

## SELF-CARE AND RELATED FACTORS OF NURSES CARING FOR COVID-19 PATIENTS IN SELECTED GOVERNMENT HOSPITALS: A CROSS-SECTIONAL STUDY

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### ABSTRACT

**Background:** The well-being of nursing staff has been challenged in the wake of the coronavirus disease 2019 (COVID-19) pandemic outbreak throughout the world. Psychological distress in frontline nursing staff caring for COVID-19 patients appeared gradually. Fear, anxiety, depression, psychological symptoms, post-traumatic symptoms, and a general decrease in overall well-being were observed. Self-care activities can help promote the mental and physical health of nurses, thereby enabling them to better cope with stress. Self-care activities include self-compassion, mindfulness, general healthy habits such as quality sleep, a balanced healthy diet, regular exercise, and attending to one's basic needs, to name a few. The self-care must become inherent to nurses to equip them to better care for others. **Objectives:** To investigate the self-care of nurses caring for COVID-19 patients and related factors. **Materials and methods:** A cross-sectional descriptive design was used with a sample size of 180 nurses caring for COVID-19 patients at selected government hospitals in Binh Dinh, Vietnam from October 2022 to December 2022. The self-care of nurses caring for COVID-19 patients was examined using the Self-Care Activities Screening Scale. Data analysis was performed in SPSS Version 26.0 using descriptive statistics and analysis of variance (ANOVA). **Results:** The mean self-care score of nurses caring for COVID-19 patients was 3.13 (SD = 0.25), and health consciousness, nutrition, and physical activity and sleep domains had overall mean of 3.21 (SD = 0.31), 3.05 (SD = 0.36), and 3.09 (SD = 0.30), respectively. Besides, there was a statistically significant association between the level of education, work experience, and self-care of nurses caring for COVID-19 patients ( $p < 0.05$ ). In contrast, there was no statistically significant association between gender and self-care of nurses caring for COVID-19 patients ( $p > 0.05$ ). **Conclusions:** According to the results, nurses caring for COVID-19 patients had high mean scores for their self-care. The assessment on self-care of nurse respondents caring for COVID-19 patients confirmed that health consciousness was the strongest component of self-care, meanwhile, nutrition was the weakest component of self-care. More related continuous training programs on self-care, especially in nutrition, should be developed for nurses caring for COVID-19 patients.

**Keywords:** Self-care, nurses, COVID-19.

### I. INTRODUCTION

The well-being of nursing staff has been challenged in the wake of the coronavirus disease 2019 (COVID-19) pandemic throughout the world. Psychological distress in frontline nursing staff caring for COVID-19 patients appeared gradually. Symptoms such as fear, anxiety, depression, post-traumatic stress, and a general decline in well-being have

been observed [1]. The intense experience of an infectious disease could have short-term and long-term impacts on mental health in the absence of effective support and timely training towards greater resiliency [2]. Self-care activities can help promote the mental and physical health of nurses, thereby enabling them to better cope with stress. Such activities include self-compassion, mindfulness, and general healthy habits, such as quality sleep, a balanced diet, regular exercise, and attending to basic need [3]. Self-care might become inherent to nurses to equip them to better care for others.

During the pandemic, nurses caring for COVID-19 patients often prioritized the health, safety, and well-being of their patients over their own, and large numbers of nurses reported feeling down, sad, and depressed. By focusing on self-care for nurses and paying closer attention to their mental health, there was hope to improve this situation [4]. In addition, two recent reviews point to the importance of balancing one's personal needs and the needs of others and recommend self-care as the first line of defense for nurses to manage COVID-19 patient care demands, the longevity of the crisis, and its disruption of normal life routines [5].

Healthcare professionals are trained to put patients first. Self-care was not always prioritized among nurses, as they may fear judgment from others or feel selfish at the thought of attending to their own needs. Practicing self-care, however, is imperative to cope with the obligations, workload, and demands of their profession and help nurses gain a better balance or integration between their work and their spare time - as well as help protect their health, psychological well-being, and satisfaction with both their work and overall life. Therefore, this study aimed to investigate the self-care practices of nurses caring for COVID-19 patients and identify related influencing factors.

## II. MATERIALS AND METHODS

### 2.1. Materials

This study was conducted in four selected government hospitals in Binh Dinh, Vietnam from October 2022 to December 2022. The study sample included all nurses caring for COVID-19 patients in four selected hospitals in Binh Dinh. The sample size was determined to be 180 nurses caring for COVID-19 patients. The participants were staff nurses involved in direct patient care of COVID-19 patients; currently employed full-time and at least 6 months in the research locale at the onset of the COVID-19 crisis. Staff nurses with administrative functions were excluded from the study.

### 2.2. Methods

- **Study design:** This study employed a cross-sectional descriptive design.

- **Study instruments:**

- + Demographic questionnaire: nursing participants' demographic data were collected using a self-report questionnaire, including information on gender, level of education, and work experience.

- + Self-care of nurses caring for COVID-19 patients was examined using the Self-Care Activities Screening Scale. The scale was developed by Martinez *et al.* (2021), and the reliability was  $\alpha = 0.83$ . Its domains included health consciousness, nutrition, and physical activity and sleep. The responses for each item were reflected on a 4-point Likert scale from 1 (strongly disagree) to 4 (strongly agree). The overall domain score was calculated by summing all items in each domain and then dividing by the number of items. The higher scores indicated a more positive assessment of self-care of nurses [6]. The original

instrument in English was translated into Vietnamese using the back-translation method. Then, the questionnaire was distributed to 30 nurses who had the same characteristics as the study participants for the pilot study. After translation and reliability assessment, some questions had similar content and internal consistency  $\alpha < 0.3$ , reducing the reliability of the instrument, so the researcher reduced it. The internal consistency reliability was 0.78.

- **Statistical analysis:** To achieve the objectives of the current study, the data were analyzed using Statistical Package for Social Science (SPSS) version 26.0. Descriptive statistics in terms of frequency, percent, mean, and standard deviation were used to examine demographic characteristics. T-test and ANOVA were used to determine relationships between the self-care of nurses caring for COVID-19 patients and related factors. Statistical significance was considered at lower than 0.05.

### III. RESULTS

Most of the participants were female (75.0%). Nearly half of the study participants hold a college degree in nursing (46.1%), and the highest percentage had 6 to 10 years of experience as a nursing professional (37.8%).

#### 3.1. Self-care of nurses caring for COVID-19 patients

Table 1. Self-care of nurses caring for COVID-19 patients

Variables	Mean	S.D
Self-care	3.13	0.25
<i>Domains</i>		
Health consciousness	3.21	0.31
Nutrition	3.05	0.36
Physical activity and sleep	3.09	0.30

Nurses caring for COVID-19 patients had high mean scores of self-care 3.13 (SD = 0.25).

Table 2. Self-care of nurses caring for COVID-19 patients in terms of health consciousness

Variables	Mean	S.D
I am alert to changes in my health	3.28	0.47
I am usually aware of my health	3.39	0.55
I reflect about my health a lot	2.99	0.54
I know about my inner feelings about my health	3.11	0.41
I am constantly examining my health	3.28	0.51
Overall Mean	3.21	0.31

The assessment on self-care of nurses caring for COVID-19 patients in terms of health consciousness had an overall mean of 3.21 (SD = 0.31).

Table 3. Self-care of nurses caring for COVID-19 patients in terms of nutrition

Variables	Mean	S.D
I eat three servings of fruits and two servings of vegetables a day	2.91	0.54
I think I am eating better than I used to (less sugar, salt, fried snacks or pre-cooked foods)	3.10	0.55
I am drinking an average of 8 glasses of water daily	3.14	0.50
Overall Mean	3.05	0.36

The assessment on self-care of nurses caring for COVID-19 patients in terms of nutrition had an overall mean of 3.05 (SD = 0.36).

Table 4. Self-care of nurses caring for COVID-19 patients in terms of physical activity, and sleep

Variables	Mean	S.D
I do physical activity (some sports, yoga or dance) for at least 30 minutes a day.	2.94	0.51
I sleep seven to eight hours a day.	3.09	0.38
I think that my rest is within the standard quality.	3.24	0.45
Overall Mean	3.09	0.30

The assessment on self-care of nurses caring for COVID-19 patients in terms of physical activity and sleep had an overall mean of 3.09 (SD = 0.30).

### 3.2. Factors related to self-care of nurses caring for COVID-19 patients

Table 5. Associations between gender, level of education, work experiences, and self-care of nurses caring for COVID-19 patients

Variables		Self-care of nurses caring for COVID-19 patients	p-value
Gender	Male (n=45)	3.11±0.26	0.487 (t-test)
	Female (n=135)	3.14±0.25	
Level of education	Intermediate (n=52)	3.04±0.32	0.019 (ANOVA)
	College (n=83)	3.12±0.26	
	Bachelor, postgraduate (n=45)	3.22±0.30	
Work experience	≤5 years (n=57)	3.07±0.28	0.031 (ANOVA)
	6-10 years (n=68)	3.15±0.25	
	>10 years (n=55)	3.21±0.29	

There was no association between gender and self-care of nurses caring for COVID-19 patients ( $p>0.05$ ). Level of education and work experience were related to the self-care of nurses caring for COVID-19 patients ( $p<0.05$ ).

## IV. DISCUSSION

### 4.1. Self-care of nurses caring for COVID-19 patients

Self-care is essential for all healthcare workers, especially during and post-time of a crisis. Self-care benefit nurses and their patients. The beneficial effects of appropriate self-care for nurses include improved physical and psychological well-being [7], as well as being able to provide care for their patients in a more sustainable way with greater compassion, sensitivity, effectiveness, and empathy [8]. Practicing self-care could also help nurses create some structure and predictability amidst chaos and uncertainty and make them able to manage high levels of stress in more constructive ways. Our study indicated a high mean score of self-care of nurses caring for COVID-19 patients (mean = 3.13). However, this finding was lower than Muhlare's study (mean = 3.59) which surveyed 209 nurses working in primary health care clinics in regions of the city of Johannesburg, Gauteng [9]. This difference might be due to differences in working environments, cultural backgrounds, organizational policies, and leadership between countries.

When we considered the mean score among domains of self-care of nurses caring for COVID-19 patients, the domain of health consciousness had the highest score (mean = 3.21), while nutrition had the lowest (mean = 3.05). The findings of the study indicated that health consciousness has played an important role in promoting self-care behaviors of nurses caring for COVID-19 patients. The benefits of self-care activities were unquestionable and their

practice can be reflected in increased health consciousness. Health consciousness, as part of self-care activities, was effective in coping with stress and preventing health problems, while the motivation to act and include self-care elements into daily routine plays an important role. Moreover, carrying out the task of taking care of the health of patients, especially COVID-19 patients, the health and well-being of nurses was something worth paying attention to. Nurses worked under the pressures of the pandemic, physical health and well-being damage is inevitable. Therefore, nurses need to have an awareness of health consciousness in self-care. In addition, the result of the study affirmed that healthy eating behavior should be facilitated in the workplace environment because most studies reported a high prevalence of anxiety and depressive symptoms [10]. According to Braquehais *et al.* (2020), nurses with higher clinical responsibilities were at a higher risk for psychological distress, as well as those living in regions with a higher rate of COVID-19 infection [11]. Consequently, nurses' habitual lifestyles, including food consumption, eating behavior, water intake and stimulant substances consumption, such as caffeine underwent important changes due to stress factors at work, impacting nutritional status, immunity response, sleep, and psychological well-being [12]. In the general population, unhealthy food choices with consequent inadequate nutrient intake, water restriction, with consequent dehydration, as well as caffeine, energy drinks, and alcohol consumption with consequent sleep disturbances, have been observed worldwide [13]. In addition, J. Zhang *et al.* (2020) reported an unbalanced diet specifically among COVID-19 nurses with high consumption of salt and oil in China [14]. Therefore, hospitals should consider nurses' demands and develop strategies and policies to satisfy also dietary needs of nurses caring for COVID-19 patients. Worksite health promotion approaches and interventions might be recommended to better help nurses manage psychological well-being, stress, and nutrition while caring for COVID-19 patients. Nurses should also be given available time and secured space in the hospitals where they could eat their homemade meals, drink water, and have a canteen with healthy food choices. If not, there was the risk that nurses make fast and unhealthy food choices, fasting all day and/or bingeing once off from work to relieve stress using comfort foods such as fast food and snacks, energy-dense and nutrient-poor foods. As a result, nurses might be unable to restore an adequate nutritional status, which is crucial to cope with continuous stress and maintain immune integrity.

On the other hand, the assessment of the nurses highlighted the important role of adequate sleep and regular physical activity (mean = 3.09). Quality sleep of at least 7-8 hours was as important to health as nutrition and exercise. Sleep was needed to repair the physical body and maintain emotional balance. A continually sleep-deprived nurse might be making more mistakes, and errors that could be life-threatening for a COVID-19 patient. Frontline nurses appeared to be more vulnerable to poor mental health which may suggest a role of self-care in contributing to functioning better emotional performance. Furthermore, physical activity was a health behavior associated with better physical health and psychological well-being in nurses caring for COVID-19 patients. Physical activity released endorphins in the body, which promoted well-being and feelings of euphoria, and boost mood and energy [15]. Nurses were in a position to adopt a physical activity approach to deal with stressful scenarios in caring for COVID-19 patients.

#### **4.2. Factors related to self-care of nurses caring for COVID-19 patients**

Research results showed that the self-care of nurses caring for COVID-19 patients had a statistically significant relationship with educational level ( $p < 0.05$ ). This suggests

that nurses with higher levels of education might have greater knowledge and understanding of aspects of health, including how to care for their health and provide support to others. These nurses are likely to understand the importance of maintaining personal health and know how to apply proper self-care methods. Additionally, nurses with higher levels of education often came with the ability to analyze and evaluate information thoroughly. This could help them make smarter and more effective self-care decisions, based on medical data and evidence. These nurses could set personal health goals and take steps to achieve them, including maintaining a healthy diet and exercising regularly.

On the other hand, the results of this study showed that there was no statistically significant association between gender and self-care of nurses caring for COVID-19 patients ( $p>0.05$ ) but there were significant differences in self-care between groups with different work experience ( $p<0.05$ ). It could be shown that as the work experience of nurses increases, the accumulation of knowledge and understanding about health issues and self-care will deepen. This could help them better recognize and understand important factors in their health care. At the same time, work experience helped nurses to develop the skills to accurately analyze and evaluate their health situation. They could recognize abnormalities and make self-care decisions based on their experience and understanding. Based on previous experiences, nurses could identify which care methods work best for them and adjust that care method as needed. Therefore, to enhance self-care for nursing staff with lower levels of education and work experience, providing them with appropriate training could enhance their knowledge and skills in managing and responding to the COVID-19 epidemic is essential.

## V. CONCLUSION

Nurses are the direct frontlines in caring for COVID-19 patients, so they are exposed to high levels of stress, which can affect their self-care. The results of this study showed that nurses caring for COVID-19 patients had high mean scores for their self-care. The assessment on self-care of nurse respondents caring for COVID-19 patients confirmed that health consciousness was the strongest component of self-care, meanwhile, nutrition was the weakest component of self-care. Additionally, work experience and education level are identified as factors related to self-care. Therefore, developing training programs on self-care, especially nutrition, and improving knowledge on how to work in emergencies was important for nurses caring for COVID-19 patients to achieve greater self-care and health resilience abilities in stressful situations.

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