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WORKLOAD AND NURSES' QUALITY OF LIFE DURING THE COVID-19 PANDEMIC: SYSTEMATIC REVIEW

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ABSTRAK

Pandemi COVID-19 memberikan perawat beban kerja yang lebih tinggi, berkontribusi pada rendahnya kualitas hidup perawat dan berpotensi berdampak pada keselamatan pasien dan kualitas asuhan keperawatan yang diberikan kepada pasien. Oleh karena itu, tinjauan sistematis ini bertujuan untuk mengkaji hubungan antara beban kerja perawat dengan kualitas hidup selama pandemi COVID-19 dan memberikan rekomendasi untuk meningkatkan kualitas hidup perawat. Tinjauan sistematis dengan Preferred Reporting Items for Systematic Review and Meta-analysis (PRISMA) digunakan sebagai metodologi penelitian ini. Pencarian artikel dilakukan melalui PubMed, BMC Nursing and Science Direct, Scopus, dan Taylor and Francis secara online dengan kata kunci "Nurse AND Workload AND Quality of Life AND COVID-19". Artikel-artikel tersebut kemudian ditinjau berdasarkan hasil dari temuan penelitian saat ini. Semua literatur mengungkapkan hubungan yang signifikan dan terbalik secara statistik antara beban kerja dan kualitas hidup perawat. Keadaan yang tidak terprediksi selama pandemi COVID-19 meningkatkan beban kerja perawat profesional di garis depan dan akibatnya menurunkan kualitas hidup di semua aspek domain fisik-psikologis. Manajemen sumber daya manusia dan lembaga pendidikan harus lebih memperhatikan kualitas hidup perawat untuk meminimalkan efek potensial pada pasien baik secara langsung dan tidak langsung, seperti dengan melatih dan membimbing mahasiswa keperawatan dalam sumber daya psikologis tertentu, termasuk keterampilan resiliensi, sementara manajemen rumah sakit menganalisis kebutuhan tenaga kerja secara bertahap, terutama pada saat beban kerja meningkat.

Kata Kunci **:** COVID-19, Coronavirus, Perawat, Beban Kerja, Kualitas Hidup

ABSTRACT

The COVID-19 pandemic might expose nurses to higher occupational stress, contributing to the nurses' low quality of life and potentially impacting patient safety and the quality of nursing care offered to patients. Therefore, this systematic review examines the relationship between nurses' workload and quality of life during the COVID-19 pandemic and provides recommendations to improve nurses' quality of life. A systematic review of Preferred Reporting Items for Systematic Review and Meta-analysis was used as the methodology (PRISMA). Search articles were conducted from PubMed, BMC Nursing and Science Direct, Scopus, and Taylor and Francis online with the keyword "Nurse AND Workload AND Quality of Life AND COVID-19". The articles are then reviewed based on the finding of current research. All the literature revealed a statistically significant and inverse relationship between workload and nurses' quality of life. The lack of prediction during the COVID-19 pandemic increased the workload on professional nurses at the frontline, consequently reducing the quality of life in all aspects of the physical-psychological domain. Human resource management and educational institutions should pay more attention to nurses' quality of life to minimize the potential effect on direct and indirect patients, such as by training and mentoring nursing students in specific psychological resources, including resilience skills, while hospital management analyzes the required needs of the workforce gradually, especially when the workload surges.

Keywords ***:*** *COVID-19, Coronavirus, Nurse, Workload, Quality Of Life*

INTRODUCTION

On December 31st, 2019, 27 cases of unknown etiology pneumonia were discovered in Wuhan City, China, with patients exhibiting clinical symptoms of fever, dry cough, dyspnea, and bilateral lung

infiltrate on imaging. The condition was named Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). Then, the World Health Organization (WHO) updated a new name for the pandemic disease caused by 2019-nCo: Coronavirus (COVID-19). On January 30, 2020, the World Health Organization declared the outbreak of COVID-19 in China a Public Health Emergency of International Concern.. (Sohrabi et al., 2020). In 2019, nCoV afflicted around 430,000 patients in 28 nations/regions, and over 612 million verified cases and over 6.5 million deaths have been reported worldwide as of 25 September 2022 (Lai et al., 2020; World Health Organization, 2022) The COVID-19 outbreak has a distinctive spread due to its rapid transmission, which has resulted in an emergency in people's health in communities worldwide in a short period. The COVID-19 pandemic has increased cases of illness and hospitalizations. Therefore, increased hospitalization might lead to a nursing workload (Ebrahimi et al., 2021).

Previous research reveals that nurses experience tremendous job stress more than other health professionals, including physicians. These results were shown before the pandemic. The pandemic exposed nurses to higher occupational stress than before (Mohamadzadeh Tabrizi et al., 2022). Numerous health measures, including job satisfaction, mental well-being, job strain, depression, emotional exhaustion, and physical symptoms, have been linked negatively by research to excessive and high workloads (Sjöberg et al., 2020). These factors contribute to the low quality of life among nurses.

According to the WHO, a person's perception of their position in life in the context of the culture and value systems in which they reside, as well as their goals, expectations, standards, and priorities, make up their quality of life. Nurses' low quality of life may impact patient safety and nursing care (Kelleci et al., 2011). Studies in East Java, Indonesia, indicate that poor nurses' quality of work-life has a 70.4% negative impact on the quality of care for 19 of 27 patients (Ardiana et al., 2020). Research conducted in India found that the quality of life of health professionals was low, with the majority (87.0%) providing direct care to COVID-19 patients; 43.0% had more than ten patients per day under their care (Caliari et al., 2021). This is corroborated by a study conducted on Iranian nurses, which indicated that Iranian nurses' quality of life decreased due to COVID-19 anxiety (Mohamadzadeh Tabrizi et al., 2022). Contrary to this, a study taken in Pekalongan and Batang in Indonesia with 100 respondents indicated that 86% were classified as having a good quality of life and 14% as having a low quality of life (Armika Vianti & Hasanah, 2021).

Nurses' quality of life is also getting more attention because of their effect on direct and non-direct patients. Other research has systematically reviewed the quality of life-related to burnout (Khatatbeh et al., 2022). However, none of the systematic reviews examined the correlation between nurses' workload and quality of life. Therefore, this systematic review examines the correlation between nurses' workload and quality of life during the COVID-19 pandemic and provides recommendations to improve nurses' quality of life.

METHOD

This study uses Preferred Reporting Items for Systematic Review and Meta-analysis (PRISMA). Articles were obtained by evaluating five electronic databases research articles: PubMed, BMC Nursing and Science Direct, Scopus, and Taylor and Francis online on the lib.ui.ac.id. The keywords are "Nurses AND Workload AND Quality of Life AND COVID-19".

Out of 1046 potential articles were retrieved from 5 databases. After removing 23 duplicates, 1023 records were screened based on the title and abstracts. Irrelevant articles were removed, and 21 were

reviewed in full text based on eligibility. A total of 5 articles met the inclusion criteria and were included in the synthesis.

The inclusion criteria used in this study were articles published from 2020 to 2022, using English and full-text access. The exclusion criteria in this study was a research journal with a topic beyond nurses' workload and quality of life during COVID-19.

There are 1023 articles in five databases found in the initial search. Articles with similar content are removed from the articles list. Based on the article title, abstract, and content, the results of this study resulted in 5 complete articles that were relevant to this study and were included in this study.

RESULTS

Populations and demographics

Among the 5 included articles, there were four cross-sectional studies and one mix-methods study. Four studies were conducted in Asia and one in Europe. Iran and China represent the continent of Asia. Spain represents the European continent. The total sample size of nurses in the 5 studies included studies was 1170 participants for the quantitative study and 4 participants for the qualitative study.

Study design

The cross-sectional study (*n=4*) measured the nurses' workload element with the *Expanded nursing stress scale (ENSS)*, NASA-TLX Workload Questionnaire, and the nurses' Quality of Life with SF-12, WHO Quality of Life Questionnaire, National Institute for Occupational Safety and Health (NIOSH) Quality of Life, The Chinese version of the Compassion Fatigue Scale (ProQOL). The Mix-Method Study (*n=1*) used a cross-sectional study design for quantitative measures by self-report online survey Short-ProQOL scale. Individual online semi-structured in-depth interviews conducted using a purposive sampling technique were used in the qualitative design.

The relationship between workload and Quality of Life (QoL) in the reviewed studies

These five studies (*n=5*) revealed a statistically significant and inverse relationship between workload and nurses' quality of life. (Babapour et al., 2022; Ebrahimi et al., 2021; Moreno-Mulet et al., 2021; Nikeghbal et al., 2021; Niu et al., 2022).

Table 1. Results of Systematic Review of Articles (*n =5*).

No	Author (Year)	Title	Place	Study Design	Results	Conclusion
1	(Nikeghbal et al, 2021)	COVID-19 Effects on the Mental Workload and Quality of Work-Life in Iranian Nurses	Iran	Cross-Sectional Study	The association between the quality of working life and the mental burden of work is an inverse relationship with statistical significance in both groups of nurses.	According to the findings, nurses' overall mental workload and quality of life are unfavorable. The type of nursing service given, particularly care for COVID-19 patients, affects the measurement of these parameters. Nurses who treat patients with the new coronavirus disease (COVID-19) have more negative scores, as was found in this study. These nurses work long hours and suffer from poor work

						conditions, which constitute the mental and physical deficiencies caused by their prolonged office visits.
2	(Ebrahimi et al, 2021)	The Effect of workload on nurses' quality of life with moderating perceived social support during the COVID-19 Pandemic	Iran	Cross-Sectional Study	Workload has a negative and significant influence on the quality of life, whereas perceived social support directly and significantly influences the quality of life. In addition, perceived social support moderates the relationship between workload and quality of life.	COVID-19 pandemic has increased the workload and greatly affected the quality of life. However, they recognized that social support directly and significantly affects the QoL. In addition, perceived social support by the moderating effect reduces the impact of workload on QoL. Unbalanced work-life balance, diminished ability to complete tasks satisfactorily, and a lower quality of life can all be results of a heavy workload. Perceived social support can also improve performance, which can help lessen work's negative effects on quality of life.
3	(Babapour et al, 2022)	Nurses' job stress and its impact on QoL and caring behaviours: a cross-sectional study	Iran	Cross-Sectional Study	The research discovered that the overall quality of life score was statistically significant and moderate for all elements of work stress, including workload.	According to this study, higher levels of perceived work stress harm nurses' QoL and caring behaviour. Work stress can adversely impact nurses' physical and mental health, diminish their energy and work efficiency, inhibit them from providing appropriate nursing care, and negatively impact patient outcomes.
4	(Moreno-Mulet et al, 2021)	The Impact od COVID-19 Pandemic on ICU Healthcare Professionals: A Mixed Methods study.	Spain	Mixed-Methods Study	In this study, 89% of respondents reported increased workload. The professional quality of life correlated with increased workloads.	ICU healthcare workers' clinical, professional, and personal lives have been profoundly impacted by COVID-19. Adapting COVID-19 preventive measures to the delivery of care services increases the workload, thereby increasing burnout and diminishing their professional quality of life. During the first wave of COVID-19, critical care professionals also suffered greatly from their

						families, so they changed their way of living together in the first wave of COVID-19.
5	Niu et al, 2020	Professional quality of life in nurses on the frontline against COVID-19	China	A Cross-Sectional Study	In particular, the findings showed that nurses with poor ProQOL had long workdays and heavy workloads and were dissatisfied with their jobs and salary.	The study indicated that long-hour nurses had more severe Secondary Traumatic Stress (STS) symptoms. Burnout (BO) was more severe among nurses with an excessive workload and were dissatisfied with their remuneration. At the same time, compassion satisfaction (CS) was low among nurses dissatisfied with their employmentj.

The research shows that 89% of 122 professionals saw their workload increase during COVID-19, especially in ICU Units. Nurses with a heavy workload had poor ProQOL, higher Burnout scores (BO), Compassion Fatigue (CF), Secondary Traumatic Stress (STS), and lower compassion satisfaction CS levels (Moreno-Mulet et al., 2021; Niu et al., 2022). Based on the qualitative result of the study, the workload increased because the experienced professionals had to train new recruiters who had no experience in the ICU unit, the clinical severity of the patient, and the complexity of wearing Personal Protective Equipment (PPE) (Moreno-Mulet et al., 2021). Compared to nurses caring for patients without COVID-19, nurses caring for COVID-19 patients have a significant inverse relationship between total quality of work life measured by The NIOSH Quality of Worklife (QWL) and total mental burden of work dominated by performance and efficiency and impact the psychological and physical domain of quality of life measured by SF-12 (Nikeghbal et al., 2021). On the other hand, Perceived social support directly affects the adverse effect between workload and quality of life (Ebrahimi et al., 2021)

DISCUSSION

This review aims to determine nurses' workload, quality of life, and the relationship between workload and the Quality of life of nurses during the COVID-19 pandemic. A nurse's workload refers to the work they must complete during working hours. The primary responsibilities of a nurse in China are providing for the patient's needs, responding to inquiries, providing clinical advice, controlling disease, assisting with admissions and discharge, etc. (Niu et al., 2022). According to the reviewed study, nurses have a high mean workload score (80.87±20.17) (Ebrahimi et al., 2021). The Dutch study supports it; compared to the same month in 2019, the number of patients per nurse increased during the COVID period, as did the mean Nursing Activities score for each nurse (Hoogendoorn et al., 2021). A mixed-method study at 6 ICU units in Spain revealed that 89% of the 122 professionals saw their workload increase at 6 ICU units. The workload increased due to the clinical severity of the patients, the need to perform the activity more quickly and effectively, the constant adjustment of protocols, and the complexity of using specific personal protective equipment (Moreno-Mulet et al., 2021).

Due to the pandemic complexity of patient care, the ongoing need to modify protocols and procedures, and the

requirement to train new professionals and professionals from other units, professionals experienced a significant increase in workload during the initial wave of COVID-19. According to earlier research, this harms an adverse effect on the professional quality of life. Subsequently, the availability of PPE has become one of the issues that most concerned professionals in several countries (Sampe et al., 2021). The findings imply that professionals who lack proper PPE have a lower quality of professional life. In addition to the availability of PPE, long-term PPE use, particularly for female menstruating nurses, can have harmful physical and psychological effects that impair decision-making, work performance, and work-related quality of life (Kondapalli et al., 2022). However, the constant adjustment of protocols and specific personal protective equipment will escalate the score for physical dimension and energy consumption, particularly during the first wave of the outbreak, which will lead to lower ProQOL(Ebrahimi et al., 2021).

Nurses who put in long extensive daily hours and a heavy workload had poor ProQOL, higher Burnout scores (BO), Compassion Fatigue (CF), Secondary Traumatic Stress (STS), and lower compassion satisfaction CS levels (Moreno-Mulet et al., 2021; Niu et al., 2022). Nurses who were satisfied with their wages experienced less BO, and those with high job satisfaction had higher levels of CS and less compassion fatigue (CF). Wages can enhance nurses' professional identity, sense of personal accomplishment, and work enthusiasm, improving nurses' job satisfaction and CS and decreasing burnout (BO) (Niu et al., 2022). This result, in line with the research from Gunawan et al., is That salary significantly affects the nurse's ability. Salary is a protective factor against dissatisfaction. The more salaries nurses receive, the better their skills and abilities are (Gunawan, 2020; Gunawan et al., 2020).

A study by Ebrahimi et al. The conclusion of the previous study confirms that workload has a very negative effect on the quality of life. On the other hand, perceptions of social support have a moderate effect, which can reduce the negative impact of workload on quality of life. Social support is perceived to be able to act as a mediator in these circumstances by reducing the negative impact of workload on quality of life. Social support is a network of people who can benefit from vital psychological resources to help them cope with the challenges of daily life (Cohen & McKay, 2020). As one of the emotional coping mechanisms, social support may protect individuals by reducing the emergence of stressful situations by allowing them to see stressful situations as less threatening. Considering these findings, it may be concluded that nurses' workload has escalated during the COVID-19 pandemic. Social support is perceived to reduce the negative impact of increased workload on QoL by reducing stress and boosting individual performance (Roberts et al., 2016). The study by Shojaei et al. stated that improving upstream managers' support for nurses, reducing overtime, and developing programs to boost happiness and vitality can help to improve nurses' quality of life (Shojaei et al., 2019).

CONCLUSION

In general, the shock situation of the COVID-19 pandemic increased the workload on professional nurses at the frontline. It reduced the QoL in all aspects of the physical-psychological domain due to several factors affecting caring behaviours, patient safety, and patient outcomes. Our systematic review suggests that due to unexpected events such as the highly contagious COVID-19 pandemic, Some academic institutions instruct and guide future health professionals in particular psychological capabilities, such as resilience skills, while hospital management analyses the required the need of the workforce gradually so when the workload surges, management can be quickly deployed to

alleviate work overload and prevent potential safety hazards, likewise regularly monitor the awarding of wages and remuneration, and job satisfaction.

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