şahin (20). Only item 7 is reverse-scored.

All three workplace support scales are based on a five-point Likert type (1 = strongly disagree, 5 = strongly agree), and a higher score from the scales indicates a higher level of perceived support.

Keyes (2002) evaluated mental health using a 42-item scale called the Mental Health Continuum-Long Form, consisting of three subscales measuring subjective well-being, psychological well-being, and social well-being (21). The same researcher later reduced the number of items collected in these subscales to 14 (22), creating the MHC-SF. The MHC-SF is a self-report scale that measures emotional, social, and psychological well-being characteristics

that represent the mental health continuum. In this study, it was used to evaluate the mental health status of nurses. Demirci and Akın (2015) established the Turkish version of the MHC-SF, consisting of 14 items and three subscales, as a valid and reliable instrument (23). Responses are evaluated based on a six-point Likert type (0: Never, 1: Once or twice, 2: About once a week; 3: About 2 or 3 times a week, 4: Almost every day, and 5: Every day). The score that can be obtained from the scale varies between 0 and 70. There are no reverse-scored items on the scale. The total MHC-SF score is derived by adding together the scores of the 14 items on the scale. In addition, it is possible to score the emotional, social, and psychological well-being subscales. A high score on each subscale indicates a high level of well-being in that specific area. Cronbach's alpha reliability coefficients of the scales and subscales used in the research are shown in Table 1.

Permission to use the scales employed in the study was obtained from the researchers who developed the scales. Written approval was obtained from the Non-Interventional Research Ethics Committee of a university (Date: March 15, 2021) and from the management of the hospital where the study was conducted. The purpose of the study was explained to the participants, and their written consent was obtained. The article adhered to research and publication ethics.

The dependent variable of the study was nurses' mental health status, and the independent variable was nurses' perceived workplace support. The data obtained from the research were analyzed using the Statistical Package for the Social Sciences v. 25.0. During the data evaluation process, descriptive statistical methods (number, percentage, mean, standard deviation, minimum, median, and maximum values) were used to express the sociodemographic characteristics of the nurses. Variables predictive of mental health were evaluated using a linear regression analysis. The statistical significance level was accepted as 0.05. In addition, the STROBE reporting guideline checklist was used for cross-sectional studies.

RESULTS

The mean age of the participants was 33.75 ± 7.94 years, 90.6% were women, 56.1% were married, and 85.4% had a bachelor's degree. The participants had an average of 10.58 ± 8.51 years of profession, and 9.29 ± 8.44 years of employment in the institution. Of the participants, 58.5% worked in pandemic units, 77% worked day and night shifts, 30.7% had three people living in the same household, 23.7% had a history of COVID-19 diagnosis, and 37.9% had a history of isolation due to high-risk contact. While 18% of the participants were considering leaving their job before the pandemic, this rate increased to 23.5% with the pandemic. The number of patients cared for in each shift in inpatient clinics was 11.55 ± 3.83 before the pandemic and 8.02 ± 2.81 during the pandemic, indicating a 30.56% decrease. Nearly half (51.8%) of the nurses perceived their health status during the pandemic period to be the same as before the pandemic.

TABLE 1. Cronbach's alpha reliability coefficients of the scales and subscales used in the research

Scale	Scale reliability coefficient (α)	
	Giray and Şahin (2012)	Current study
Perceived workplace support (total)	--	0.95
Perceived organizational support scale	0.93	0.90
Supervisor support scale	0.94	0.96
Coworker support scale	0.90	0.94
Scale	Demirci and Akın (2015)	Current study
Mental Health Continuum Short Form	0.90	0.94
Emotional well-being	0.84	0.82
Social well-being	0.78	0.88
Psychological well-being	0.85	0.94

The data that support the findings of this study are available from the corresponding author, [EY], upon reasonable request

As seen in Table 2, the participants' mean perceived workplace support score was found to be 110.95 ± 21.65 (minimum: 33, maximum: 160). Upon evaluation of the three scales under the heading of workplace support, it was determined that the mean score on the Perceived Organizational Support Scale was 36.77 ± 8.94 (minimum: 12, maximum: 60), the mean score on the Supervisor Support Scale was 37.02 ± 10.08 (minimum: 10, maximum: 50), and the mean score on the Coworker Support Scale was 33.70 ± 7.30 (minimum: 9, maximum: 45).

In the evaluation of the mental health status of the participants, the mean scores were determined to 34.31 ± 16.53 (minimum: 0, maximum: 70) for the total MHC-SF, 5.67 ± 3.96 (minimum: 0, maximum: 15) for the emotional well-being subscale, 11.32 ± 6.43 (minimum: 0, maximum: 25) for the social well-being subscale, and 17.31 ± 8.23 (minimum: 0, maximum: 30) for the psychological well-being subscale (Table 2).

The predictive effect of nurses' perceived workplace support on their mental health status was evaluated using a simple regression analysis. Upon examining the significance level associated with the F value, it was observed that the established model was statistically significant ($F = 75.573$; $p < 0.05$). According to the regression model, perceived workplace support had a statistically significant effect on mental health status ($p < 0.05$). However, the model explained only 15% of the variance in mental health, indicating that other factors also contribute to nurses' mental health outcomes. Specifically, a one-unit increase in the total perceived workplace support score was associated with a 0.3-point increase in participants' MHC-SF score (Table 3). This finding highlights the importance of workplace support, while also acknowledging that additional variables – such as resilience, coping strategies, and general health status – may further influence mental health.

DISCUSSION

The effects of the COVID-19 pandemic, the biggest crisis of recent times, on nurses' mental health status continue to be a source of concern. During times of crisis, the priority is to determine the mental health status and workplace support of nurses, who consistently face challenging situations on the front lines. It is crucial for supervisors to understand which are important components of workplace support on nurses' mental health to formulate effective strategies.

TABLE 2. Participants' mean scores on perceived workplace support and mental health scales

Scale	Number of items	$\bar{X}$ ±SD*	Median	Min	Max
Perceived workplace support (total)	32	110.95±21.65	110.00	33.00	160.00
Perceived organizational support scale	12	36.77±8.94	37.00	12.00	60.00
Supervisor support scale	11	37.02±10.08	38.00	10.00	50.00
Coworker support scale	9	33.70±7.30	33.00	9.00	45.00
Mental Health Continuum Short Form	14	34.31±16.53	35.00	0.00	70.00
Emotional well-being	3	5.67±3.96	5.00	0.00	15.00
Social well-being	5	11.32±6.43	11.00	0.00	25.00
Psychological well-being	6	17.31±8.23	18.00	0.00	30.00

* $\bar{X}$ ±SD=mean±standard deviation

TABLE 3. Predictive effect of perceived workplace support on mental health status

Independent variable	B	SE*	β	t	p	95% CI#	
						Lower bound	Upper bound
Constant	1.074	3.895		0.276	0.783	−6.582	8.731
Workplace support	0.300	0.034	0.392	8.693	<0,001	0.232	0.367

*SE: Standard error, #CI: Confidence interval. R=0.154, adjusted R^2=0.152, F=75.573, Durbin–Watson statistic=1.846

In this study, the nurses' perceived workplace support was determined to be above average. Perceived workplace support consists of perceived organizational support, supervisor support, and coworker support. Among these three parameters that constitute perceived workplace support, the highest perceived level was observed in coworker support. This was followed by supervisor support and perceived organizational support. The establishment of many new COVID-19 patient care services during the pandemic period may have led to a high perception of coworker support among nurses. Nurses were required to rotate between various units due to fluctuating patient density, and they provided mutual support for each other in their work environments (24). During this major crisis, employees who provide healthcare services collaboratively 24/7 experienced all the difficulties together, produced solutions, and had to collectively manage the process. After the support of coworkers, the highest level of workplace support was observed in relation to perceived organizational support. This was attributed to the support provided by national and international institutions, as well as institutional managers and nurse preceptors, to employees during the crisis (17,18). The role of supervisors has become more important during the COVID-19 pandemic. The implementation of evidence-based recommendations by supervisors in clinics during the pandemic, as well as the sharing of professional organizations' work with nurses through senior management, may indicate how nurses view these initiatives and the level of support they receive. In a study conducted by Foye et al. (2021), 70% of the nurses stated that their main sources of support during the COVID-19 crisis were supervisors and their recommendations (25,26).

In this study, although perceived organizational support was high, the perceived lower level of support from supervisors and coworkers was attributed to the organizational structure and culture of the healthcare facility (27). It was hypothesized that dissatisfaction with the work environment due to increased working hours, intense workload, limited resources, problems obtaining personal protective equipment, and perceived injustice may have also influenced participants' perceived organizational support.

To the best of our knowledge, there is only one study in the literature measuring nurses' perceived workplace support using the same measurement tool as in our study. In that study, Terzi and Polat (2020) reported that the perceived support levels of nurses showed similar rankings. However, the perceived organizational support level of the nurses included in our study was higher than previously reported (28). This may be related to our data being collected during the COVID-19 pandemic crisis, while previous study collected their data before the pandemic. In times of crisis characterized by chaotic conditions and depleted resources, employees' positive perceptions of organizational support are very important (28,29). While there are studies in the literature that evaluate nurses' perceived organizational support with similar findings (27,30).

In this study, it was determined that the mental health levels of nurses were at a moderate level. In addition, the psychological well-being of the nurses was at the highest level, while their emotional well-being was at the lowest level. Mental well-being emphasizes positive functioning in individual and social life (30). In times of mass crises, such as pandemics, the most at-risk group is healthcare workers. While fighting against the pandemic, they not only face a heavy virus load but also work intensively, under high risk, without sufficient rest, and in an unsafe environment with limited resource availability, resulting in serious psychological repercussions (31). Supporting this, in a study, it was determined that nurses' mental health problems significantly increased during the COVID-19 pandemic compared to the pre-pandemic period (32). In another study, Nagel and Nilsson (2022) compared the mental health status of nurses before and during the pandemic and reported that the percentage of nurses diagnosed with mental fatigue or stress tripled and the percentage of those diagnosed with depression or anxiety doubled during the pandemic (33). These factors can also explain the moderate well-being level of the nurses during the pandemic, as observed in the current study.

This study revealed that nurses' perceived workplace support explained 15% of the variance in their mental health.

In a study conducted by Chatzittofis et al. (2021), it was determined that perceived organizational support explained 3.5-4.4% of the mental state variance among healthcare professionals (34). Organizational support, supervisor support, and coworker support refer to interpersonal connections that exist inside the workplace. Negative perceptions of the work environment negatively impact nurses' mental health (35). While our findings explain some of the factors that influence nurses' mental health, the significant contribution of other factors should not be overlooked. In the literature, mental health has been examined using variables such as post-traumatic stress disorder, anxiety, depression, and emotional exhaustion. Havaei et al. (2021) emphasized that work-life balance, psychological protection of employees, and workload management were the most important determinants of depression, anxiety, post-traumatic stress disorder, and emotional exhaustion (36). By acknowledging that challenges associated with these variables arose during the pandemic, we can better comprehend their adverse impact on mental health. Similarly, to determine strategies for mental health in future crises, an emphasis was placed on the provision of workplace support that would create a mentally healthy work environment, management that supported employees, and an organizational culture that normalized mental health support (37). Another study showed that fear of COVID-19 and stress were predictive of depression, and resilience played a mediating role (38). In a different study, it was stated that endurance, coping skills, and sleep quality explained 44% of the variance in anxiety levels (39). As evidenced in the literature discussed above, there may be various factors that predict the mental health of nurses. The results of the current research indicate that to protect and maintain the mental health of healthcare professionals in future crises, there is a need for more supportive organizational interventions rather than solely focusing on individuals.

Limitations

The survey began during the peak of the COVID-19 pandemic in Türkiye in 2021. The assessment process allowed us to more clearly identify the resources nurses, who had survived the first two waves, had to maintain and improve their mental health during the pandemic. The study has several limitations, including its cross-sectional design, which captures participants' mental health at a single point in time and may not reflect changes over time or the status of nurses who did not participate, as well as the low participation rate (40.13%) and the fact that the sample was drawn from a single university hospital, limiting the generalizability of the findings to the broader nursing population. Furthermore, this study did not control for potential confounding variables such as family support, resilience, and pre-existing mental health problems. These factors should also be considered as a limitation.

CONCLUSION

Nurses' perceived workplace support, encompassing organizational, supervisor, and coworker support, significantly influences their mental health, particularly during crisis periods such as the COVID-19 pandemic. Implementing structured interventions, including peer support programs, resilience-building workshops, and accessible psychological counseling services, can enhance social and emotional well-being and help maintain a resilient nursing workforce (40). Integrating these measures into institutional policies and crisis-preparedness frameworks ensures that both routine and emergency healthcare environments support nurses effectively. Despite the significant effect observed, the regression model explained only 15% of the variance in mental health, highlighting the need to investigate additional determinants, such as coping strategies, sleep quality, resilience, educational background, and overall health status (6). Future longitudinal and multivariate studies are recommended to inform evidence-based interventions and policies that optimize workplace support and protect healthcare workers' mental health. These strategies can guide policymakers, hospital administrators, and nursing managers in implementing structured, sustainable initiatives that safeguard and enhance nurses' well-being during and beyond crisis periods.

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DECLARATION OF INTERESTS

Authors declare no conflict of interests.

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