Burnout Among Public Health Workers During the COVID-19 Pandemic in South Korea

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Objective: This study aimed to investigate the prevalence of burnout experiences and factors associated with burnout among Korean health care workers during the coronavirus disease 2019 (COVID-19) pandemic. **Methods:** A nationwide survey was conducted in 2021, and the sample comprised 1000 public health center employees. Multivariate linear regression was used to examine the factors associated with burnout among the participants during the COVID-19 pandemic. Perceived factors contributing to burnout were also analyzed using an open-ended question. **Results:** Personal (e.g., age, gender, and self-rated health) and work-related factors (e.g., type of job tasks and COVID-19–related discrimination experience) affected burnout among health care workers. However, organizational support, including emotional support and sufficient financial compensation, was associated with lower burnout. **Conclusions:** Ensuring sufficient support and rewards for health care workers is essential to guaranteeing their well-being during the current public health crisis.

Keywords: health care workers, burnout, COVID-19, pandemic, mental well-being

LEARNING OUTCOMES

After reading this article, readers will be able to:

- Describe the prevalence of and factors associated with burnout experiences during the COVID-19 pandemic among health care workers in Korea
- Identify the relevance of individual and work-related factors for burnout experiences during the COVID-19 pandemic among health care workers in Korea
- Understand the importance of support measures for health care workers during the COVID-19 pandemic to ensure a high-quality work environment for health care workers and reduce their burnout

The coronavirus disease 2019 (COVID-19) pandemic poses a threat to the health and social stability of individuals worldwide. The pandemic has rendered health care workers who are combating unprecedented crises in various settings vulnerable. Health care workers are exposed to stressful working conditions and risk of infection, which leads to negative psychological outcomes, including burnout.[1,2]

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Burnout is a syndrome caused by chronic workplace stress, characterized by feelings of exhaustion, depersonalization, and a reduced sense of personal accomplishment.[3] Burnout results in a wide range of adverse physical and mental health outcomes, including cardiovascular disorders, musculoskeletal pain, gastrointestinal issues, anxiety, sleep disturbance, and depression.[4,5] Furthermore, burnout among health care workers is associated with lower quality of health care services and poor patient safety.[6] Given the high levels of workload and uncertainty during the pandemic, it is important to understand the burnout experiences of health care workers to identify ways to support them and deliver high-quality care services.

In South Korea, health care workers at public health centers have played a crucial role in the COVID-19 response since the early stages of the pandemic. Under the Regional Public Health Act, a public health center can be established in each city or district to promote the health of local residents and prevent disease.[7] There are 3571 public health centers and suborganizations in Korea, including 256 public health centers in city areas, 1337 branches of public health centers in towns, 1901 public health posts in rural areas, and 77 health life support centers.[8] Employees in public health centers include health professionals (e.g., medical doctors, nurses, nursing assistants, and pharmacists) and administrative staff. Public health centers provide preventive health care services for the community, particularly those from low socioeconomic backgrounds.

During the COVID-19 pandemic, the Korean government implemented massive testing, contact tracing, and social distancing instead of a lockdown.[9] Based on experience with Middle East respiratory syndrome in 2015, nationwide public health centers cooperated with government and local hospitals. The Korean government asked individuals with suspicious symptoms to report to nearby public health centers. Subsequently, patients were classified based on the severity of symptoms and were transferred to hospitals or living and treatment support centers (for mild cases) with the cooperation of local governments.[10] Health care workers of public health centers have been engaged in various COVID-19 response jobs, including epidemiological investigation, testing, contact tracing, patient monitoring, and public campaigns. These health care workers experience high levels of stress, civil complaints, and verbal violence without sufficient support.[11] Despite the relatively successful control of COVID-19 in Korea, the number of public health workers leaving their jobs or taking long-term leave has increased since the start of the pandemic in 2020.[12]

However, little is known about burnout among health care workers who proactively provide services at public health centers in Korea during the COVID-19 pandemic. To overcome the public health crisis successfully, it is necessary to address the burnout of health care workers, which can negatively impact their well-being. Thus, our study aimed to investigate the prevalence of COVID-19–related burnout experiences among Korean health care workers at public health centers and factors associated with these experiences.

METHODS

Data and Participants

A web-based link to an online survey was disseminated to health care workers from 253 public health centers in Korea with the cooperation of the Ministry of Health and Welfare of South Korea.

The survey was conducted between March and April 2021. After reading the instructions, the study participants completed online questionnaires via smartphones or computers. The survey was anonymous, and the respondents voluntarily participated in the survey. The target population of 1000 public health workers comprised 3% of the total 30,000 health care workers from 253 public health centers nationwide. The final sample included 1000 employees 19 years or older from public health centers. Written informed consent was obtained from all the participants. Participants' responses were used in the analyses. This study was approved by the ethics committee of the Korea Institute for Health and Social Affairs (IRB no. 2020-104).

Measures

The survey included questionnaires on the participants' personal and work-related characteristics, their roles in the COVID-19 response, and their opinions and feelings related to COVID-19. The outcome of the study was the burnout experience of the participants during the COVID-19 pandemic. We used a self-report questionnaire developed by the Korea Occupational Safety and Health Agency for the general public.[13] The questions were modified for use in the context of COVID-19 response jobs. The questionnaire comprised 17 items about the participants' feelings and experiences related to the COVID-19 response job at public health centers. Responses were recorded on a four-point Likert scale ranging from "strongly disagree" to "strongly agree." The responses to the 17 items were reverse-coded and summed, with the total score ranging from 17 (lowest) to 68 (highest); a higher score indicated higher burnout among the participants. In this study, the measure had a Cronbach's alpha value of 0.96. We reported continuous scores because the scale had not been validated within the context of COVID-19, and the cutoff score was not identified.

Regarding workplace characteristics, six different jobs related to COVID-19 control were included: work experience at a COVID-19 screening clinic, visiting COVID-19 patients (in-person or by phone), visiting high-risk groups (in-person or by phone), COVID-19 epidemiological investigation, disease prevention and environmental management, and COVID-19 vaccination jobs. For support for health care workers, questions about whether the participants received adequate training for COVID-19–related tasks, emotional support, protective equipment, and financial compensation for overtime and risk allowance were used. All these variables were based on four-point Likert scales ("strongly agree," "mostly agree," "mostly disagree," and "strongly disagree"). The responses were dichotomized as "yes" ("strongly agree" and "mostly agree") or "no" ("mostly disagree" and "strongly disagree") for the analyses.

A set of sociodemographic variables was included in the analyses. Age was also included as a continuous variable. Dichotomous variables included sex (male or female), marital status (married or unmarried [single, divorced, and others]), region where they worked (Seoul and Gyeonggi Province or other), and type of employment (temporary or permanent). During the study period, more than half of the confirmed cases in South Korea were in Seoul, the capital city, and Gyeonggi Province, the area surrounding Seoul. Therefore, these two areas were compared with other areas. Regarding type of employment, permanent workers were mostly public officials, whereas various types of temporary workers were combined into a single category. Whether participants were caregivers for their families was dichotomized based on a question whether there were any children younger than 18 years, older adults, or individuals with disabilities who needed care from the participants. The responses about the self-quarantines experience because of COVID-19 since January 2020 were also dichotomized as "yes" and "no."

Regarding the psychosocial and health-related information, self-rated health, work-related burden, fear of infection, and discrimination experiences were included. Self-rated health was assessed using a self-report five-point Likert scale. Responses ranged from "very good"

TABLE 1. Demographic and Work-Related Characteristics of the Study Participants (n = 1000)

Variables	Number	%
Age, yrs (mean (SD))	37.7 (10.26)	
Age category: 34 or younger	504	50.4
Age category: Older than 35	496	49.6
Sex		
Males	149	14.9
Females	851	85.1
Marital status		
Married	510	51.0
Unmarried (single, divorced, etc.)	490	49.0
Self-rated health		
Not good	769	76.9
Good	231	23.1
Taking care of family members		
Yes	386	38.6
No	614	61.4
Region		
Seoul and Gyeonggi province	247	24.7
Other	753	75.3
Type of employment		
Temporary workers	140	14.0
Permanent workers	856	85.6
Self-quarantine experience		
Yes	98	9.8
No	902	90.2
Work-related burden		
Yes	901	90.1
No	99	9.9
Fear of infection		
Yes	847	84.7
No	153	15.3
COVID-19–related discrimination experience		
Yes	262	26.2
No	738	73.8
Worked at COVID-19 screening clinic		
Yes	862	86.2
No	138	13.8
Experience of visiting COVID-19 patients		
Yes	661	66.1
No	339	33.9
Experience of visiting high-risk groups		
Yes	400	40.0
No	600	60.0
Work experience of COVID-19 epidemiological investigation		
Yes	632	63.2
No	368	36.8
Work experience of disease prevention and environmental management		
Yes	278	27.8
No	722	72.2
Worked for COVID-19 vaccination		
Yes	340	34.0
No	660	66.0
COVID-19–related job training and education		
Yes	521	52.1
No	479	47.9
Adequate protective equipment		
Yes	894	89.4
No	106	10.6
Emotional support		
Yes	227	22.7
No	773	77.3
Financial compensation		
Yes	330	33.0
No	670	67.0

to "very bad." For the analysis, self-rated health was dichotomized as "good" if the participants' responses were "good" or "very good" and "not good" if the response was "bad," "very bad," or "moderate." Another question, using a four-point Likert scale, evaluated the burden of being a part of the COVID-19 response team. Responses were categorized as "yes" or "no." Similarly, the fear of infection was assessed by responses using a four-point Likert scale, ranging from "very afraid" to "not at all"; the responses were categorized as "yes" or "no." As for discrimination experiences, one question asked the participants whether they experienced discrimination and exclusion because they had worked at public health centers for COVID-19 responses from January 2020 to present. Responses comprised on a 4-point Likert scale ranging from "never," "mostly no," "mostly yes," and "severe." The responses were categorized as "yes" ("mostly yes" and "severe") or "no" ("never" and "mostly no").

Perceived reasons for burnout among the participants were analyzed based on an open-ended question. The free-text responses were summarized into 31 contents, and the percentage of each content was calculated.

Statistical Analysis

Descriptive statistics and t-tests were used to examine the characteristics and burnout scores of study participants. The results of quantitative variables are reported as the number and percentage (%) of responses or mean and standard deviation (SD). Multivariate linear regression analyses were performed to examine the factors associated with burnout among the participants. A P value of ≤0.05 was considered statistically significant, and missing values were excluded from analyses. Statistical analyses were performed using SPSS version 25.0.

RESULTS

Sample Characteristics

The mean age of the participants was 37.7 years, and those 34 years or younger accounted for 50.4% of the participants (Table 1). Most of the participants were women (85.1%) and married (51.0%). A high percentage (76.9%) of participants believed that they were not in good health. The proportion of participants who cared for other family members including children, older adults, and people with disabilities was 38.6%. Participants who worked in Seoul and Gyeonggi Province accounted for 24.7% of the sample, whereas 75.3% worked in other regions. Regarding type of employment, 85.6% of the participants were permanent employees. Self-quarantine experiences as part of the COVID-19 response were reported by 9.8% of the participants. Work-related burden and fear of infection were reported by 90.1% and 84.7% of the participants, respectively. The proportion of participants who experienced discrimination or exclusion was 26.2%.

Regarding work-related characteristics, a high proportion of participants worked at COVID-19 screening clinics (86.2%), visited COVID-19 patients in person or by phone (66.1%), and conducted COVID-19–related epidemiological investigations (63.2%). The proportion of participants who visited high-risk groups in person or by phone was 40.0%. The proportion of those who worked for COVID-19 vaccination was 34.0%, and those engaged with disease prevention and environmental management was 27.8%. The participants felt that they had sufficiently received job training and education related to COVID-19 (52.1%) and that the protective equipment provided was adequate (89.4%). However, participants reported insufficient emotional support (77.3%) and financial compensation (67.0%).

COVID-19–Related Burnout Experiences

The mean scores for burnout according to the participants' characteristics are presented in Table 2. Burnout scores were high in those who were younger (52.78), women (51.36), unmarried (52.35),

TABLE 2. Burnout of the Health Care Workers

Variables	Burnout Score		
	Mean (SE)	t	P
Age			
Age group 1 (<= 34)	52.78 (10.63)	5.66	<0.001
Age group 2 (> = 35)	48.88 (11.14)		
Sex			
Males	47.90 (11.53)	−3.54	<0.001
Females	51.36 (10.89)		
Marital status			
Married	49.39 (11.06)	−4.27	<0.001
Unmarried (single, divorced, etc.)	52.35 (10.85)		
Self-rated health			
Not good	53.01 (10.23)	12.08	<0.001
Good	43.65 (10.65)		
Taking care of other family members			
No	51.06 (10.98)	0.78	0.437
Yes	50.50 (11.17)		
Region			
Seoul and Gyeonggi province	53.98 (9.98)	5.51	<0.001
Other	49.82 (11.20)		
Type of employment			
Temporary workers	45.36 (10.41)	−6.45	<0.001
Permanent workers	51.73 (10.90)		
Self-quarantine experience			
No	49.23 (10.99)	−7.97	<0.001
Yes	55.38 (9.91)		
Work-related burden			
No	37.36 (8.37)	−16.46	<0.001
Yes	52.32 (10.28)		
Fear of infection			
No	48.63 (11.62)	−2.69	0.007
Yes	51.24 (10.91)		
Discrimination experience			
No	49.23 (10.99)	−7.97	<0.001
Yes	55.38 (9.91)		
Worked at COVID-19 screening clinic			
No	48.86 (12.37)	−2.07	0.040
Yes	51.16 (10.80)		
Experience of visiting COVID-19 patients			
No	47.29 (11.28)	−7.47	<0.001
Yes	52.66 (10.48)		
Experience of visiting high-risk groups			
No	48.67 (11.38)	−7.85	<0.001
Yes	54.11 (9.67)		
Work experience of COVID-19 epidemiological investigation			
No	46.97 (11.07)	−8.77	<0.001
Yes	53.10 (10.40)		
Work experience of disease prevention and environmental management			
No	49.93 (11.12)	−4.24	<0.001
Yes	53.21 (10.51)		
Worked for COVID-19 vaccination			
No	50.08 (11.08)	−3.04	0.002
Yes	52.31 (10.86)		
COVID-19–related job training and education			
No	54.07 (9.94)	9.23	<0.001
Yes	47.87 (11.20)		
Adequate protective equipment			
No	55.42 (10.31)	4.55	<0.001
Yes	50.30 (11.02)		
Emotional support			
No	53.12 (10.40)	13.01	<0.001
Yes	43.08 (9.59)		
Financial compensation			
No	53.12 (10.40)	9.70	<0.001
Yes	46.22 (10.90)		

and had poor self-rated health (53.01). Those who worked in Seoul and Gyeonggi Province (53.98), and permanent workers (51.73) reported high burnout. The burnout scores among participants who had experienced self-quarantine (55.38) and discrimination related to COVID-19 (55.38) were also high. The burnout score of health care workers who experienced work-related burden was 52.32, whereas that of those without burden was 37.36, showing the largest differences. The burnout score of participants with fear of infection was 51.24.

Among the six types of COVID-19 response jobs, the burnout score of those who had visited high-risk groups was the highest (54.11), followed by those who conducted jobs related to disease prevention and environmental management (53.21), and epidemiological investigation (53.10). Furthermore, burnout scores were lower among those who received organizational support than those who did not. The burnout score was 47.87 in participants who received adequate COVID-19–related job training and 50.30 in those who received adequate protective equipment. Similarly, the burnout score of those with emotional support was 43.08, and those who received sufficient financial compensation was 46.22.

Factors Associated With Burnout Among Participants

Factors associated with burnout among health care workers during the COVID-19 pandemic are shown in Table 3. Among the personal variables (Model 1), higher age ($\beta = -0.18$, $P < 0.001$), good self-rated health ($\beta = -0.25$, $P < 0.001$), and regions other than Seoul and Gyeonggi Province ($\beta = -0.13$, $P < 0.001$) were associated with lower burnout among the participants. Being female ($\beta = 0.13$, $P < 0.001$), working as a permanent employee ($\beta = 0.15$, $P < 0.001$), having a higher work-related burden ($\beta = 0.30$, $P < 0.001$), and discrimination experience ($\beta = 0.18$, $P < 0.001$) were associated with higher burnout among the participants.

When adjusting for the types of job performed by the participants (Model 2), the association between personal variables and the outcome remained. Among the work-related factors, work experience with COVID-19 epidemiological investigation ($\beta = 0.09$, $P < 0.001$), disease prevention and environmental management ($\beta = 0.06$, $P = 0.019$), and COVID-19 vaccination ($\beta = 0.06$, $P = 0.023$) were associated with higher burnout. In Model 3, four types of organizational support measures

TABLE 3. Factors Associated With Burnout of the Health Care Workers

Variables	Model 1	Model 2	Model 3
	β coefficient	β coefficient	β coefficient
Age	−0.18*	−0.15*	−0.14*
Sex (ref: males)			
Females	0.13*	0.14*	0.11*
Marital status (ref: married)			
Unmarried (single, divorced, etc.)	0.01	0.01	0.00
Self-rated health (ref: not good)			
Good	−0.25*	−0.23*	−0.19*
Taking care of family members (ref: no)			
Yes	0.03	0.03	0.01
Region (ref: Seoul and Gyeonggi province)			
Other	−0.13*	−0.13*	−0.09*
Type of employment (ref: temporary workers)			
Permanent workers	0.15*	0.11*	0.11*
Self-quarantine experience (ref: no)			
Yes	−0.01	−0.02	−0.01
Work-related burden (ref: no)			
Yes	0.30*	0.26*	0.22*
Fear of infection (ref: no)			
Yes	0.01	0.02	0.03
Discrimination experience (ref: no)			
Yes	0.18*	0.18*	0.16*
Worked at COVID-19 screening clinic (ref: no)			
Yes		−0.01	0.00
Experience of visiting COVID-19 patients (ref: no)			
Yes		0.05	0.04
Experience of visiting high-risk groups (ref: no)			
Yes		0.05	0.04
Work experience of COVID-19 epidemiological investigation (ref: no)			
Yes		0.09*	0.08**
Work experience of disease prevention and environmental management (ref: no)			
Yes		0.06***	0.07***
Worked for COVID-19 vaccination (ref: no)			
Yes		0.06***	0.06***
COVID-19–related job training and education (ref: no)			
Yes			−0.05
Adequate protective equipment (ref: no)			
Yes			−0.04
Emotional support (ref: no)			
Yes			−0.15*
Financial compensation (ref: no)			
Yes			−0.10*

ref, reference category.
*$P < 0.001$.
**$P < 0.01$.
***$P < 0.05$.

were added. Receiving emotional support in the workplace (β = −0.15, $P < 0.001$) and sufficient financial compensation (β = −0.10, $P < 0.001$) were associated with lower burnout. The impact of other factors decreased slightly; however, there were small differences compared with Model 2.

Perceived Reasons for Burnout Among Participants

We analyzed the subjective responses of participants for perceived reasons for burnout during the COVID-19 pandemic (Table 4). Approximately 76.9% of the participants reported that high workload caused burnout. Burden from civil complaints (64.0%), insufficient financial compensation (59.5%), and unclear job tasks (44.7%) were also the main reasons for participants' burnout. In addition, the participants felt that difficulties in wearing masks, using personal protective equipment at work (35.4%), and lack of cooperation within the organization (35.2%) led to burnout.

DISCUSSION

This is one of the first studies to explore the burnout experiences of diverse workers who played a pivotal role in COVID-19 responses at public health centers in Korea. Our findings showed that demographic and work-related factors affected burnout experiences among participants. The results suggest that receiving organizational support is associated with lower burnout among health care workers. The participants reported high workload, burden from civil complaints, and lack of compensation as the main reasons for their burnout.

Among individual characteristics, being younger and female was related to higher burnout, as in other studies on burnout among health care workers.[14,15] The pandemic has negatively affected younger health care workers by disrupting their opportunities for education and work.[16] Although women comprise a high proportion of health care workers in many countries, they struggle to care for their families during the pandemic because of fear of infecting them and social distancing policies.[17] In addition, those who worked in high-incidence regions (Seoul and Gyeonggi Province) were permanent workers and had high work-related burden reported high burnout. This might reflect that those with high workloads and burdens were more likely to experience burnout.

TABLE 4. Causes of Burnout Among Health Care Workers Who Worked for COVID-19 Response Jobs (n = 844)

Summary	%
High workload	76.9
Burden from civil complaints	64.0
Insufficient financial compensation	59.5
Unclear job tasks at workplace	44.7
Difficulties in wearing masks and using personal protective equipment during worktime	35.4
Lack of cooperation within the organization	35.2
Frequent changes in roles at workplaces	28.1
Difficulties in performing both former jobs and new roles related to COVID-19	2.0
Prolonged COVID-19 pandemic	1.1
Worked on weekends and holidays	1.1
High physical demands	0.7
Work in an emergency situation	0.6
Unfair distribution of work	0.5
Job rotation is not possible	0.4
Working overtime	0.4
Managers make arbitrary task assignments	0.2
Lack of rest time	0.2
Lack of appreciation for hard work	0.2
Risk of infection	0.2
High level of work difficulty	0.2
I think it is not my job	0.1
High work pressure (e.g., the need to develop a new work strategy suitable for the COVID-19 response)	0.1
Poor evaluation of previous work	0.1
Increased demand for various work reports	0.1
Frequent changes in work guidelines	0.1
Difficulties in taking a vacation	0.1
Poor work environment	0.1
Getting injuries from working at screening clinics	0.1
Frequent work meetings	0.1
Inadequate staffing levels	0.1
None	0.1

Among the physical and psychological characteristics, poor self-rated health and discrimination experiences were associated with higher burnout among participants. Self-rated health shows the comprehensive status of the physical, mental, and social aspects of health.[18] Given that most of the participants reported that their health status was poor, health care workers might not have been able to care for themselves under a high workload, thereby leading to burnout. Furthermore, there has been widespread discrimination against health care workers during the COVID-19 pandemic.[19–22] Under uncertainty during the pandemic, individuals react with fear and stigmatize health care workers.[23] A previous study reported that COVID-19–related discrimination was associated with stress, depressive symptoms, and suicide risk among health care workers.[24] The negative impact of discrimination on the health and well-being of health care workers may contribute to a higher risk of burnout.

Among work-related factors, various duties in the workplace (epidemiological investigation, disease prevention and environmental management, and COVID-19 vaccination) were related to higher burnout among the participants. In Korea, response teams at public health centers have investigated the locations visited by patients for epidemiological investigation. As the public experienced fatigue due to social distancing measures,[25] not many residents were favorable to public health workers. Health care workers also experience emotional burden and ethical dilemmas because they have to obtain extensive patient data for epidemiological investigation.[26] In addition, health care workers at public health centers perform a wide range of duties for disease prevention. They monitored individuals quarantined at home or at facilities and performed COVID-19 testing, which was free of charge for every citizen at the time of the survey. Similarly, COVID-19 vaccination was provided free for older adults. Despite the beneficial impact of these services, heavy workloads and complaints from local citizens in the process of performing work might have added to health care workers' burnout, as they reported.

Another important finding was that protective factors in the workplace were associated with lower burnout. Participants were less likely to experience burnout when adequate emotional support and financial compensation were provided. Support measures and rewards from the workplace could have buffering effects on the burnout of health care workers, particularly during the COVID-19 pandemic.[1] In Korea, some public health centers provided "mental health kits" to individuals who require psychological support, which include mental health guidance and plant cultivation kits.[27] However, regional variations were observed in these support measures. Owing to increased work hours and burden from work, health care workers might feel that they did not receive the adequate reward they deserved. In this context, emotional and practical support in the workplace might be crucial factors related to lower burnout.

Furthermore, the qualitative analysis of the responses on the perceived causes of burnout supported the quantitative findings of the study. A high proportion of participants perceived high workload and burden from civil complaints as the main contributors to their burnout experiences. The participants also reported that lack of financial compensation was related to burnout experiences, as shown in the regression analysis. In addition, unstable work conditions, such as unclear job tasks and lack of cooperation within the organization, contribute to burnout. Perceived challenges faced by health care workers during the COVID-19 pandemic were also revealed. These included

the difficulty of wearing personal protective equipment, frequent role changes during prolonged pandemics, and lack of rest. By analyzing subjective responses, perceived causes and contexts of burnout experiences among health care workers that could not be captured by the survey were revealed.

Our findings highlight the need for support measures for health care workers during the COVID-19 pandemic. Practical support in the workplace, such as appropriate work shifts, adequate rest, and provision of psychological interventions for those with mental health issues, can effectively reduce the psychological distress of health care workers.[28] In addition to organizational support, it is crucial for the government to establish clear work guidelines and provide resources for health care organizations. Public health education on COVID-19 and the effectiveness of preventive measures are also needed to increase the public's adherence to preventive measures and reduce discrimination against health care workers. These efforts help mitigate public health crises by ensuring a high-quality work environment for health care workers and reducing their burnout.

Although this study provides insights into the factors associated with burnout among health care workers using nationwide survey data, it has several limitations. This is a cross-sectional study and may not reflect the fluctuations present during the COVID-19 pandemic. We included participants with diverse occupations and roles, and there might have been differences in outcomes across occupations. Moreover, the challenges faced by public health workers in Korea may differ from those in other countries. However, considering that burnout among health care workers has been reported globally, practical and policy implications may also apply to other countries. Further studies are needed to examine the long-term impact of burnout among health care workers and its associated factors.

CONCLUSION

Using data from a nationwide survey, this study examined the factors associated with burnout among Korean health care workers during the COVID-19 pandemic. The results showed that personal and work-related factors affected burnout among participants, whereas organizational support may lower burnout. Our findings reflect the challenges faced by public health workers, including high workloads and a lack of support in the workplace. This study suggests the need to understand the factors associated with burnout among health care workers to provide practical support for them. Policy measures are required to improve the work environment and enhance the well-being of frontline health care workers during the COVID-19 pandemic.

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