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Factors contributing to nurses' resilience in caring for COVID-19 patients: an integrative review

Review

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Abstract: **Objective:** To summarize factors contributing to the resilience of nurses in caring for coronavirus disease 2019 (COVID-19) patients.
Methods: An integrative review was conducted according to the recommendations proposed by Whittemore and Knafl. Articles were searched through 8 electronic databases: PubMed, Scopus, Clinical Key for Nursing, ProQuest, Medline and Wiley Online Library, CINAHL, and Garuda, which are databases recommended by the Ministry of Education, Culture, Research, and Technology in Indonesia. Relevant articles published in English and Indonesia between 2019 and 2022, being quantitative or qualitative theoretical-methodological studies that analyzed or proposed factors to nurses' resilience in caring for COVID-19 patients, were included, whereas primary studies that used review as a methodology to review an object of research were excluded.
Results: From the 17 articles that were included in this study, 3 factors were found that contributed to the resilience of nurses in caring for COVID-19 patients, namely personal factors, workplace/organizational factors, and social factors.
Conclusions: Understanding factors related to nurses' resilience during the COVID-19 pandemic can contribute to meet nurses' resilience both physically and psychologically. Good resilience of nurses during a pandemic is useful for improving nursing care services and patient safety, as well as for being able to avoid turnover intentions among nurses in pandemic time.

Keywords: *COVID-19 • integrative review • nurses • resilience • caring*

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1. Introduction

For more than 2 years, coronavirus disease 2019 (COVID-19) has been affecting the world, causing a pandemic. COVID-19 its complications are now a well-known phenomenon and till date much research aimed at studying these has been conducted.[1] Since the first case was discovered in Wuhan, China in December 2019, the number of confirmed cases keeps increasing, and current global data (30 June 2022) show around 545 million confirmed cases of COVID-19, including 6 million deaths; the up-to-date total number of COVID-19 cases in the world has reached more than 318 million people with a total number of deaths amounting to more than

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5 million.[2] The high incidence and mortality rate have caused the international community to work hard to prevent and break the chain of transmission of COVID-19 as a whole. Although many countries have adopted a series of strict public health measures, which have been proven effective in slowing the increase in the number the cases, the constantly mutating nature of the virus implies the inevitability of the appearance of new cases. Moreover, the pandemic has had a negative impact on people's physical and mental health all over the world, including those of healthcare workers.[3] The ongoing battle with the possibility of infection will undoubtedly continue to place a great burden on healthcare systems for a longer period of time.[4]

In contrast to the general population, healthcare workers, including doctors and nurses, are more likely to be exposed to a variety of risk factors for mental health issues, such as needing to encounter and tackle the worries of the patients and their family members, as well as increased government oversight of professional activity.[5,6] Moreover, caring for COVID-19 patients is challenging for nurses due to high virus transmission, the disproportionate ratio of nurses and patients, lack of knowledge in treating COVID-19 patients as a new experience, limitations, and the use of personal protective equipment (PPE).[3,7–10] The challenges can cause various psychological problems for nurses in providing care for COVID-19 patients, such as the emergence of feelings of fear, stress, anxiety, and depression. Feelings of fear are attributable to thoughts concerned with the likelihood of being infected as well as serving as a cause for transmission of the infection to other people.[3] In addition, acute fear, physical and emotional exhaustion, and feelings of powerlessness in dealing with the patient's condition also create stress for nurses,[3,9,11] especially for young nurses who do not have experience in caring for critically ill patients, and who would thus typically show greater psychological crises such as anxiety and depression.[12] These psychological problems and challenges that arise among nurses in caring for COVID-19 patients indicate that nurses caring for COVID-19 patients must have good resilience before engaging in health care for COVID-19 patients. Resilience is the ability to adapt, rise, and survive in difficult or unpleasant situations so as to obtain a balance in various aspects of life.[13] Good resilience will help nurses to recover from work stress and be more empowered to care for patients, and to better ensure the aspect of patient safety when providing their services.[14]

It is important to identify factors that can help nurses to have good resilience, especially during the COVID-19 pandemic. A previous integrative review study examined nurses' resilience experiences in clinical practice and identified individual and external factors that influence nurse resilience.[15] Another systematic review examined personal and workplace factors affecting nurses' resilience.[16] However, these two previous reviews have not shown factors related to nurse resilience in providing nursing care during COVID-19 pandemic. Thus, the aim of this review focuses on summarizing the current evidence of factors contributing to nurses' resilience in caring for COVID-19 patients. The knowledge gained based on this review provides important information to support the nurses on duty in the COVID-19 room and to prevent them from experiencing psychological pressure.

2. Methods

2.1. Literature search

This review uses an integrative review approach to summarize various previous studies related to the phenomenon that will be reviewed comprehensively so that it becomes a unified whole.[17] The focus of this review is to explore factors related to the resilience of nurses caring for COVID-19 patients. All populations studied were comprised of nurses who worked and provided health care to COVID-19 patients in various health care services. Integrative review allows all related studies to be included so that findings can become more complex. The articles were searched using 8 electronic databases: *PubMed, ProQuest, Scopus, Clinical Key for Nursing, Medline, Wiley online library, CINAHL,* and *Garuda*, which are databases recommended by the Ministry of Education, Culture, Research, and Technology in Indonesia. The keywords used in English were: "nurs* AND *resilience AND COVID-19* OR *Corona virus* OR *SARS CoV-2*", while the keywords in Indonesian were: *perawat*, *resiliensi*, and *COVID-19*.

The inclusion criteria in this review were: (1) articles published in English and Indonesian between 2019 and 2022, and (2) focus on factors contributing to nurses' resilience in caring for COVID-19 patients; while the exclusion criteria were: (1) unpublished articles, (2) review studies, and (3) articles concerning the development of assessment instruments.

2.2. Search outcome

The first author conducted an article search resulting in a total of 1236 articles related to the resilience of nurses during the COVID-19 pandemic. After the duplicate articles were excluded, there were 1208 articles remaining. The remaining articles were then subjected to a screening process, for which the following were deployed as the criteria: the availability of full text, the appropriateness of the title/abstract, and the article being in English or Indonesian; resultantly, 1117 articles were excluded,

leaving behind 91 articles. Subsequently, 19 articles were excluded due to their methods using review study design, and then another 55 articles were excluded because of nonadherence to inclusion criteria. The results of this assessment then leave 17 articles that meet the inclusion criteria (Figure 1).

2.3. Quality appraisal

Quality appraisal is actually not a requirement in an integrative review, but by assessing the quality of a study, the interpretation of the research can be performed better.[17] The included studies were assessed using the standard quality assessment criteria from the Joanna Briggs Institute (JBI) according to the type of study being assessed.[18]

2.4. Data extraction

The first author initially identified and reviewed citations based on the title and abstract. A second and third author independently reviewed and evaluated the papers selected for inclusion. We extracted the data related to author(s), year of publication, country, aim of the study, design and methods, sample and setting, and key findings, and evaluated the quality of the study (Table 1).

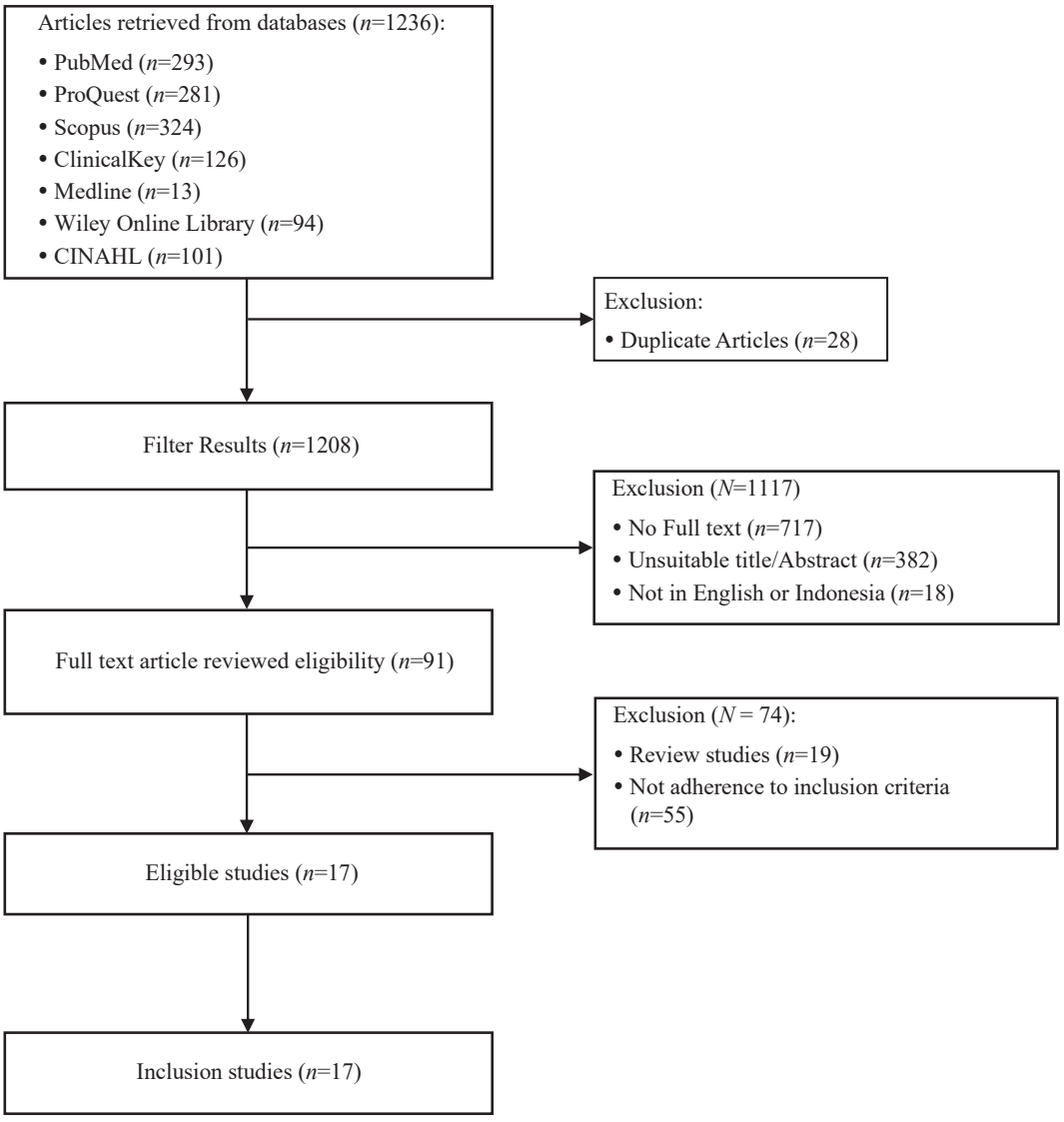


Figure 1. Screening flow diagram.

Author, year, country	Research purposes	Method	Sample/setting	Factors related to nurse resilience	Value/ level
Abdullah et al., 2021,[19] Iraq	To explore the experiences of nurses caring for COVID-19 patients in Iraqi Kurdistan	Qualitative	12 nurses caring for COVID-19 patients/one of the clinical units of two COVID-19 hospitals in Iraqi Kurdistan	Most nurses experience stress, anxiety, fear, and isolation. Relatives, close friends, and community have a fear of becoming infected from the virus through nurses.	High
Anton et al., 2021,[20] United States of America	To identify sources of data that inform nurse decision-making regarding deteriorating patient admissions, and explore how COVID-19 has impacted nurse decision-making	Qualitative	10 COVID-19 nurses from various nursing areas	Experienced nurses are able to make decisions faster, and prioritize work so that workloads can be managed properly. The work environment (organization) allows nurses to work safely by ensuring the availability of PPE as well as other resources needed during patient care.	High
Balay-odao et al., 2021,[21] Saudi Arabia	Knowing the preparedness of hospitals in managing COVID-19 patients as well as the psychological burden and resilience among clinical nurses in overcoming the COVID-19 crisis in Saudi Arabia	Cross-sectional	281 clinical nurses, Hospital Riyadh, Saudi Arabia	Positive characteristics that can increase resilience are age, years of experience, and level of trust in health care authorities. Age (resistance in the face of problems increases with age) Nursing knowledge and skills can be used by nurses to adapt psychologically and prevent the psychological burden. Implementation of hospital preparedness guidelines and policies in preventing and controlling disease	High
Chegini et al., 2021,[22] Iran	To describe the experience of critical care nurses caring for COVID-19 patients	Qualitative	15 nurses working in critical care units of Iranian general hospitals	Emotional support and psychological counseling play an important role in maintaining the optimal mental health of nurses during the COVID-19 crisis. Adequate PPE, effective communication, staff training and recruitment, proper work shifts, and financial as well as non-financial support are needed to reduce the negative impact on nurses.	High
Chen et al., 2021,[23] Taiwan, China	Responding to the related need for the promotion of nursing workplace policies and reforms and investigating the employment of new nursing staff in Taiwan, China To examine changes in nursing competence in care, current clinical stress situations, and intentions to stay in the current workplace under the influence of COVID-19 among new nurses	Cross-sectional	333 novice nurses/online survey in Taiwan, China	Education level is positively correlated with the ability to provide services to patients and willingness to remain in their current position.	High
Chua et al., 2021,[24] Malaysia	To investigate levels of preparedness and anxiety among nurses during the COVID-19 outbreak in Sabah, Malaysia To know the effect of differences in preparedness and readiness among nurses To examine the effect of COVID-19 preparedness on anxiety among nurses	Cross-sectional self-administered survey	148 nurses from 2 hospitals in Sabah, Malaysia	Nurses who received support and were able to cope with psychological problems showed lower anxiety.	Average
Galletta et al., 2021,[35] Italy	To analyze how perceived impact, pandemic preparedness, and anxiety were associated with mental health indicators (crying, rumination, and stress) in nurses	Cross-sectional	894 nurses during the COVID-19 pandemic in Italy	The pandemic causes stress, and levels of this stress are higher in young nurses. As for the level of concern characterizing the communication of apprehensions pertaining to the impact of infection, this was observed to be higher in younger nurses as compared to older ones. Health organizations must pay attention to the mental health of nurses.	High
González-Gil et al., 2021,[25] Spain	To identify the safety-related, organizational, decision-making, communication, and psychosocio-emotional needs felt by critical care and emergency nurses in the Madrid region, Spain, during the acute phase of the epidemic.	Mixed-method	557 critical care and emergency nurses from 26 public hospitals in Madrid used an online questionnaire.	Nurses in a vulnerable condition Fear of being infected Workload increases High nurse–patient ratio Shift doesn't allow nurses to rest Emotional exhaustion and unable to vent emotions Unable to provide psychosocial care to patients and families	Average

Table 1. Continued

Author, year, country	Research purposes	Method	Sample/setting	Factors related to nurse resilience	Value/ level
Al Harthi et al., 2021,[26] Saudi Arabia	To explore strategies to improve disaster nursing in Saudi Arabia.	Cross-sectional	800 nurses, Saudi Arabia	Support needs include: development of evaluation tools and legislation as specific nursing guidelines, providing PPE to nurses to minimize the risk of infection, encouraging nurses to respect their efforts to minimize their stress levels during disasters, ensuring the availability of PPE for nurses, providing psychological support to nurses when contact with their family and relatives is limited	
Hu et al., 2020,[27] China	To examine mental health (fatigue, anxiety, depression, and fear) and related factors among frontline nurses caring for COVID-19 patients in Wuhan, China	Cross-sectional, descriptive, and large-scale correlation	2014 frontline nurses from two hospitals in Wuhan, China	Fatigue, anxiety, and depression are negatively correlated with resilience. High self-efficacy can maintain nurses' resilience to facing painful psychological pressure. Mental health support: availability of psychological interventions, formation of response hotlines, and social and medical support Mental health challenges: fatigue, anxiety, depression, and fear of infection and death Injuries due to the use of PPE	High
Kalateh Sadati et al., 2021,[28] Iran	To investigate the perceptions and experiences of nurses in dealing with the COVID-19 outbreak	Qualitative	24 nurses working in specialized COVID-19 treatment hospitals located across Arak, Kashan, and Qazvin, Iran, particularly Shiraz Hospital	Requires a commitment to sacrifice Nurses need psychosocial support for themselves and their families Experience with COVID: new experiences and social stigma	High
Labrague and De Los Santos, 2021,[29] Philippines	To ascertain the prevalence and predictors of coronaphobia in avant-garde hospitals and public health nurses	Cross-sectional	736 nurses working in COVID-19 hospitals and health units in Region 8, Philippines	Coronophobia can be reduced by increasing the nurses' personal resilience. Gender predicts coronaphobia, with female nurses reporting higher levels of dysfunctional anxiety than male nurses. Coronophobia interventions tailored to the identified predictors	High
Mubarak Al Baalharith and Mary Pappiya, 2021,[30] Saudi Arabia	To ascertain the level of knowledge about preparedness and effective response to COVID-19 among nurses working under the Ministry of Health Hospital in Najran, KSA	Cross-sectional	594 nurses from 9 Ministry of Health Hospitals in Najran, KSA	Overall knowledge of COVID preparedness is sufficient. Nurse readiness for PPE is moderate. Nurses need adequate COVID-19 preparedness training to increase their knowledge of prevention, control, and management.	High
Park and Jung, 2021,[31] South Korea	To investigate nursing professionalism as a mediating factor in the relationship between resilience and work stress levels for nurses working in hospital long-term care units during the COVID-19 pandemic	Cross-sectional	200 nurses from 7 hospitals in Seoul City	Nursing professionalism increases work resilience and reduces work stress. Individual and occupational characteristics can lead to differences in nurse resilience. Those aged under 40 years had significantly less resilience than the older age group.	High
Rathnayake et al., 2021,[32] Sri Lanka	To explore the experiences and challenges of nurses working with hospitalized patients with COVID-19	Phenomenological qualitative	14 nurses caring for COVID-19 patients at the General Hospital for COVID-19 patients in Sri Lanka	Willingness to work (as an obligation, seeking new experiences) Education and information needs Support needs (appreciation, incentives, counseling) The use of modern technology such as robots, as well as communication media such as telephones, is very helpful.	High
Sharif Nia et al., 2021,[33] Iran	To investigate the relationship between workload, quality of supervision, additional behavior of salary satisfaction, and nurses' intention to care for patients with COVID-19 in Iran	Cross-sectional	648 nurses caring for COVID-19 patients in hospitals affiliated with Mazandaran University of Medical Sciences	Hospital managers need to pay attention to nurse job satisfaction and organizational factors to ensure that they can cope with the challenges of the COVID-19 pandemic. Satisfaction with salary increases job satisfaction, and job satisfaction increases care intention. High workload lowers job satisfaction, and less job satisfaction lowers work intention.	High
Schroeder et al., 2020,[34] United States of America	To explore the experiences of nurses caring for COVID-19 patients in urban academic medical centers during the early stages of the pandemic	Qualitative	21 nurses caring for COVID-19 urban patients at an academic medical center in the Northeastern United States	Adapting to dynamic situations Understanding and adapting to the pandemic A sense of responsibility in caring for COVID-19 patients despite the fear of being infected	High

Note: COVID-19, coronavirus disease 2019; PPE, personal protective equipment.

Table 1. Data extraction.

2.5. Analysis method

The method used in this review is qualitative analysis to describe the research results and summarize the results of the study. Basic information from research results, which includes related factors, is the main content taken.

3. Results

The 17 studies reviewed in the present research consist of 10 cross-sectional quantitative studies, 6 qualitative studies, and 1 mixed methods study. Studies come from various countries around the world, namely: 3 studies from Saudi Arabia, 3 studies from Iran, 2 studies from the United States, and other studies from China, South Korea, Malaysia, Denmark, Sri Lanka, Italy, the Philippines, and Spain.

3.1. Factors contributing to nurses' resilience in caring for COVID-19 patients

This integrative review summarized current studies relating to factors that contribute to the resilience of nurses in caring for COVID-19 patients. A scrutiny of the key factors reported in this study shows that there are 3 main factors that can contribute to nurses' resilience in caring for COVID-19 patients during pandemic time, namely personal factors, workplace/organizational factors, and social support factors. A summary of these factors is shown in Figure 2.

3.1.1. Personal factors

In this review, we found that there are many factors that came from personal characteristics, including demographic characteristics (age and gender), knowledge and skills, working experience, self-efficacy, self-adaptation, psychological problems (stress, anxiety, feeling of isolation, inability to express emotion), and physical endurance (fatigue due to PPE).

Age is one of the personal factors that relates to a person's resilience because the ability of someone to deal with problems typically increases with age.[21] The pandemic can cause stress, and the levels of this stress are generally observed to be higher for young nurses. The level of concern characterizing the communication of apprehensions pertaining to the impact of infection was observed to be higher in younger nurses as compared to older ones.[35] Other studies have also found that those having ages of less than 40 years have significantly less resilience than older age groups.[31] Demographic characteristics other than age that can affect a person's resilience include gender. Female nurses tend to have higher dysfunctional anxiety (coronophobia) than male nurses.[29] However, another study from Saudi Arabia found the opposite – that men are more

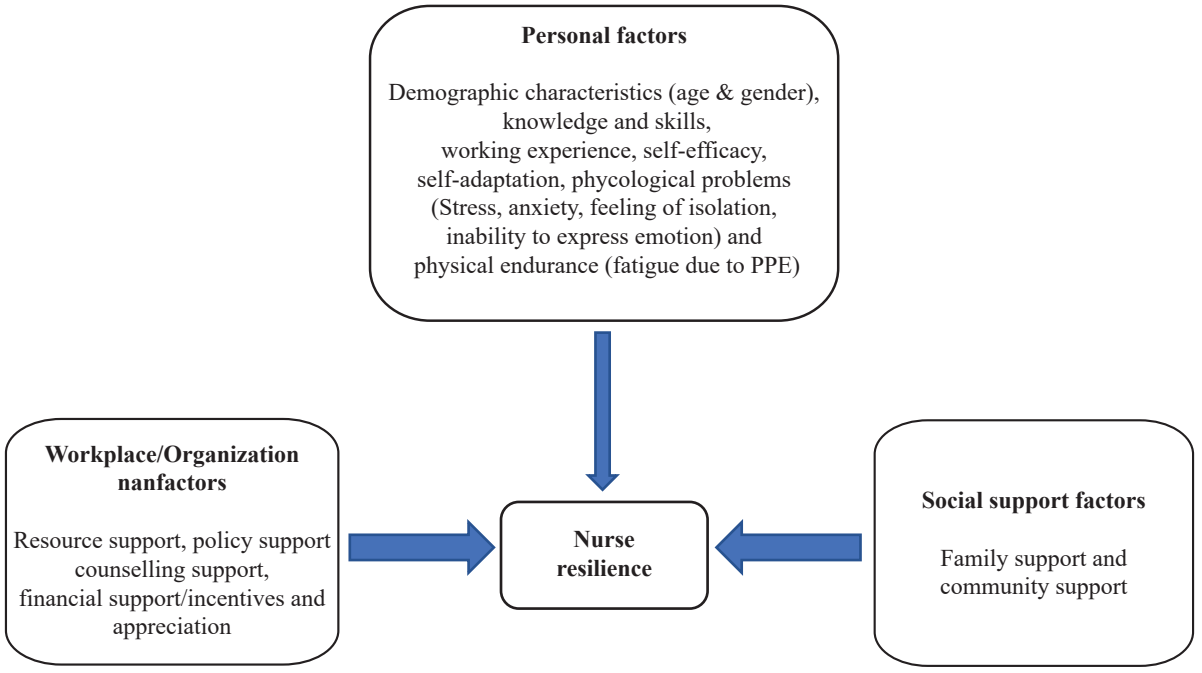


Figure 2. Factors contributing to nurses' resilience in caring for COVID-19 patients. COVID-19, coronavirus disease 2019.

susceptible to stress than women because men have a big responsibility to earn a living and provide for their families. Thus, men are more susceptible to decreased resilience than women.[21]

The level of education possessed by nurses is positively correlated with the ability to provide services to patients and willingness to remain in their position. Knowledge and skills can improve nurse adaptation and prevent psychological burden.[21,23] Knowledge and skills will increase nursing professionalism and nursing professionalism will increase work resilience and reduce work stress.[31] Years of work experience can increase the resilience of nurses.[21] Experienced nurses can make decisions faster and are better able to prioritize work so that workloads can be managed properly.[20] Commensurate with increase in the knowledge and experience possessed by an individual, self-efficacy also usually increases, thereby improving the self-confidence available with which to proceed in the performance of work. Self-efficacy can increase nurses' resilience in dealing with psychological pressures while working in the COVID room, such as the emergence of feelings of fear, anxiety, and depression.[27] In addition, the ability to adapt to a dynamic pandemic situation will have a positive effect on the resilience of nurses working in the provision of health care to COVID-19 patients.[34]

Physical problems at work such as fatigue can reduce the resilience of nurses. In caring for COVID-19 patients, nurses are in a vulnerable condition due to high workloads and a high nurse–patient ratio; this results in a situation wherein it becomes scarcely possible for nurses to rest; also, these nurses, who might often be expected to work in multiple, consecutive shifts especially during the prevalence of peaks of infection waves, are themselves constantly exposed to the threat of infection, and not infrequently injuries caused by the use of PPE.[27,25] Psychological problems can reduce the resilience of nurses while caring for COVID-19 patients. Several psychological aspects can reduce nurses' resilience, namely: stress, anxiety, depression, fear of being infected and infecting others (coronophobia), feelings of isolation, and the inability to vent emotions.[19,23,25,27,32]

3.1.2. Workplace or Organizational support

To increase resilience at work, nurses need various supports from the workplace including resource support, policy support, counseling support, financial support/incentives, and appreciation.

(1) **Resource support**
Hospitals should ensure the availability of the necessary resources during the care of COVID-19 patients.[20] Resources that can support nurses while working in the COVID-19 room include providing and ensuring the availability of PPE for nurses to minimize the risk of infection and the use of modern technology such as robots and communication devices.[20,22,26,32]

(2) **Policy support**
Policy support from the hospital can be in the form of implementing preparedness guidelines and policies, and providing preparedness training to increase knowledge about the management, prevention, and control of COVID-19, as well as developing evaluation tools and legislation.[21,26,30]

(3) **Counseling support**
Counseling support can be in the form of availability of psychological interventions and mental health programs.[27] Nurses need psychological support during the pandemic when contact with their family and relatives is very limited.[26] In addition to support for the nurses themselves, support for their family members is also very much needed.[28] Psychological support and counseling can maintain nurses' mental health during a pandemic crisis situation.[22,32]

(4) **Financial support/incentives and appreciation**
Financial support/incentives and appreciation are very influential on nurse satisfaction. Nurse satisfaction with salary will increase job satisfaction. Hospital managers need to pay attention to nurse job satisfaction in relation to organizational factors so that nurses can overcome challenges.[22,32,33]

3.1.3. Social support

In addition to support from the hospital, nurses also need social support to increase their resilience. Social support can come from family and community.[27] Some relatives, close friends, and the public have feelings of fear of contracting the virus from nurses.[19] The existence of social stigma against nurses can have a bad effect on the psychological condition of nurses.[28] Nurses who obtain support and are able to overcome psychological problems will show lower anxiety.[24]

4. Discussion

This integrative review identifies factors related to nurse resilience in caring for COVID-19 patients. The factors identified that influence nurse resilience both positively and negatively in this review are personal factors, workplace/organizational factors, and social support factors.

Being a nurse during the COVID-19 pandemic requires high resilience to be able to face extraordinary

challenges. In this review, psychological problems were the most discussed in causing a decrease in nurse resilience. Nurses faced with the COVID-19 pandemic have a high risk of experiencing anxiety and depression. Various backgrounds influence the occurrence of mental disorders such as demographic characteristics, psychosocial factors, and occupational factors.[36] This needs attention so that nurses avoid psychological disorders that have a bad effect on themselves and their work.

In this review, age was the most described demographic characteristic affecting nurse resilience. Older age tends to be more stable than younger age. Younger people are significantly more prone to stress.[37] In addition, in terms of gender, it can also be stated that women tend to be more prone to dysfunctional anxiety than men. Research in China also confirms that anxiety among female nurses in China is much higher than in the general population. Especially married women, who have the obligation to take care of their parents and children, will feel more depressed than others.[38] However, this research on gender still needs to be reviewed further because a study from Saudi Arabia found the opposite – that men are more prone to stress than women.[21] One study found that sex differences in relation to stress were non-uniform, nuanced, and nonlinear in relation to cellular function, hormone systems, alcohol consumption, and predictors of stress.[39] Therefore, sex predictors of resilience still need to be studied further.

In addition to dealing with psychological problems, this review also explains that nurses in the COVID-19 room have decreased endurance due to physical problems, namely fatigue due to long shifts and the use of PPE. Nurses working in COVID-19 treatment rooms experience higher levels of fatigue compared to those working in other treatment rooms.[40] This review found that fatigue caused by high workload and high nurse–patient ratio did not allow nurses to rest. Fatigue experienced by nurses is not only a risk that interferes with health but can also reduce the quality of care and be dangerous for patients.[41] In addition, the use of PPE also causes physical problems for nurses. Various physical problems that can occur due to the use of PPE include shortness of breath, headaches, heat, and skin injuries.[42] Such a collection of physical problems entails the risk of causing a decrease in the resilience of nurses in the COVID-19 room.

The most discussed aspect in this review is the increase in nurse resilience caused resultant to the existence of both support from the workplace and social support. Support from the workplace can be in the form of resource support, as well as policy, psychological, and incentive support. On the other hand, social support can be in the form of support from family, relatives, and society. Related research has identified that to maintain the physical and mental health of the workforce during the pandemic, the health service center must provide full support to its workforce, such as meeting basic daily needs, good communication in the service system, and providing options for psychosocial and mental support for staff in need.[43] In addition to support from the workplace, other studies have also confirmed that having support from family, friends, and significant others will increase nurses' psychological resilience.[44] The existence of positive support from the workplace and psychosocial support will maintain the resilience of nurses to continue to provide good service during the COVID-19 pandemic.

In addition to support factors, personal factors from nurses also play an important role in maintaining the resilience of nurses while treating COVID-19 patients. Personal factors identified in this review are nursing professionalism (knowledge, skills, and experience), adaptability, and self-efficacy. According to related research, the level of education and work experience of nurses is a predictor of increasing job security. With good education and experience, the knowledge and skills of nurses will increase and nurses will be better able to cope with and adapt to difficult situations that occur, and to ensure patient safety and prevent medical error.[14,45] In addition, other research also arrives at the following corroborative confirmation about self-efficacy: that with high self-efficacy, a person will be able to conquer more difficult challenges, set higher goals, and strive harder to achieve these goals.[46] Thus, the nurse's adaptation mechanism to survive in difficult situations will be better.

5. Conclusions

This review identifies factors related to nurse resilience while caring for COVID-19 patients. The factors that were found to have a positive or negative relationship with nurses' resilience during the COVID-19 pandemic were individual characteristics, physical problems, psychological problems, and aspects of support. Individual characteristics, namely gender, still need further review because the selected studies have inconsistent differences between the sexes of women and men.

By knowing the factors related to the resilience of nurses caring for COVID-19 patients, related parties can provide support to nurses so that nurses are able to survive and adapt to crisis situations. The resilience of nurses during the pandemic is useful for improving nursing care services and being able to avoid turnover intentions among nurses so that service delivery during the pandemic will be maximized. This review can also

be a consideration for health service managers to pay more attention to aspects of the physical and psychological well-being of nurses so that nurses can survive in various difficult situations in providing health services to patients.

Limitations

This integrative review still has some limitations. In terms of the literature reviewed, there has been no review linking cultural and policy factors in a particular health care facility with the resilience of nurses in that area. To ensure the required resilience in nurses while caring for patients in the COVID-19 ward, future studies should examine in greater detail the coping mechanisms that can be adapted by nurses during the pandemic; more qualitative studies that explore the factors affecting this resilience are also needed.

Ethical approval

Ethical issues are not involved in this paper.

Conflicts of interest

All contributing authors declare no conflicts of interest.

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