REVIEW ARTICLE

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Coping strategies that motivated frontline nurses while caring for the COVID-19 patients during the pandemic: A scoping review

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Abstract

Background: The world faced a great health crisis during the COVID-19 pandemic. Consequently, the health care providers struggled and faced tremendous difficulties in treating high-load critical patients. This was particularly true in low- and middle-income countries where the work and patient loads are always higher and nurses at the forefront must deal with emergencies while being at high risk of exposure. However, little is known about the survival strategies of frontline nurses as dealt with the pandemic.

Objectives: This study catalogued the coping strategies of frontline nurses to deal with caring for the COVID-19 patients during the pandemic.

Methods: The Arksey O'Malley framework was followed to conduct a scoping review. A systematic literature search was conducted using three databases: Google Scholar, Scopus and PubMed; and out of the 192 studies, 12 met the inclusion criteria set for this review study.

Results: A total of 44 strategies were identified that motivated nurses to deal with the COVID-19 situation, and these strategies could be categorized into five main themes: nurses' self-strategies, nurses' strategies at the ethical level, employers' strategies, nursing leaders' strategies and supplementary strategies.

Conclusions: The findings of this study will provide guidance for health care workers, employers, policymakers, regulators and other stakeholders to adopt and promote different strategies in managing difficult emergency situations in future.

Implications for nursing management: This study emphasizes the importance of learning how to deal with adversity by health care workers and organizations in an emergency.

KEYWORDS
coping strategies, COVID-19, nurses, pandemic, patient care, scoping review

1 | BACKGROUND

The COVID-19 outbreak has highlighted the tremendous vulnerability of health care workers (HCWs), especially direct patient caregivers like nurses all across the world. Patient handling and transferring; sharp injuries and spills exposure to blood or body fluids that may carry human immunodeficiency virus (HIV), hepatitis B and C virus among others; exposure to chemical agents; work-related anxiety and depression; and workplace harassment and violence are more frequent occupational stressors for nurses (Koehoorn et al., 2015). These challenges are more acute for the low- and middle-income countries (LMIC) where the health care delivery system operates in less than ideal conditions and HCWs including nurses often work in a compromised compromised work environment (Workie et al., 2020). There is also huge shortage of nurses around the world (Lopez et al., 2021) particularly so in LMIC. Moreover, nurses deal with high level of work stress (Mo et al., 2020), manage complex patient care situations (Combrinck et al., 2020) and come across emergency situations on a regular basis (Fjällman et al., 2021).

The provisions or supply of basic necessities such as food, clothing, shelter, health care and education were all in jeopardy in most countries as COVID-19 impacted almost all spheres of individual lives and all national level delivery systems suffered because of a lack of preparation, expertise and resource support to deal with a pandemic of this massive scale in severity, nature and extent (Ramsari, 2020). Brickell et al. (2020) revealed that most countries struggled to provide health care services given the risk, uncertainty and fear associated with delivery of care for the COVID-19 patients. Moreover, health care facilities in developed and developing countries battled to provide adequate care during the pandemic as these were overburdened with patients that created many organization-level limitations (AL-Abrrow et al., 2021; Gunawan et al., 2021). Inadequate supply of personal protective equipment (PPE) (Cohen & van der Meulen Rodgers, 2020) and insufficient human resource staffing (Harrington et al., 2020) were some of the challenges health care facilities faced. In addition, hospital capacity in terms of number of beds and oxygen supply/intensive care unit (ICU) supports (Bonnet et al., 2021) was not adequate to admit COVID-19 infected patients (De Nardo et al., 2020). Unfortunately, according to the International Council of Nurses (ICN, 2020), an estimated 20,000 frontline nurses died worldwide in this pandemic.

Access to health care has always been considered to be one of the most important human rights (Brunelli et al., 2021). The gains of medical advancement and the digital revolution, which started in health care in the 19th century in health care since the 19th century seemed to have vanished in thin air as a pandemic of this magnitude and severity with so high case fatality rate afflicted the humanity (Keesara et al., 2020). No one could imagine that the huge population size infected with coronavirus would face extreme difficulty in receiving timely, adequate and appropriate health care (Kumar et al., 2020). Different waves of coronavirus came up and afflicted the population en masse that further complicated the already strained health care delivery system and inflicted moral wounds on nurses and other direct care providers (Magnusson et al., 2020; Solmi & Correll, 2021). However, the world witnessed the great dedication of health workers who risked their lives to help the infected and suffering patients. Nurses were the major frontline fighters in this war because they spent a large number of their working hours caring for these patients at their bedsides. Therefore, it is critical to explore, understand and describe how nurses responded to less than ideal work environments using various coping strategies. This review study looked into the various techniques adapted by frontline nurses while caring for COVID-19 patients during this pandemic.

2 | METHODS

2.1 | Study design

The scoping review was conducted using five steps of the Arksey and O'Malley framework (Arksey & O'Malley, 2005) to determine the strategies employed by nurses in handling COVID-19 cases during this difficult pandemic situation. This study employed the following steps: (I) formulation of the research questions; (II) finding relevant research; (III) selection of studies; (IV) charting the data; and (V) collating, summarizing and reporting the findings. Scoping reviews were used to uncover knowledge gaps, develop research agendas and determine decision-making implications (Tricco et al., 2016).

2.2 | Formulation of the research questions

This research question was formulated after extensive discussions among the author reviewers: 'What are the coping strategies that motivated frontline nurses while caring for COVID-19 patients during this pandemic?'

2.3 | Search methods

From three databases (Google Scholar, Scopus and PubMed), the relevant original articles were selected between September and October 2021, for which the full texts were available and written in English. The keywords included 'strategies OR techniques AND nurses OR healthcare workers AND covid-19 OR pandemic AND Experiences OR caring COVID patients AND coping OR survival strategies OR techniques'. The term 'experience' was used because some nurses had a positive experience in coping with pandemic situations. Also, the term 'healthcare worker' was used because nurses are part of the HCW team (Table 1).

TABLE 1 Database searching (Duignan et al., 2021)

Database (September 2021 to October 2021)	Retrieved
Google Scholar	112
PubMed	10
Scopus	70
Total	192

FIGURE 1 PRISMA flow diagram
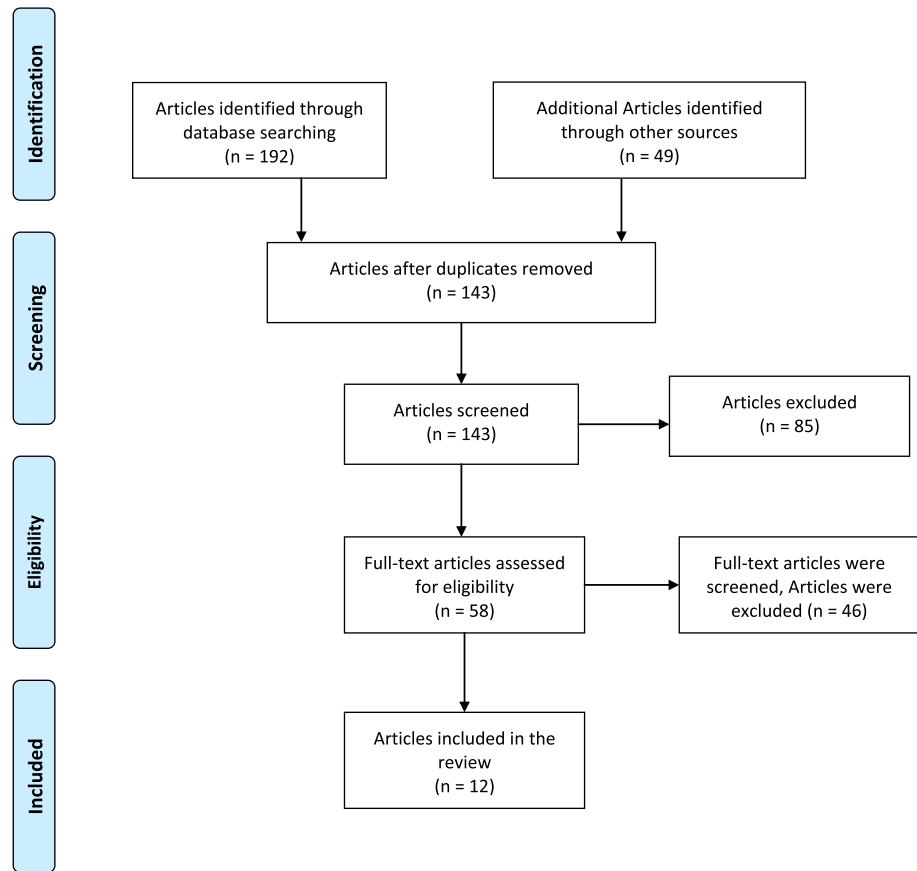
2.4 | Inclusion and exclusion criteria

The following types of articles were searched for (I) original research published in the COVID-19 era from 2020 to 2021, (II) the study involved nurses who had experience caring for patients with COVID-19, (III) studies available in English with full text and (IV) studies explored nurses' coping strategies. At the end, 12 articles met all the inclusion criteria. The exclusion criteria were short reports, commentary, editorials, review articles, magazine articles, perspectives and letters to the editor.

2.5 | Selection of studies

All authors searched the literature independently following the guideline and objectives of this study. All authors conducted independent literature searches. After that, the duplicate articles were removed.

2.6 | Charting the data

After the article selection process, data were extracted on a Microsoft excel sheet, which consisted of the authors' names, date of

TABLE 2 Categories of selected studies

Categories	Quantity	%
Qualitative studies	5	41.67
Mixed-methods study	2	16.67
Comparative study	1	8.33
A cross-sectional study	1	8.33
Grounded theory approach	2	16.67
Longitudinal study	1	8.33
Total	**12**	**100%**

publication, country, study sample, sample size, data collection time, study design, objectives and finally identified coping techniques/strategies.

3 | RESULTS

3.1 | Search results and quality assessment

After screening 192 identified articles (Figure 1), 12 articles were finally selected (Table 2). The five articles reported qualitative studies (41.67%), two articles of mixed-method type (16.67%), two were

TABLE 3 Coping strategies derived from the selected studies (Squires et al., 2017)

Studies	Coping strategies				
	Nurses' self-strategies	Nurses' strategies at the ethical level	Employers' strategies	Nursing leaders' strategies	Supplementary strategies
Huang et al. (2020)	v		v		
Rony et al. (2021)	v				
Zhang et al. (2020)	v		v	v	
LoGiudice and Bartos (2021)	v				
Kackin et al. (2021)					v
Tosepu et al. (2021)	v				
Catania et al. (2021)			v	v	
Ohta et al. (2021)	v	v			
Manik et al. (2021)	v	v			v
Zhou et al. (2021)	v		v		
Pogoy and Cutamora (2021)	v	v			
Demirci et al. (2021)	v	v	v		v

grounded theory studies (16.67%), one comparative study (8.33%), one longitudinal study (8.33%) and one cross-sectional study (8.33%).

3.2 | Analytical findings

A total of 44 strategies (Tables 3 and 4) were identified and categorized under five themes: (1) nurses' self-strategies, (2) nurses' strategies at the ethical level, (3) employers' strategies, (4) nursing leaders' strategies and (5) supplementary strategies.

3.3 | Nurses' self-strategies

Nurses adopted self-strategies to deal with the COVID-19 emergency according to a majority of the studies. Nurses felt they were in the position of patients, and nurses' resilience in emergency situations aided them in handling work stress (Rony et al., 2021). Pogoy and Cutamora (2021) discussed that several nurses realized that life is short and they should value it; thus, nurses united together to minimize work burden. LoGiudice and Bartos (2021) revealed that nurses expressed their pride in being on the front lines as a nurse. Being a nurse gave them a sense of pride, which motivated them to stay confident and feeling heroic (Demirci et al., 2021). Also, the sympathy (Ohta et al., 2021) and positive perspectives (Demirci et al., 2021) of the nurses encouraged them to communicate closely with their patients and to have enough affection for them to help them manage difficulties. Moreover, nurses were able to maintain emotional control during pandemic crises by convincing themselves that fighting the deadly virus was a normal part of their job in the COVID-19 era (Pogoy & Cutamora, 2021). Nurses' emotional coping skills included providing emotional support to the patients, accepting any worsening circumstance optimistically and

performing nursing tasks without becoming confused (Huang et al., 2020). Besides, nurses were self-aware in managing COVID-19 patients by wearing PPE and cleaning their hands often (Zhang et al., 2020). Although the PPE supply of health care organizations was limited during the pandemic crisis, nurses showed their creativity by making masks from clothes and gowns from raincoats (Tosepu et al., 2021).

As frontline fighters, they were able to focus on the work without fear. When corona patients and deaths were on the upswing, nurses rarely saw corona-related news to reduce their own anxiety, had a tendency to avoid unfavourable situations at all costs and were always ready to work in any situation (Zhang et al., 2020). Zhang et al. (2020) also said that the nurses were mentally prepared to the point and that is why they ran campaigns in various locations to raise awareness of coronavirus infections among the general people. In addition, the nurses were grateful to God (Allah) for giving them the chance to help corona patients, believing that it was a nurse's job to do clinical tasks honestly (Manik et al., 2021). A few nurses surrendered to God (Allah) after realizing that He is in charge of everything and that they must try their best in order to please Him (Tosepu et al., 2021). Thus, nurses used prayers, meditation and other techniques to improve their emotional responses (Rony et al., 2021).

3.4 | Nurses' strategies at the ethical level

Nurses were professionally vigilant about offering proper nursing activities, coordination with other staff, managing workload situations and so on (Manik et al., 2021). In an emergency, nurses felt it was their professional obligation to be by the critical patients' side (Pogoy & Cutamora, 2021). Also, nurses were passionate about their work and realized how important it was to fight illnesses at any

TABLE 4 Characteristics of included studies

Author, year, country	Sample	Sample size	Data collection time	Study design	Objectives	Coping strategies/major findings
Huang et al. (2020) Anhui Province, China	Nurses and nursing students	Nurses = 374	1 to 20 February 2020	A comparative study	To investigate nurses' and nursing students' emotional responses and coping styles during COVID-19 outbreak	Nurses' self-strategies: emotion-focused coping such as self-emotional control, tendency to deal any uncertain moment, taking a challenging situation positively, religious belief, humour control and avoiding self-confusion. Employer strategies: problem-focused coping such as proper planning and adequate instrumental support.
Rony et al. (2021) Bangladesh	Frontline nurses caring for patients with COVID-19	20	January to March 2021	Qualitative study	To explore frontline nurses' experiences caring for patients with COVID-19	Nurses' self-strategies: empathy (feeling self in a patient position), prayer or meditation establishing emotional self-control.
Zhang et al. (2020) Wuhan and Shanghai, China	Frontline nurses caring for COVID-19 patients	107	In March 2020	A cross-sectional study	To explore perceived effective morale support strategies	Nurses' self-strategies: recreational activities, limited watching of COVID-19 news and taking preventive measures. Employer strategies: arranging health-promoting activities (health awareness campaign) and government allowance (money was given as an incentive). Nursing leaders' strategies: Supportive team leader.
LoGiudice and Bartos (2021) United States	Nurses caring for COVID-19 patients	43	Between early May and end of June 2020	A convergent mixed methods	To understand nurses' lived experiences during the COVID-19 outbreak and to examine their resiliency	Nurses' self-strategies: feeling proud as a nurse, positive feelings in difficult situations, belief in controlling ones emotions and restorative self-care (e.g., grooming, engage in exercise and sit in the sun light).
Kackin et al. (2021) Istanbul, Turkey	Nurses caring for COVID-19 patients	10	9 May and 12 May 2020	A qualitative study	To determine the experiences and psychosocial problems of nurses caring for the COVID-19 patients	Supplementary strategies: short-term coping strategies (handle difficult situations normally and avoiding negativity) and needs (psychosocial support from colleagues, coworkers, families, organizations and society).
Tosepu et al. (2021) Indonesia	Doctors, nurses, public health practitioners, midwife, surveillance team member and health analyst	Nurses = 23.10%	In April 2020	A descriptive qualitative study	To explore the experience of health care workers in combatting COVID-19	Nurses' self-strategies: interest in performing prayers, creative activities (making homemade masks and gowns), surrendered to Allah and meditation.

(Continues)

TABLE 4 (Continued)

Author, year, country	Sample	Sample size	Data collection time	Study design	Objectives	Coping strategies/major findings
Catania et al. (2021) Italy	Frontline nurses who worked in a COVID-19 ward	23	In 16 May 2020	A descriptive qualitative study	To explore nursing management issues within COVID-19 narratives of frontline nurses	Employer strategies: skill mix between inexperienced and experienced nurses. Nursing leaders strategies: leadership tactics to manage the emergency (training for emergency management and training to build confidence among nurses), proper communication with frontline nurses and making excellent team spirit among nurses.
Ohta et al. (2021) Japan	Nurses who worked in a COVID-19 ward	16	In 2020	A grounded theory approach using qualitative analysis	To inquire nurses' changing perceptions about the efforts in preparation for working in a COVID-19 ward in the rural	Nurses' self-strategies: sympathy for patients. Nurses' strategies at the ethical level: establishment of standard approaches and practices.
Manik et al. (2021) Indonesia	Nurses caring for COVID-19 patients	Quantitative, 118 respondents; qualitative, 11 participants	First week of May 2020	A mixed-methods study	To describe the social stigma against nurses taking care of patients with COVID-19 and experiencing suspected or probable or confirmed COVID-19 cases	Nurses' self-strategies: truthfulness from a religious point of view. Nurses' strategies at the ethical level: professional vigilance (evidence-based practice, properly organize nursing activities and work environment). Supplementary strategies: source of supports (family and social support).
Zhou et al. (2021) Wuhan, China	Local health care workers, medical team members, nurses, doctors, administrators and medical technician	Nurses = 68	In March and April 2020	Longitudinal study	To examine the mediating effects of coping self-efficacy and coping strategies	Nurses' self-strategies: taking self-protective measures (washing hands, wearing masks and other preventive measures), emotion-focused coping strategies (doing meditation, Yoga or Tai Ji to release; coping self-efficacy; and psychological adaptation). Employer strategies: highest level of organizational support.
Pogoy and Cutamora (2021) Dubai, United Arab Emirates	Intensive care unit nurses caring for COVID-19 patients	8	In 2020	A qualitative Husserlian phenomenological approach	Nurses' experiences working in COVID-19 intensive care units	Nurses' self-strategies: seeing oneself in the patient's position, adapting to change (living the new normal and protecting one's self from COVID-19). Nurses' strategies at the ethical level: professional ethics (being with others).

(Continues)

moment. They highlighted the necessity to be always on the patient's side as a frontline caregiver (Demirci et al., 2021). Moreover, nurses were more focused on establishing standard approaches and practices to relieve work stress (Ohta et al., 2021).

3.5 | Employers' strategies

Health care organizations used a variety of techniques to facilitate health care providers to deal with the coronavirus disaster. Demirci et al. (2021) found that several health care organizations were able to manage enough PPE before the outbreak of a pandemic. In addition, numerous health care organizations also supplied nutritious food, health care facilities for employees and lodging for nurses on duty (Zhou et al., 2021). In particular, through proper planning and engaging nursing decision-makers in inpatient management, certain health care institutions have been able to successfully overcome patient load challenges (Huang et al., 2020). One of the key tactics used by health care organizations was to manage nursing services by combining the skills of new nurses and experienced nurses (Catania et al., 2021). These techniques encouraged new nurses to learn how to adapt to unexpected situations. Various government and non-government organizations also provided additional allowances to nurses (Zhang et al., 2020), which helped to raise their spirit.

3.6 | Nursing leaders' strategies

One of the most crucial aspects of a health care institution's strategies is the nursing leadership and management it offers. That was especially noticeable while dealing with corona scenarios. Zhang et al. (2020) revealed that a competent nursing team leader was essential in maintaining the work–life balance of professional nursing practice. Similarly, Catania et al. (2021) explained that one of the nursing team leaders' key strategies was to keep in touch with the nurses frequently. Also, nursing supervisors or nursing team leaders played a vital role in assisting nurses to work normally, in controlling pressure, increasing sincerity of the nurses, increasing team spirit and how to focus on work when there was a high work stress.

3.7 | Supplementary strategies

To adapt to diverse situations, the nurses practised different new and other strategies. Positive attitudes from coworkers, families, organizations and society all played a part in motivating nurses to continue to work. They received the most assistance from family members in particular (Manik et al., 2021). Colleagues were also supportive on an emotional and psychological level (Kackin et al., 2021). Demirci et al. (2021) revealed that the unlimited sacrifices of nurses further increased the social status of nurses during the pandemic, which encouraged nurses to do more work.

TABLE 4 (Continued)

Author, year, country	Sample	Sample size	Data collection time	Study design	Objectives	Coping strategies/major findings
Demirci et al. (2021) Turkey	Nurses working in pandemic units	15	In June 2020	A grounded theory design	To explore the experiences and coping strategies of nurses working in pandemic units	Nurses' self-strategies: psychological growth (positive perspective on life). Nurses' strategies at the ethical level: having a nursing philosophy (proper application of nursing knowledge, values and beliefs). Employer strategies: equipment support and informational support. Supplementary strategies: feeling heroic, empowered by multidimensional support such as psychological support from friends and increased social status as a nurse.

4 | DISCUSSION

During this pandemic, health care organizations across the world battled to deal with COVID-19 affected patients due to the very high prevalence of coronavirus cases. In this scoping review, we explored how nurses were able to adapt to the challenging situations. Most of the studies uncovered nurses' self-strategies to deal with difficult situations (Demirci et al., 2021; Huang et al., 2020; LoGiudice & Bartos, 2021; Manik et al., 2021; Ohta et al., 2021; Pogoy & Cutamora, 2021; Rony et al., 2021; Tosepu et al., 2021; Zhang et al., 2020; Zhou et al., 2021). Rony et al. (2021) described how nurses imagined themselves in the patients' position and how nurses controlled patients' emotions. Lin et al. (2021) revealed that nurses' self-strategies helped them become more professional and inspired them to practice mindfulness. Besides, every nurse has unique self-strategies for dealing with stressful situations (Ausar et al., 2021; Hofmeyer & Taylor, 2021) and providing appropriate nursing care (Mintz-Binder et al., 2021). This enables nurses to avoid burnout by reducing the severity of job stress (Eder & Meyer, 2022; Shahzad et al., 2021). Additionally, it plays a significant role for nurses to develop advanced skills and to utilize their nursing knowledge and abilities at the appropriate time (Hossain & Clatty, 2021). However, a remarkable revelation by Pogoy and Cutamora (2021) was that nurses learned that working as a frontline warrior is normal for a nurse at any time.

Another significant part of this study is the adoption of professional strategies by nurses to ensure nursing commitment from ethical concerns. In particular, Manik et al.'s (2021) unique statement was that nurses were professionally and intellectually conscious of the need to reduce medical errors and that nurses, as health care personnel, should always be by the patient's side. Supporting Manik et al.'s (2021) opinion, Kim et al. (2021) defined that nurses' moral sense enables them to fulfil nursing responsibilities effectively in health care environments. Markey et al. (2021) also mentioned that nursing ethics greatly assisted in the provision of standard nursing care, patient rights and the establishment of a facilitative environment for patients. Demirci et al.'s (2021) notable finding was that nursing philosophy was present among the nurses and this philosophy says that nurses should devote themselves to the patients.

This review explored how employers used a variety of strategies to manage the COVID-19 pandemic. The strength of employers is to develop and provide comprehensive health care management to meet the needs of employees and patients (Gebreheat & Teame, 2021). Moreover, providing adequate staff, retaining employees and providing high-quality service all depend entirely on the employers' strategy (Copeland, 2021). On the other hand, Zhang et al. (2020) outlined a variety of techniques employed by employers to deal with less-than-ideal situations. One of the most interesting observations was that health care organizations provided a variety of incentives (money, medals, cars, dresses etc.) to nurses. At times, incentives positively encouraged health care professionals to work more effectively and efficiently to bridge clinical gaps (Jang & Chang, 2021). In addition,

Catania et al. (2021) mentioned employers' strategies and leadership strategies that health care organizations used a combination of experienced and novice nurses, in order for new nurses to be able to adapt to a variety of challenging scenarios. In particular, Catania et al. (2021) gave more importance to leadership strategies in dealing with the situation because a good leader is very important to motivating the nursing staff. But Demirci et al. (2021) discovered several strategies other than leadership tactics. However, Richard-Eaglin (2021) urged that nurse leaders be responsible for guiding nurses to ensure nursing care planning and create positive patient outcomes.

4.1 | Strength and weakness

Only the original research studies published in English were selected in this study, which revealed the real scenarios of the coping strategies of the nurses. It also highlights how other variables, along with nurses' self-strategies, have positively impacted nurses' coping strategies, which are fundamental for managing a well-organized health care system.

After searching the literature, a few studies met the inclusion criteria. There has been little research on nurses' coping strategies; the majority of research has been conducted on other HCWs. Even though nursing leadership is crucial in developing future expert nurses, only two research studies have covered leadership strategies. Although the prevalence of the deadly coronavirus was high in many countries, we found limited research on nurses' coping strategies in LMIC.

4.2 | Implication for nursing management

This study shows how nurses at hospitals dedicated themselves to patients by adapting to awful situations created by created by the pandemic. These study findings will inspire all nurses and health care professionals around the world in dealing with challenging situations. Also, this study highlighted the many coping/survival techniques used by nurses in various situations, which will motivate health care personnel to work harder. Nurses' strategies at the ethical level will encourage health care organizations and policymakers to comprehend the nursing profession's perspective, motivating them to participate in making quality of nursing care environments in developing countries. Also, all health care organizations around the world can benefit from organizational strategies that make nurses' tasks more efficient. Moreover, nursing leadership strategies will also play an important part in developing the next generation of nursing leaders (Al-Yateem et al., 2021). Finally, this study enables nurse managers to better understand how nurses responded to stressful conditions during this devastating pandemic situation. This study encourages nurse managers and organizations to increase nurses' coping strategies to ensure self-sufficiency in health care. In addition, this study provides novel and distinctive data on nurse resiliency from the viewpoints of individuals, nursing teams and nursing leadership.

5 | CONCLUSIONS

Health care providers including nurses acted by adapting different strategies to continue taking care of patients in hostile environments and these strategies helped them maintain emotional stability while doing their duty in difficult situations. Coping strategies motivated the nurses to provide appropriate nursing care. Therefore, health care institutions must always be ready to operate optimally during any emergency situation. Health workers have to be ready, available and motivated at all times. It is important to know about how they adopt various coping strategies. Additional research of qualitative nature on frontline nurses should be undertaken to explore these strategies further to assess their relative effectiveness.

CONFLICT OF INTEREST

The authors have no competing interest at all.

ETHICS STATEMENT

Not applicable.

AUTHOR CONTRIBUTIONS

Data were extracted by Moustaq Karim Khan Rony and Hasnat M. Alamgir. Any disagreement was resolved by Moustaq Karim Khan Rony, Kanika Islam and Hasnat M. Alamgir. Moreover, Moustaq Karim Khan Rony did the critical analysis. Moustaq Karim Khan Rony, Kanika Islam and Hasnat M. Alamgir prepared the manuscript draft. All authors contributed to the revisions in depth for the manuscript and approved the final manuscript.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analysed in this study.

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