

Relationship between Resilience and Social and Organizational Support among Nurses Working with COVID-19 Patients: A Cross-Sectional Study

Abstract

Background: One of the coping strategies in stressful situations effectively is resilience skills. Due to the coronavirus disease 2019 (COVID-19) pandemic and its resulting stresses, this study was conducted to determine the relationship between resilience and social and organizational support among nurses working with COVID-19 patients. **Materials and Methods:** A cross-sectional study was undertaken on 224 nurses working with COVID-19 patients in Iran in 2021. A demographic questionnaire, the Connor–Davidson Resilience Scale, Multidimensional Scale of Perceived Social Support, and Survey of Perceived Organisational Support were used for data collection. Data analysis was performed using descriptive and interpretive statistics (Pearson correlation coefficient test and linear regression). **Results:** The mean [Standard Deviation (SD)] resilience score was 65.86 (14.01). In addition, the mean (SD) scores of organizational support and social support were 21.57 (4.46) and 65.10 (10.93), respectively. The Pearson correlation coefficient test results showed a statistically significant direct relationship between social support and resilience ($r = 0.41$, $p < 0.001$). In addition, there was a statistically significant relationship between organizational support and resilience ($r = 0.16$, $p = 0.01$). Multivariate linear regression analysis showed that for each unit increase in social support and organizational support scores, resilience scores increased by 0.41 ($p = 0.01$) and 0.15 ($p < 0.001$) units, respectively. **Conclusions:** The results of the present study showed a direct relationship between resilience and social support and organizational support in nurses. Due to the prolongation of the COVID-19 pandemic and the high prevalence of the disease in our country, nursing managers should seriously consider measures to protect their staff.

Keywords: COVID-19, nurses, organizational support, resilience, social support

Introduction

Viral infectious diseases are always considered a threat to people's health and survival. Coronavirus disease 2019 (COVID-19) is an infectious viral disease that first emerged in December 2019 in Wuhan, Hubei Province, China. In just a few months, the World Health Organization (WHO) declared a pandemic in March 2020.^[1,2] Diseases that cause a pandemic greatly affect healthcare systems, especially the health workforce.^[3] With the outbreak of COVID-19, healthcare workers experienced many challenges^[4] because they are at the forefront of pandemics.^[5,6] Nurses make up the majority of the workforce in the health care system.^[6-8] Evidence shows that nurses suffered from deteriorating mental health during the COVID-19 pandemic. For example, the results of an umbrella review demonstrated that nurses had poor mental health and high anxiety

disorders compared to other healthcare workers.^[9] The main sources of stress in nurses during the COVID-19 pandemic were the fear of spreading COVID-19, the challenges of supporting families and caring for children, irregular working hours, and the high workload of providing care to patients and the resulting physical fatigue.^[10] Therefore, they need coping strategies to ease the weight of the pandemic and their daily life stressors on their mental health.^[11] One of the coping strategies for facing stressful situations effectively is resilience skills. The vital factors that help nurses to endure stressful situations and maintain their mental health include resilience and social and organizational support.^[12] Resilience is a person's ability and capacity to maintain bio-psychological balance under threatening conditions. In the COVID-19 pandemic context, it can help nurses adaptively and effectively endure

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

How to cite this article: Mehdizadeh S, Aghamohammadi P, Maleki M, Hasanlo M, Abbasi S. Relationship between resilience and social and organizational support among nurses working with COVID-19 patients: A cross-sectional study. Iran J Nurs Midwifery Res 2024;29:352-7.

Submitted: 06-Sep-2022. **Revised:** 30-Dec-2023.
Accepted: 23-Jan-2024. **Published:** 02-Jul-2024.

Soudabeh Mehdizadeh¹,
Phateme Aghamohammadi²,
Maryam Maleki³,
Masoumeh Hasanlo¹,
Soheila Abbasi¹

¹Department of Nursing, Faculty of Nursing and Midwifery, Zanzan University of Medical Sciences, Zanzan, Iran, ²Department of ICU, MSN, Hospital of Ayatollah Mousavi, Zanzan University of Medical Sciences, Zanzan, Iran, ³Department of Pediatric and Neonatal Intensive Care Nursing Education, School of Nursing and Midwifery, Tehran University of Medical Sciences, Tehran, Iran

Address for correspondence:
Mrs. Soheila Abbasi,
Department of Pediatric and Neonatal Intensive Care Nursing Education, School of Nursing and Midwifery, Zanzan University of Medical Sciences, Zanzan, Iran.
E-mail: abbasi@zums.ac.ir

Access this article online

Website: <https://journals.iww.com/jnmr>

DOI: 10.4103/ijnmr.ijnmr_281_22

Quick Response Code:



the stress caused by the pandemic.^[13,14] In this regard, the results of a cross-sectional study on 736 Philippine nurses working with COVID-19 patients indicated the protective role of resilience against anxiety related to the COVID-19 pandemic.^[15]

One of the factors influencing people's resilience is social support.^[16] Social support is defined as the range of support levels that people receive from their social network such as family, friends, colleagues, and managers.^[17] Adequate social support is critical to effectively managing stressful events including emergencies, crises, and infectious disease outbreaks.^[18] Some studies have also confirmed the positive effect of social support on job satisfaction, job commitment, health, and the prosperity of nurses.^[19,20] Another helpful factor in nurses' ability to endure stressful situations is organizational support. Perceived organizational support refers to an individual's beliefs about the degree to which the organization is committed to its employees.^[21] Higher levels of organizational support can reduce various workplace stressors caused by crises, disasters, and emerging infectious diseases.^[22] A cross-sectional study by Karadas *et al.*^[23] found that nurses experienced a moderate rate of organizational support. In addition, there was a positive relationship between resilience and perceived organizational support. Furthermore, the findings of another study indicated a positive relationship between high levels of organizational support and job performance and satisfaction in nurses.^[24]

Resilience can protect nurses against the negative consequences of their occupation, including anxiety, burnout, and depression. Moreover, the resilience of nurses can improve patient outcomes.^[25] Therefore, it is important to identify the factors affecting nurses' resilience. In this regard, in a cross-sectional study by Labrague and De los Santos on 325 nurses in the Philippines, it was found that personal resilience, organizational support, and high social support predicted lower COVID-19 anxiety.^[12] However, based on our knowledge, no study was found that examined the relationship between nurses' resilience and both organizational and social support during the COVID-19 pandemic. Therefore, the present study was conducted to investigate the relationship between resilience and social and organizational support among nurses working with COVID-19 patients.

Materials and Methods

A cross-sectional study was undertaken on nurses working with COVID-19 patients in hospitals affiliated with Zanjan University of Medical Sciences, Iran, in August 2021. A total of 224 nurses were chosen via the convenience sampling method. The study inclusion criteria were a minimum educational level of bachelor's degree in nursing science, directly caring for patients with COVID-19, lack of any known physical and mental disorders, no experience of severe emotional and stressful crises such as the death

of close relatives in the past 6 months, and the willingness to participate in the study. The exclusion criterion was the incomplete completion of the questionnaire.

The required sample size was estimated to be 206 based on similar studies^[19,23,26] and considering a 90% test power, 95% Confidence Interval (CI), and assuming that the correlation coefficient between resilience and social and organizational support be at least 0.25 and 0.31 to be statistically significant, respectively. Considering the possibility of dropout of subjects, 238 questionnaires were distributed for data collection. For sampling, the researchers contacted the COVID-19 in-patient wards and then used face-to-face interviews to assess the inclusion criteria of the participants. The purpose of the study was explained to eligible nurses. To increase the participation of the participants, it was suggested to them that they can complete the questionnaires on paper or online at their convenience. The link of the online questionnaire was sent via SMS to the nurses who wanted to complete the questionnaire online.

A demographic characteristics questionnaire, the Connor-Davidson Resilience Scale (CD-RISC), Multidimensional Scale of Perceived Social Support (MSPSS; Zimet *et al.*,^[27] 1988), and Survey of Perceived Organisational Support (SPOS; Eisenberger *et al.*, 1986)^[28] were used for data collection. The demographic characteristics questionnaire included questions on sex, age, marital status, education, family income, type of employment, work history, work experience in the COVID-19 department, work shift, number of shifts per month, and number of patients under care. In Iran, there are various types of employment for nurses, including temporary employment within the program of a human research project, part-time employment in which nurses are employed on 89-day contracts, contractual employment as a 5-year contract employment, and formal employment.^[29] To examine resilience, the CD-RISC was used, which consists of 25 items. The answers to each item are in the form of a 5-point Likert scale ranging from 0 (completely false) to 4 (always true). Therefore, the range of the total score of the scale is 0–100. Higher scores indicate higher resilience.^[30] The internal consistency, test-retest validity, and convergent and divergent validity of the CD-RISC have been reported to be adequate. The validity and reliability of this tool have been confirmed by Ansari Mehr *et al.*^[31] The reliability of this questionnaire was 0.86 in the present study, obtained using Cronbach's alpha. The MSPSS was used to assess social support. The MSPSS is a standardized 12-item questionnaire. Each item is scored on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). This questionnaire consists of 12 items in the 3 sub-scales of family (items 3, 4, 8, and 11), friends (items 6, 7, 9, and 12), and important others (items 1, 2, 5, and 10). The total social support score ranges from 12 to 84, and the higher the score is, the higher the perceived

social support.^[27] In the current study, the Iranian version of the MSPSS was used; the validity and reliability of the Iranian version have been reported in a previous study.^[32] The reliability of this questionnaire in the present study was obtained to be 0.87 using Cronbach's alpha. To assess the level of organizational support, the SPOS was used. This questionnaire has eight items that are graded using a 7-point Likert scale ranging from 1 (completely disagree) to 7 (completely agree), and the range of its total score is 8–56. A higher score means more perceived organizational support.^[33] The validity of this questionnaire has been confirmed in the study by Safari *et al.*^[34] In the present study, the reliability of this questionnaire was calculated to be 0.87.

Data were analyzed using descriptive and inferential statistics in SPSS software (version 21; IBM Corp., Armonk, NY, USA). To investigate the relationship of perceived organizational and social support with resilience, Pearson correlation coefficient test was used, and to predict the impact of organizational and social support on resilience, multivariate linear regression analysis was used. The significance level for all variables was considered to be 0.05.

Ethical considerations

This study was approved by the Ethics Committee of Zanjan University of Medical Sciences (Project number: IR.ZUMS.REC.1399.438). Before collecting the data, the participants were provided with sufficient explanations about the aim and method of the study. In addition, the participants were assured that the data would remain confidential. Written informed consent was obtained from nurses who met the inclusion criteria and were willing to participate in the research.

Results

Demographic characteristics, perceived social support, organizational support, and resilience scores among nurses

In total, 178 paper and 60 online questionnaires were collected. Of the 238 questionnaires, 14 paper questionnaires were excluded from the study due to being incomplete. Therefore, 224 questionnaires were analyzed and reported [Table 1].

The nurses' mean (SD) age was 30.36 (5.53) years. Most nurses were single 129 (57.60%), and 148 (66.10%) of them were women. The mean (SD) duration of work in the COVID-19 wards was 9.25 (5.19) months, and the mean (SD) number of patients per shift and the number of work shifts per month were 4.50 (3.50) and 28.13 (5.36), respectively.

The mean (SD) score of resilience in nurses was 65.86 (14.01). Moreover, the mean (SD) scores of organizational support and social support were 21.57 (4.46)

and 65.10 (10.93), respectively. Moreover, 96 (42.90%) of nurses received good organizational support, 104 (46.40%) received moderate organizational support, and 24 (10.70%) received weak organizational support.

Relationship between perceived social support and organizational support and resilience in nurses

The Pearson correlation coefficient test results showed a statistically significant direct relationship between social support and resilience ($r = 0.41$; $p < 0.001$). In addition, there was a statistically significant relationship between organizational support and resilience ($r = 0.16$; $p = 0.01$). Multivariate linear regression analysis showed that for each unit increase in the score of social and organizational support, the resilience score increased by 0.41 and 0.15 units, respectively [Table 2].

Discussion

The results of this study revealed that the level of resilience was high in nurses participating in the study. In addition, the level of social support in participants was good. Moreover, the majority of the nurses received moderate organizational support. Furthermore, there was a statistically significant direct relationship between resilience and perceived social support in nurses working in COVID-19 in-patient wards. There was also a relationship between resilience and perceived organizational support. The results of the study by KILINÇ and SIS ÇELİK in Turkey, which was conducted to investigate the relationship between social support and

Table 1: Demographic characteristics of nurses

Variable	n (%)	
Gender	Female	148 (66.10)
	Male	76 (33.90)
Marital status	Married	94 (42.00)
	Single	129 (57.60)
	Divorced/widowed	1 (0.40)
Education status	Bachelor's degree	211 (94.20)
	Master's degree	13 (5.80)
Work history (year)	Less than 5	119 (53.10)
	5-10	52 (23.20)
	10-15	27 (12.10)
	15-20	17 (7.60)
	More than 20	9 (4.00)
Income status	Very good	5 (2.20)
	Good	118 (52.70)
	Average	92 (41.10)
	Poor	6 (2.70)
Employment status	Very poor	3 (1.30)
	Temporary	93 (41.50)
	Part-time	58 (25.90)
Shift work	Contractual	24 (10.70)
	formal	33 (14.70)
	Rotating	208 (92.90)

Table 2: The result of multivariate linear regression in determining the contribution of organizational support and social support in predicting the resilience score

Regression Variable	Unstandardized coefficients		Standardized coefficients	t	p
	B	Std. Error	Beta		
Organizational support	0.46	0.19	0.15	2.42	0.016
Social support	0.52	0.08	0.41	6.74	<0.001

mental resilience in nurses during the COVID-19 pandemic, indicated that with increase in perceived social support, the level of resilience in nurses increased; in addition, the amount of social support perceived by nurses was good and their resilience was reported as fair.^[26] The results of the study by Wang *et al.*^[35] also showed that social support was an important factor in increasing the resilience of nurses. Öksüz *et al.*,^[19] in a study that examined nurses' resilience in terms of perceived social support and job satisfaction, showed that perceived social support and job satisfaction were important factors in nurses' resilience. Liu *et al.*^[36] found a direct relationship between resilience and social support in pregnant nurses. It seems that social support can act as a buffer against the effects of providing care to patients with COVID-19 and potentially reduce nurses' vulnerability to developing mental symptoms and work impairment.^[26] According to the results of the present study, the amount of social support in the nurses participating in the study was good. Moreover, the social support perceived by Turkish nurses during the COVID-19 pandemic was reported as good.^[26] However, direct contact with patients, taking on a lot of responsibilities, and having a busy work schedule fatigues people with clinical work and, as a result, reduces their mental resilience. The high level of resilience and social support in nurses can be related to the support provided to the medical staff during the COVID-19 pandemic and the social support received from their families. This enabled the nurses to control their negative emotions during this stressful period and to feel that they are not alone in the management of these problems, and thus, their resilience has increased.

The results of this study showed that there was a statistically significant relationship between the average perceived organizational support and the average resilience in nurses, and for each unit increase in the organizational support score, the resilience score increased by 0.147 units. Based on the results of the study by JO *et al.*,^[37] the resilience of nurses increased with the organizational support received during the COVID-19 pandemic. According to the results of the study by Zhou *et al.*,^[38] receiving organizational support had a significant effect on reducing PTSD symptoms in healthcare personnel (nurses and doctors) during the COVID-19 pandemic, which indicated the importance of receiving organizational support. Moreover, the results of the study by Labrague and De los Santos, which examined the effect of resilience and social and organizational support on reducing anxiety related to COVID-19 in frontline nurses in the Philippines,

showed that resilient nurses and those who have a greater understanding of organizational and social support reported less anxiety about COVID-19.^[12]

Zhang *et al.*^[39] reported that the received organizational support, through the mediating role of resilience, reduced the mental, emotional, and physical fatigue of nurses during the COVID-19 pandemic. According to the results of another study, negative organizational support has been associated with adverse mental health outcomes in Canadian nurses during the COVID-19 pandemic.^[40] To cope with stressful situations, nurses need to adapt to existing conditions, maintain their mental health, and become resilient to continue providing efficient and safe care to patients.^[26] The development of organizational strategies helps nurses in creating and maintaining their resilience in their workplace. Although the resilience of nurses in the present study was favorable, it should be noted that resilience is not a permanent condition, but it is temporary. Therefore, individual and environmental resources should be continuously improved.^[41] Increasing nurses' resilience can reduce their emotional fatigue and lead to an increase in their work participation and performance when facing workplace challenges. One of the important factors in dealing with the side effects of low resilience in nurses and preventing a faulty patient care process is the development of social support infrastructure by the authorities. The workplace indirectly moderates the effect of resilience on anxiety through perceived social support among nurses.

In addition, increasing social support can create a greater sense of emotional security among healthcare workers, and as a result, with the reduction in their worry and anxiety, they can perform more effectively during the pandemic.^[42] Therefore, according to the findings of the present study that illustrate a positive relationship between social and organizational support and the level of resilience in nurses and considering the prolongation of the COVID-19 pandemic and the high prevalence of the disease in our country, nursing managers should seriously pay attention to support measures for their employees.

Due to the non-randomness of the research units, which were limited to the hospitals of one university, the importance of the issue, and the possibility of similar crises in the future, it is suggested that more extensive studies in this field be carried out at the national level. Another limitation of this study was the use of a self-report method, and there is a limitation of self-reporting methods in this study.

Conclusion

The results of this study showed that there is a relationship between perceived social and organizational support and resilience among nurses. Thus, nursing managers should seriously pay attention to support for nurses.

Acknowledgements

The authors would like to thank the dear nurses and Deputy of Research in Zanjan University of Medical Sciences.

Financial support and sponsorship

Zanjan University of Medical Sciences

Conflicts of interest

Nothing to declare.

References

- Nikbakht Nasrabadi A, Abbasi S, Mardani A, Maleki M, Vlasisavljevic Z. Experiences of intensive care unit nurses working with COVID-19 patients: A systematic review and meta-synthesis of qualitative studies. *Front Public Health* 2022;10:1034624.
- Spoorthy MS, Pratapa SK, Mahant S. Mental health problems faced by healthcare workers due to the COVID-19 pandemic—A review. *Asian J Psychiatr* 2020;51:102119.
- Fernandez R, Lord H, Halcomb E, Moxham L, Middleton R, Alananzeh I, *et al.* Implications for COVID-19: A systematic review of nurses' experiences of working in acute care hospital settings during a respiratory pandemic. *Int J Nurs Stud* 2020;111:103637.
- Galehdar N, Kamran A, Toulabi T, Heydari H. Exploring nurses' experiences of psychological distress during care of patients with COVID-19: A qualitative study. *BMC Psychiatry* 2020;20:489.
- Vieira CM, Franco OH, Restrepo CG, Abel T. COVID-19: The forgotten priorities of the pandemic. *Maturitas* 2020;136:38-41.
- Motahedi S, Aghdam NF, Khajeh M, Baha R, Aliyari R, Bagheri H. Anxiety and depression among healthcare workers during COVID-19 pandemic: A cross-sectional study. *Heliyon* 2021;7:e08570.
- Nasirizad Moghadam K, Chehrzad MM, Masouleh SR, Mardani A, Maleki M, Akhlaghi E, *et al.* Nursing workload in intensive care units and the influence of patient and nurse characteristics. *Nurs Crit Care* 2021;26:425-31.
- Nasirizad Moghadam K, Chehrzad MM, Reza Masouleh S, Maleki M, Mardani A, Atharyan S, *et al.* Nursing physical workload and mental workload in intensive care units: Are they related? *Nurs Open* 2021;8:1625-33.
- Sahebi A, Nejati-Zarnaqi B, Moayedi S, Yousefi K, Torres M, Golitaleb M. The prevalence of anxiety and depression among healthcare workers during the COVID-19 pandemic: An umbrella review of meta-analyses. *Prog Neuropsychopharmacol Biol Psychiatry* 2021;107:110247.
- Ayanian JZ. Mental health needs of health care workers providing frontline COVID-19 care. *JAMA Health Forum* 2020;1:e200397.
- Li F, Luo S, Mu W, Li Y, Ye L, Zheng X, *et al.* Effects of sources of social support and resilience on the mental health of different age groups during the COVID-19 pandemic. *BMC Psychiatry* 2021;21:16.
- Labrague LJ, De los Santos JAA. COVID-19 anxiety among front-line nurses: Predictive role of organisational support, personal resilience and social support. *J Nurs Manag* 2020;28:1653-61.
- Duncan DL. What the COVID-19 pandemic tells us about the need to develop resilience in the nursing workforce. *Nurs Manag (Harrow)* 2020;27:22-7.
- Schierberl Scherr AE, Ayotte BJ, Kellogg MB. Moderating roles of resilience and social support on psychiatric and practice outcomes in nurses working during the COVID-19 pandemic. *SAGE Open Nurs* 2021;7:23779608211024213.
- Labrague LJ, De Los Santos JAA. Prevalence and predictors of coronaphobia among frontline hospital and public health nurses. *Public Health Nurs* 2021;38:382-9.
- Hass M, Graydon K. Sources of resiliency among successful foster youth. *Child Youth Serv Rev* 2009;31:457-63.
- Pineda CN, Naz MP, Ortiz A, Ouano EL, Padua NP, Pelayo JM, *et al.* Resilience, social support, loneliness and quality of life during COVID-19 pandemic: A structural equation model. *Nurse Educ Pract* 2022;64:103419.
- Kim HJ, Park HR. Factors affecting post-traumatic stress of general hospital nurses after the epidemic of Middle East respiratory syndrome infection. *J Korean Clin Nurs Res* 2017;23:179-88.
- Öksüz E, Demiralp M, Mersin S, Tüzer H, Aksu M, Sarıkoc G. Resilience in nurses in terms of perceived social support, job satisfaction and certain variables. *J Nurs Manag* 2019;27:423-32.
- Choi B-S. Influence of social support and resilience on the nurse job performance. *Indian J Public Health Res Dev* 2018;9:788.
- Eisenberger R, Cummings J, Armeli S, Lynch P. Perceived organizational support, discretionary treatment, and job satisfaction. *J Appl Psychol* 1997;82:812-20.
- Veenema TG, Deruggiero K, Losinski S, Barnett D. Hospital administration and nursing leadership in disasters. *Nurs Adm Q* 2017;41:151-63.
- Karadas A, Dogu Ö, Oz SD. The effect of perceived organizational support of nurses on their resilience: A cross-sectional study from turkey. *Can J Nurs Res* 2022;55. doi: 10.1177/08445621221118800.
- Al-Homayan AM, Mohd Shamsudin F, Subramaniam C, Islam R. The moderating effects of organizational support on the relationship between job stress and nurses' performance in public sector hospitals in Saudi Arabia. *Adv Environ Biol* 2013;7:2606-17.
- Baskin RG, Bartlett R. Healthcare worker resilience during the COVID-19 pandemic: An integrative review. *J Nurs Manag* 2021;29:2329-42.
- Kılınç T, Sis Çelik A. Relationship between the social support and psychological resilience levels perceived by nurses during the COVID-19 pandemic: A study from Turkey. *Perspect Psychiatr Care* 2021;57:1000-8.
- Zimet GD, Dahlem NW, Zimet SG, Farley GK. The multidimensional scale of perceived social support. *J Pers Assess* 1988;52:30-41.
- Eisenberger R, Huntington R, Hutchison S, Sowa D. Perceived organizational support. *J Appl Psychol* 1986;71:500-7.
- Maleki M, Mardani A, Vaismoradi M. Insecure employment contracts during the COVID-19 pandemic and the need for participation in policy making. *Int J Environ Res Public Health* 2021;18:12548.
- Connor KM, Davidson JR. Development of a new resilience scale: The Connor-Davidson resilience scale (CD-RISC). *Depress Anxiety* 2003;18:76-82.
- Mehr FA, Zarea K, Farsi Z, Haghhighzadeh MH. The effect of positive thinking skills training on happiness and resilience

- of nurses in Shahid Baqaei oncology hospital of Ahvaz. Iran J Psychiatr Nurs 2022;10:65-74.
32. Bagherian-Sararoudi R, Hajian A, Ehsan HB, Sarafranz MR, Zimet GD. Psychometric properties of the Persian version of the multidimensional scale of perceived social support in Iran. Int J Prev Med 2013;4:1277-81.
 33. Eisenberger R, Armeli S, Rexwinkel B, Lynch PD, Rhoades L. Reciprocation of perceived organizational support. J Appl Psychol 2001;86:42-51.
 34. Safari Y, Asadi M, Khalijian S, Joursara MR. Analysis of relationships between organizational support, trust and organizational commitment among nurses. Q J Nurs Manage 2018;7:9-17.
 35. Wang L, Tao H, Bowers BJ, Brown R, Zhang Y. Influence of social support and self-efficacy on resilience of early career registered nurses. West J Nurs Res 2018;40:648-64.
 36. Liu X-X, Liu W-H, Ping M, Li C-Y, Liu X-Y, Song P. Correlation between resilience and social support and anxiety in obstetric nurses. Front Nurs 2018;5:311-5.
 37. Jo S, Kurt S, Bennett JA, Mayer K, Pituch KA, Simpson V, *et al.* Nurses' resilience in the face of coronavirus (COVID-19): An international view. Nurs Health Sci 2021;23:646-57.
 38. Zhou T, Guan R, Sun L. Perceived organizational support and PTSD symptoms of frontline healthcare workers in the outbreak of COVID-19 in Wuhan: The mediating effects of self-efficacy and coping strategies. Appl Psychol Health Well Being 2021;13:745-60.
 39. Zhang N, Xu DX, Li JJ, Gong ZX. Effect of perceived organizational support on fatigue of Chinese nurses during the COVID-19 pandemic: Resilience as a mediator. Int J Ment Health Promot 2021;23:243-54.
 40. Havaei F, Ma A, Staempfli S, MacPhee M. Nurses' workplace conditions impacting their mental health during COVID-19: A cross-sectional survey study. Healthcare (Basel) 2021;9:84.
 41. Silva SMD, Baptista PCP, Silva FJD, Almeida MCDS, Soares RAQ. Resilience factors in nursing workers in the hospital context. Rev Esc Enferm USP 2020;54:e03550.
 42. Labrague LJ. Psychological resilience, coping behaviours and social support among health care workers during the COVID-19 pandemic: A systematic review of quantitative studies. J Nurs Manag 2021;29:1893-905.