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Job demands and job resources for job satisfaction and quality health outcomes among nurses during COVID-19: A cross-sectional study in Indian health settings

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Abstract:

BACKGROUND: Coronavirus disease 2019 (COVID-19) pandemic has created unprecedented challenges for the Indian health-care system. Nurses, being vital partners of health care, experience tremendous challenges and job stress to deliver quality health care with limited resources. Drastic surge in health-care demands during COVID-19 pandemic amplified the challenges for nurses, yet it remains a neglected area of concern. Job resources like working conditions, team support, and job demands like workload, stress, and ethical dilemmas greatly affect the job satisfaction and health outcomes in nurses. The study aims to identify the job demands and resources among nurses in connection to COVID 19.

MATERIALS AND METHODS: A quantitative cross-sectional design was adopted to assess the impact of job demands and resources among registered nurses (N = 102).Those in the age group of 21–58 years and working in regular and COVID-19 patient care were included. Semi-structured interview schedule was used, and psychological impact was assessed through DASS-21 scale. Data analysis was done by descriptive and analytical statistical applications using Statistical Package for the Social Sciences (SPSS) 20. The level of significance was $P \leq 0.05$.

RESULTS: The study findings revealed that 66.67% of the nurses frequently experienced work pressure, 72.55%experienced frequent moral distress, and 80.4%were dissatisfied due to being non-participatory inpatient care decision making. Of all, 67.3% agreed that they hadjob dissatisfaction and 79.4% felt conflicting work climate.

CONCLUSION: Nurses, being key players in the health care, experience constant challenges in the delivery of safe and quality patient care. Addressing the challenges of job stress and promoting job resources can positively impact their job satisfaction, perceived autonomy, job morale, and commitment, which directly influence positive health outcomes.

Keywords:

Job Demands, job resources, job satisfaction, quality health outcomes and registered nurses

Introduction

The world is undergoing tremendous challenges due to the abrupt outbreak of the coronavirus disease 2019(COVID-19) pandemic which has impacted every sector of the society. The pandemic has greatly altered the landscape of health care, raising the burden on health-care workforce hugely. In the first half of the first wave it self, more than 15 million cases of COVID-19 had been recorded globally, which surged further. While the increasing disease burden impacts the public health systemas well asthe private sector, the resources and support system

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available to the frontline health staff, especially the nursing staff, arehighly compromised. Nurses, being the major source of frontline health care, experience insecure working conditions, inadequate supplies, and detrimental work environment, resulting inmoral distress, burnout and adverse impact on quality health care delivery and also adverse impact on their mental health, and social well-being. Pandemic-associated disease burden is taxing the already overburdened Indian health-care system, amplifying the workload on the frontline health workforce amid the limited resources available. Estimates suggest that about 20% of frontline health workforce got affected themselves with COVID-19 infection with striking amount of mortality.

When compared to other respiratory viruses, the COVID-19 infection demanded steady use of personal protective equipment (PPE) by the frontline health staff while caring for people. Use of PPE by other stakeholders of health-care organizations and by the general public has made the demand increase further. However, increased demands for the use of PPE caused shortage in supply; even though local production of PPE tried to meet the demand, the supplies are inconsistent and inadequate. Increased work burden, inadequate resources, insecure and unsafe working conditions predispose to t physical and mental health challenges among the nurses and also affect adversely the quality care outcomes.

Nurses are accountable to their families, colleagues, team, institutions, licensing bodies, and society as a whole.[1] They are educated to believe that they are primarily accountable to the patients and act as patient advocates; however, the health-care environment challenges them with toughest and conflicting situations with minimal scope for professional autonomy. Recent research[2] support the importance of job motivation as one of the essential factors in quality care delivery among nurses. Frequent ethical dilemmas, unsupportive working conditions, and lack of autonomy related to patient care may result in increased stress, poor coping, and job dissatisfaction among nurses. Structural attributes related to the context of care and health service delivery, such as ethical climate, autonomy, team approach, and hours of nursing care per day, act as nursing sensitive indicators and positive job resources related to safe patient care and quality health outcomes. On the other hand, strenuous job demands such as increased workload, lack of autonomy, and interpersonal relationships can negatively affect the mental health in nurses. On the top of it, frequent ethical conflicts at the work environment give rise to moral distress. Uresolved moral distress leads to burnout, job dissatisfaction, and adversely impact quality health-care outcomes. Nurses' undistinguished voice and feeble involvement inpatient care decisions and expectation "to follow orders," result in emotional anguish and lack of control over the care decisions, affect their self esteem, job morale and job satisfaction adversely.

Ethical challenges arise at the workplace during situations where even after knowing the right action, they are not able to take the right step for the benefit of patients. Nurses recurrently experience ethical challenges in the workplace, which may result in job dissatisfaction, diminished job morale, and which, in the course of time, may turn into moral distress. Moral distress may give rise to psychological anguish, loss of control over work-related decision-making, and powerlessness in acting for patient safety due to institutional and work-related constraints.[3] An ethical environment[4] is the working conditions in which the nurse is comfortable identifying the ethical work culture and addressing the ethical concerns for a healthy work environment. Healthy work environment with an open and fair discussion for patient care, team approach, and supportive environment engages nurses in moral decision-making in work to carry out job responsibilities with confidence. The ethical climate of the hospitals is directly associated with the self-esteem, coping skills, and job satisfaction of nurses. Frequently experienced stress not only causes physical and psychological symptoms, but also reduces one's self-worth and self-esteem. Moral distress is a growing concern among nurses globally,[5] yet unaddressed mostly. Nurses experiencing moral distress may withdraw from work or ethically challenging situations or change their work or the workplace if the issues are unresolved.[6]Although moral distress is a common challenge in both nurses and doctors, nurses experience higher levels of distress comparatively. Evidence suggests that moral distress is negatively associated with job satisfaction and the perceived quality of health care.[7] Resilience has been shown as the resource for coping with moral distress and burnout. However, little research has been available to understand and address job demands and moral distress among health-care workforce. Current COVID-19 pandemic further aggravated the challenges in working conditions and increased the moral distress and work stress among nurses. Studies on job demands and resources and associated distress are very limited among nurses from Indian health-care settings. Although a few studies have examined cross-cultural ethical concerns in nurses[8] and association of resilience with stress,[9] limited evidence is available indicating the association between recurrent exposure to work stress and burnout among nurses.[10-12] Persistent moral distress and stress among nurses is a growing challenge in the health-care

system; however, it is paid less attention. Burnout, compromised work environment, and deficient professional autonomy at the workplace are the acute concerns of the health-care system. Policymakers need to promote workplace well-being, health, and job morale among nurses, which directly impacts quality patient care outcomes. Considering this need, the present study aims to investigate the work-related stress, depression, anxiety, and perceived job demands and job resources among registered nurses in Indian health-care settings.The findings will help to develop interventions and models to improvemoral resilience among nurses to cope with the challenges encountered on a regular basis as well as during unprecedented situations like the pandemic.

Materials and Methods

Study design

Quantitative research approach with descriptive cross-sectional design was used to collect data on the selected variables among nurses working in public-based hospitals in Hyderabad and Ranga Reddy districts in Telangana state between April and June 2021.

Study population and sampling

Registered nurses (RN), who were working for fulltime on regular and contract bases, with diploma or above professional qualification and at least 1 year of clinical experience participated in the online survey through Google forms and emails, as per their convenience. The sample size was calculated using a single population proportion formula at 90% significance level by considering the proportion of work-related stress (50%) with a 5% margin of error. Thus, the total sample size was obtained as 106 nurses, which was calculated to nearing total, N = 110. However eight of them (7.27%) withdrawn from participation due to reasons of high workload and family reasons and a total of 102 nurses participated in the study.

Data collection tool and technique

A structured questionnaire was used to collect data on sociodemographic information. Job resources were measured for 12 items rated on a scale ranging from "highly satisfied"(scored as 4) to "highly dissatisfied"(scored as 1). Job demands assessed on five areas, that is, perceived work pressure, workload, ethical conflicts at workplace, work-related stress, and moral distress, were scored on a scale from 1 (very often) to (4) rarely. Perceived job satisfaction and perceived impact on quality health-care outcomes were measured in 4-point Likert scale. The validity was assessed by feasibility study and reliability by Cronbach's alpha, which was found to be 0.78. Reasons for moral distressand stress coping measures adopted by the nurses were assessed through a semi-structured questionnaire. Depression anxiety stress scale Depression anxiety stress scale- 21

(DASS-21), a standardized tool with reliability of (Cronbach's alpha) 0.84 was used to assess depression, anxiety, and stress in nursing professionals working in COVID-19 patient care as well as in regular clinical care. DASS is a set of self-report scales used to measure depression, anxiety, and stress. It contains seven items, and the scores are evaluated from normal to extremely severe.[13] The study questionnaire also included information related to fear or difficulties experienced during COVID-19, support and training received during COVID-19 patient care, and common reasons for anxiety among nurses.

Ethical considerations

Institutional ethical approval was obtained and informed consent was procured by the nurses who were willing to participate in the study after explaining the purpose of the study, before initiating the data collection process.

Results

This study aimed to explore the job demands, job resources, preparedness and resource availability in COVID-19 patient care. In total, 102 nurses responded out of 110 (92.73%);eight of them could not participate due to workload and other personal reasons.

Mean age of the participants was 36.28 years, and all of them were females. No male nurses were available to respond from the participating institution.

RN with age ranging between 21 and 58 years participated in the study (*N* = 102).Among them, 85.29% were in COVID-19 care and others (1.71%) were in non-COVID care units during the study [Table 1].

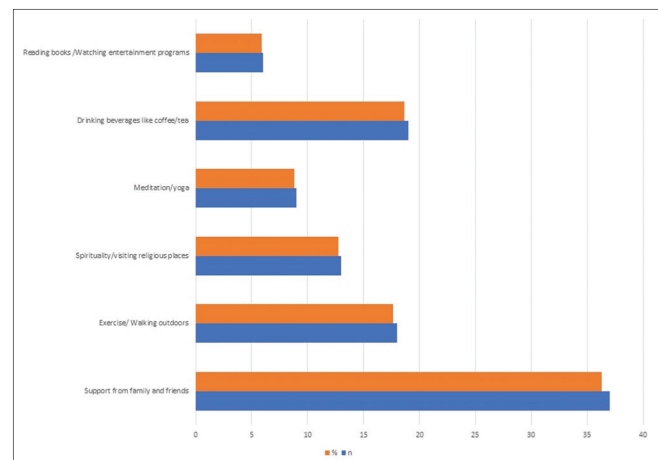

Figure 1: Coping measures in nurses

Mental health was assessed through DASS-21 questionnaire. Reasons for fear and anxiety in connection to COVID-19 workload were identified. Findings indicated that 37.25% of the RN [Figure 1] reported mild depression, 29.4% had moderate depression, 35.3% were moderately anxious, 46.1% had moderate stress, and 14.71% had severe stress. Support from the family and friends wasthe most common coping measure identified in nurses.

Nurses frequently experienced ethical conflicts in workplace (78.4%), 32.35% of them often and 36.28% of them very often experienced high workload, and 43% of them often and 31.3% of them very often experienced work-related stress [Table 2]. Job satisfaction showed a positive association ($r = 0.41$, $P < 0.001$) with ethical work climate and quality patient care ($r = 0.39$, $P < 0.001$).

Nurses at workplace experienced lack of professional autonomy and non-participatory working situations in patient care (92.16%) and dissatisfaction with the quality of workplace environment (78.43%).Very few nurses (22.55%) were satisfied with the team support obtained from their colleagues and higher officials, whereas 77.45% were dissatisfied with the quality of work environment[Table 3]. Job satisfaction among nurses showed that 53.92% were dissatisfied, 10.79% were highly dissatisfied, and 20.59% agreed that they were satisfied. About 62.75% felt that the scope for professional growth and promotional opportunities was not favorable for nurses. Majority of nurses (76%) said that limited staff was a barrier to quality patient care. Oher factors were having too many patients and the nurse: patient ratio sometimes reached 1:60–120, where they were unable to deliver the care satisfactorily, resulting indistress and professional dissatisfaction. Lack of adequate material resources (64%), inadequate team support (77%), and lack of professional cohesion and positive interpersonal relationships (74.5%) were the other barriers in delivering quality patient care.

Moral distress was very frequently experienced (72.55%) by nurses, and lack of ethical work climate was one of the major causes (84.3%) for moral distress among nurses. Non-participatory work environment (80.4%), inadequate resources (68%), inappropriate work conditions (60.78%), high workload (70.59%), lack of recognition and respectful work environment (74.51%), and deficient public image (72.55%) were some of the other reasons for moral distress among nurses[Figure 2]. The mean values of moral distress among RN and head nurses/nursing supervisors were 63.6 ± 32.4 and 48 ± 37.2, respectively. Family and friends were the major source of coping among nurses, and 18.63% showed dependence on beverages like tea or coffee [Figure 3]. Due to their challenging work conditions, health-care workforce members frequently require psychological support mechanisms. Support from family and friends was the major coping measure (36.27%) for nurses. Also, 66.67% nurses in the study expressed the need for psychological supportive services at the workplace [Figure 4].Fear of spreading infection from workplace to close family members was the most common fear (56.9%).Fear of carrying blame and losing relationships due to continuous COVID-19 patient care

Table 1: Sociodemographic characteristics of the nursing professionals

Demographic variables	*n*	%
Age (years)		
21-25	42	41.2
26-35	48	47.1
36-58	12	11.7
Unit of workplace		
COVID-19 patient care	87	85.29
Regular/non-COVID care	15	14.71
Position		
Nursing officer/staff nurse	69	67.65
Head nurse/in-charge nurse	33	32.35
Professional qualification		
Diploma (GNM) in Nursing	52	51.0
BSc Nursing	46	45.1
MSc Nursing	4	3.9
Work experience		
1-5 years	63	61.8
6-10 years	15	14.7
11 years and above	24	23.5

COVID-19=coronavirus disease 2019

Table 2: Job demands among nursing professionals

Job demands among nursing professionals	*n*	%
Perceived work pressure		
Very often	23	22.55
Often	45	44.12
Sometimes	26	25.49
Rarely or not felt	08	7.84
Workload		
Very often/often high workload	70	68.63
Sometimes high workload	23	22.55
Optimal workload	9	8.82
Experience of ethical conflicts at workplace		
Very often/often	79	77.45
Sometimes	19	18.63
Rarely	4	3.92
Perceived work-related stress		
Very often stressful	32	31.37
Often stressful	44	43.14
Sometimes stressful	22	21.57
Rarely stressful	4	3.92
Perceived moral distress		
Most often distressed	22	21.57
Often distressed	52	50.98
Sometimes distressed	24	23.53
Rarely/not distressed	4	3.92

Table 3: Percentages of Perceived Job resources among nursing professionals

Perceived job resources in nurses	Highly satisfied	Somewhat satisfied	Dissatisfied	Highly dissatisfied
1.Working conditions/resources	1.96	19.61	45.10	33.33
2. Team support	2.94	19.61	47.06	30.39
3.Career advancement	9.80	27.45	50.00	12.75
4.Interpersonal relations and team approach	7.84	17.65	21.57	52.94
5.Inclusive and ethical work climate	5.88	14.71	26.47	52.94
6.Professional development opportunities	11.76	23.53	38.24	26.47
7.Autonomy/participation in patient care decisions	3.92	7.84	11.77	76.47
8.Professional respect	3.92	21.57	54.90	19.61
9.Workplace well-being and safety	3.9	23.5	37.3	31.4
10.Family support	35.3	11.8	13.7	7.8
11. Public image of nursing	1.96	25.49	19.61	52.94
12. Perceived job satisfaction	5.88	14.71	26.47	52.94

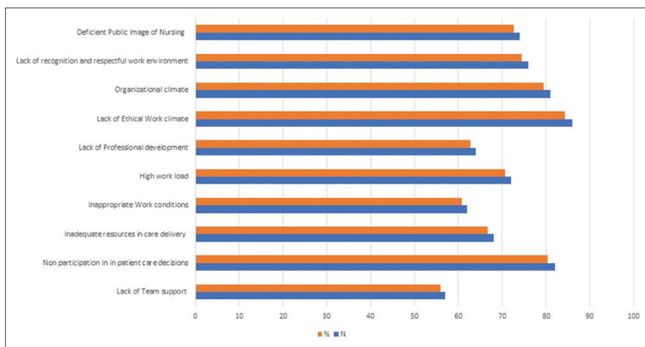

Figure 2: Perceived reasons for moral distress

were some other reasons offear among nurses [Table 4]. There was minimal or negligible psychological and professional support available for nurses at workplace, which was found to be one of the major reasons for stress.

Discussion

Nurses are essential partners of health care, and they frequently encounter work-related pressure and ethical conflicts due to challenging health-care demands and work conditions. Unpredictable and emergency situations like COVID-19 pandemic tend to multiply the pressure and anxiety among health-care professionals. Nurses who are trained to provide quality and safe patient care with ethical competence to save lives and restore the health are at tremendous risk of health of their own and find it demanding to cope up with constantly encountered uncertainty and inadequate resources. Frequent experience of work dilemmas, for instance, how to distribute quality time among highly loaded patient ratio and scarce resources to needy patients, challenge them and they may land in such a state that they have their own physical and mental health issues. However, they wish to resolve their own health needs along with patients' needs and hold responsibility for their family and friends with minimal or insufficient resources,[9,13,14] and in doing so, they tend to experience work pressure, burnout, and moral distress. Evidence supports that job

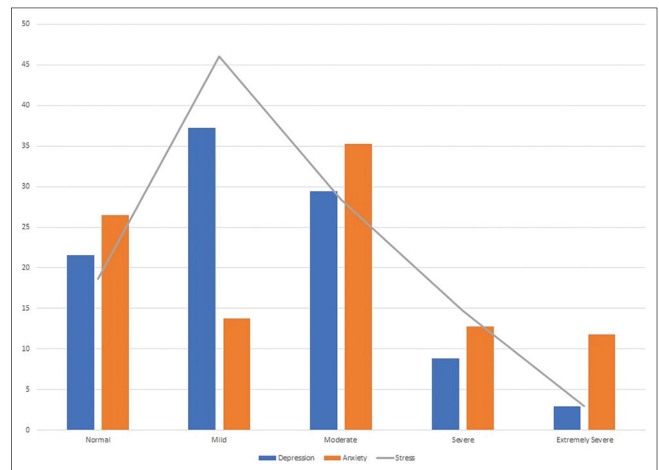

Figure 3: Depression, anxiety, and stress in nurses

stress, moral distress, lack of ethical and respectful work environment, and deficient scope in career advancement may result in nurses experiencing burnout, leaving their profession and changing their career.[15]

During the recent outbreak, many nurseslived away from their families and friends to ensure their safety,[16] while striving to reduce their exposure to infection, which further demands their mental health needs. Perceived risk attached to care of COVID-19 infection-affected patient' care was associated with increased work stress among nurses. Strategies to identify and resolve work stress and moral distress may lead to a lower employee turnover and greater organizational commitment in nurses,[17] which are linked with higher job performance. Ethical work climate enables positive work environment and greater job morale in nurses.[18] The study results showed that 57% of the nurses were anxious and had fear of infecting their loved ones due to working with COVID-19-infected patients, which is consistent with a recent study[19] which reported that nurses were experiencing additional stress during the current outbreak. The present study findings strengthen the need for psychosocial support interventions and ethical

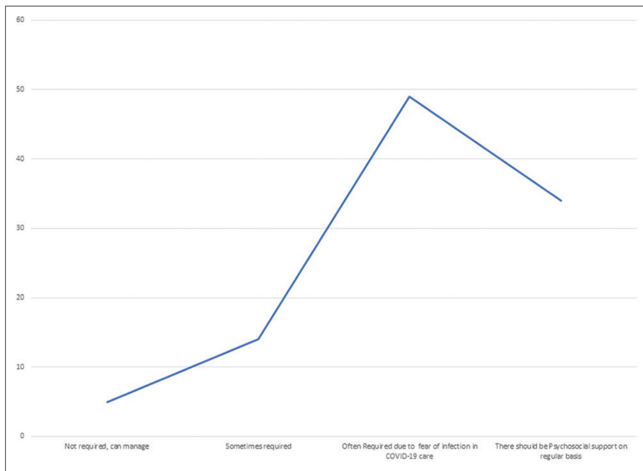

Figure 4: Perceived need for psychosocial support in nurses
COVID-19 = coronavirus disease 2019

work climate, highlighting the considerably higher levels of work-related stress and moral distress in nurses. The findings were similar to the findings of a study which reported significant stress and loneliness perceived by nurses during care delivery in emergency outbreaks.[20] Getting infected and spreading the infection to family members were a few major causes for fear related to COVID-19, which is echoed in recent studies.[21,22]

The study findings showed that 46.08% of the nurses had moderate stress and 14.7% had severe stress; the findings are consistent with reports that stress among nurses is high during the current pandemic,[23-25] as well as in other emergency situations.[26] The findings of the study showed that perceived stress and anxiety were considerably high in nurses during COVID-19 care which may negatively affect the quality health care outcomes, especially in emergencies like the pandemic. Similarly, a recent study reported the importance of team support, adequate resources, and training on COVID-19 knowledge and care that increase nurses' confidence and preparedness and reduce stress among nurses.[22] Present study findings reported that lack of respectful work environment, deficient ethical work climate, and being non-participatory in patient care decisions (88%) were the major sources for moral distress in nurses. Evidence demonstrates that nurses' participation in patient care decision-making and a respectful work environment would promote professional autonomy and confidence in nurses while delivering care.[27] Lack of appropriate public image was another factor for moral distress in nurses, echoing the findings from a previous study.[7,28] Support from the family and friends was the highest valued support by the nurses in the present study, similar to previous evidence.[29] The findings of a study showed 19% of the nurses take alcohol to cope with stress.[30] A similar number (18.63%) showed dependence on beverages like tea or coffee, but none reported alcohol intake in our study, probably due to cultural influence in India. Studies suggest that to reduce burnout and promote quality of health-care outcomes, there should be balance in such a way that straining job demands are reduced and job resources are increased.

Table 4: COVID-19 preparedness and resources in health care

COVID-19 preparedness and resources in health care	*n*	%
Received training before handling COVID-19 cases		
Received by government sources	14	13.73
Received by hospital administration	53	51.96
Other sources	8	7.84
No training received	27	26.47
PPE equipment availability during COVID patient care		
PPE	46	45.10
Only N-95 masks	26	25.49
Gloves and sanitizer	12	11.76
Only gloves	18	17.65
How frequently posted for double duties in a week time?		
Three times and more in a week	18	17.65
Twice in a week	48	47.05
Once in a week	22	21.57
None	14	13.73
Number of night shifts in a week time		
Once	12	11.76
Twice	33	32.35
Three times	36	35.29
More than three times	21	20.60
Common reasons for fear/anxiety whileworking duringCOVID-19 pandemic		
Fear of spreading infection to closerelatives and friends	58	56.86
Fear of carrying blame	12	11.76
Fear of breaking relationships	15	14.71
Fear of losing loved one	17	16.67

COVID-19=coronavirus disease 2019, PPE=personal protective equipment

Limitations and recommendation

This study has the following limitations. The participants were only public-based hospitals, and nurses from private/corporate hospitals were not part of the study. Thus, the findings cannot be generalized. The pandemic restrained personal communication with the participants who were on emergency care and in quarantine during part of the study period; hence, online self-administered questionnaires were used, which might have the limitation of documenting lived experiences of nurses in depth on the impact of COVID-19 in professional and personal perspectives.

Future research with a wider sample size among nurses working in different care units of both private and public sectors is suggested. Future research to explore lived experiences, and qualitative data and longitudinal and interventional research are recommended. Policymakers should support further research to build adequate evidence as well as measures to address the burnout and moral

distress among nurses, in order to promote professional resilience, which is essential for quality health care.

Conclusion

Nurses in the study experienced significant stress and moral distress due to unfavorable job demands. Common reasons for moral distress included lack of autonomy in patient care decisions, deficient team support, lack of respect in workplace, and lack of psychosocial support mechanisms to cope up with ethical dilemmas, compromise in societal image for the nurses and work-related stress. Younger nurses working in direct clinical care experienced higher moral distress when compared to senior nurses working in supervisory roles. The study shows that the work-related job demands and work stress during COVID-19 pandemic for nurses in Indian health settings are considerably high. Further, the study explores nurses' experiences on job resources, concerns related to lack of resources and support to cope with ethical conflicts, and the psychological stress that highlights the gaps in organizational climate and team approach in health care. Nurses felt a strong need for psychosocial support and team approach, and participatory and shared decision-making inpatient care. TWork environment with eam approach and psychosocial support promote mental health and ethical competence among nurses, in order to enable them to deliver effective patient care in regular as well as unprecedented situations such as COVID-19 pandemic to meet the demands of health care effectively.

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Conflicts of interest

There are no conflicts of interest.

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