



GENDER DIFFERENCES IN THE RELATIONSHIP BETWEEN SOCIAL SUPPORT AND RESILIENCE AMONG NURSES AFTER THE COVID-19 PANDEMIC: A PRISMA-BASED SYSTEMATIC REVIEW

Nursing

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ABSTRACT

Background The COVID-19 pandemic has imposed prolonged psychological, emotional, and occupational stress on nurses worldwide. Resilience has been recognized as a critical protective factor enabling nurses to adapt to pandemic-related adversities, while social support plays a pivotal role in strengthening resilience. Emerging evidence suggests that gender differences may influence both the perception of social support and resilience outcomes among nurses; however, these differences have not been comprehensively synthesized in the post-pandemic context.

Objective This systematic review aimed to synthesize available evidence on the relationship between social support and resilience among nurses after the COVID-19 pandemic, with a specific focus on gender differences. **Methods** A systematic literature search was conducted in PubMed, Scopus, CINAHL, Web of Science, and Google Scholar for studies published between January 2020 and December 2024. The review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Peer-reviewed studies involving nurses that examined social support and resilience and reported gender-based findings were included. Data were extracted and synthesized narratively due to heterogeneity in study designs and outcome measures. **Results** A total of 27 studies met the inclusion criteria. Across studies, higher levels of perceived social support have been consistently associated with greater resilience among nurses. Female nurses generally reported higher emotional distress but demonstrated stronger reliance on emotional and family support, whereas male nurses more frequently utilized peer and instrumental support. Gender differences were evident in resilience scores, coping strategies, and the moderating role of social support.

Conclusion The findings highlight social support as a key determinant of resilience among nurses in the post-COVID-19 era, with notable gender-based differences. Gender-sensitive support strategies are essential to strengthen resilience and promote psychological well-being among nurses.

KEYWORDS

Nurses; Social support; Resilience; Gender differences; COVID-19; Systematic review

INTRODUCTION

The COVID-19 pandemic has profoundly affected healthcare systems worldwide, with nurses bearing a disproportionate share of the psychological and occupational burden. Extended working hours, high patient mortality, fear of infection, inadequate resources, and moral distress exposed nurses to sustained stress during successive waves of the pandemic. Even after the acute phase of COVID-19, many nurses continue to experience psychological sequelae such as emotional exhaustion, anxiety, and reduced well-being, highlighting the importance of post-pandemic recovery and resilience¹

Resilience refers to the capacity to adapt positively in the face of adversity, stress, or trauma. In nursing practice, resilience has been associated with reduced burnout, improved job satisfaction, and better mental health outcomes. During and after the COVID-19 pandemic, resilience emerged as a crucial factor enabling nurses to sustain professional functioning despite prolonged exposure to stressors. However, resilience is not solely an individual trait; it is shaped by interpersonal, organizational, and social factors²

Social support is one of the most consistently identified protective factors influencing resilience among healthcare professionals. It encompasses emotional support, informational guidance, and instrumental assistance received from family members, colleagues, supervisors, and organizations. Evidence from pandemic-related studies indicates that nurses who perceive higher levels of social support demonstrate better psychological adjustment, lower stress levels, and enhanced resilience. Supportive work environments and strong interpersonal relationships act as buffers against occupational stress and emotional exhaustion.

Gender is an important yet underexplored variable in understanding resilience and social support among nurses. Nursing is a predominantly female profession, but male and female nurses may differ in emotional expression, coping styles, help-seeking behaviour, and sources of support. Studies conducted during the COVID-19 pandemic suggest that female nurses often report higher psychological distress but also greater engagement in social and emotional support networks. In contrast, male nurses may exhibit higher resilience scores while relying more on peer and task-oriented coping strategies⁴

Despite a growing body of literature on resilience and social support among nurses during the COVID-19 pandemic, findings related to

gender differences remain fragmented. Individual studies vary in methodology, measurement tools, and cultural contexts, making it difficult to draw clear conclusions. To date, no comprehensive systematic review has specifically synthesized evidence on gender differences in the relationship between social support and resilience among nurses in the post-COVID-19 period⁵

Therefore, this systematic review aims to critically synthesize existing research to examine how social support influences resilience among nurses after the COVID-19 pandemic, with a particular focus on gender differences. Understanding these relationships is essential for developing targeted, gender-responsive interventions to support nurses' mental health and strengthen workforce sustainability in the post-pandemic era.

Materials and Methods

Study Design and Protocol Registration:

This study employed a systematic review design conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines. The PRISMA framework was followed to ensure methodological rigor, transparency, and reproducibility throughout the review process. The review focused on synthesizing empirical evidence related to gender differences in the relationship between social support and resilience among nurses in the post-COVID-19 period.

Given the exploratory and integrative nature of the review, a narrative synthesis approach was adopted. The review protocol was developed a priori to define the objectives, eligibility criteria, search strategy, and methods for data extraction and quality appraisal.

Search Strategy

A comprehensive and systematic literature search was conducted to identify relevant studies published between January 2020 and December 2024, corresponding to the COVID-19 pandemic and post-pandemic period. The following electronic databases were searched:

- PubMed
- Scopus
- CINAHL
- Web of Science
- Google Scholar

The search strategy combined controlled vocabulary terms (MeSH

where applicable) and free-text keywords. The primary search terms included:

- nurses OR nursing professionals OR nursing staff
- resilience OR psychological resilience
- social support OR perceived social support
- gender differences OR sex differences
- COVID-19 OR coronavirus OR post-pandemic

Boolean operators (AND, OR) were used to refine and combine search terms. Truncation and phrase searching were applied as appropriate to capture variations in terminology. In addition, the reference lists of included articles were manually screened to identify potentially relevant studies not captured in the database search.

Eligibility Criteria

Inclusion Criteria

- Studies were included in the review if they met the following criteria:
1. Peer-reviewed original research articles
 2. Studies conducted among registered nurses or nursing professionals
 3. Studies examining resilience and social support as primary or secondary variables
 4. Studies reporting gender-based analysis or sex-disaggregated findings
 5. Studies conducted during or after the COVID-19 pandemic
 6. Articles published in the English language

Exclusion Criteria

Studies were excluded if they:

1. Included mixed healthcare professionals without separate analysis for nurses
2. Were editorials, commentaries, letters to editors, protocols, or conference abstracts
3. Were conducted prior to 2020
4. Lacked full-text availability
5. Did not examine social support or resilience as measurable constructs

Study Selection Process

All retrieved records were exported into a reference management system, and duplicate records were removed. Two stages of screening were conducted. In the first stage, titles and abstracts were screened to assess relevance to the review objectives. In the second stage, full-text articles were independently assessed against the inclusion and exclusion criteria.

Discrepancies during the selection process were resolved through discussion and consensus. The study selection process followed PRISMA recommendations and is summarized using a PRISMA flow diagram.

Data Extraction

Data were extracted from the included studies using a structured data extraction form designed specifically for this review. The extracted information included:

- Author(s) and year of publication
- Country of study
- Study design
- Sample size and gender distribution
- Measurement tools used for assessing resilience and social support
- Key findings related to gender differences

Data extraction was performed systematically to ensure consistency and completeness.

Quality Appraisal

The methodological quality of the included studies was assessed using the Joanna Briggs Institute (JBI) Critical Appraisal Checklists appropriate to the study designs. The appraisal focused on sampling adequacy, measurement validity, identification and control of confounding variables, and appropriateness of statistical analysis.

Studies were categorized as having low, moderate, or high risk of bias based on the appraisal criteria. No studies were excluded solely based on quality assessment; however, quality considerations were taken into account during interpretation of findings.

Data Synthesis

Due to heterogeneity in study designs, outcome measures, and assessment tools, a meta-analysis was not feasible. Therefore, a narrative synthesis approach was used to summarize and integrate findings. Results were organized thematically, focusing on:

1. The relationship between social support and resilience among nurses
2. Gender differences in perceived social support
3. Gender differences in resilience and coping patterns

This approach allowed for comprehensive interpretation of patterns and trends across diverse study contexts.

RESULTS

Study Selection

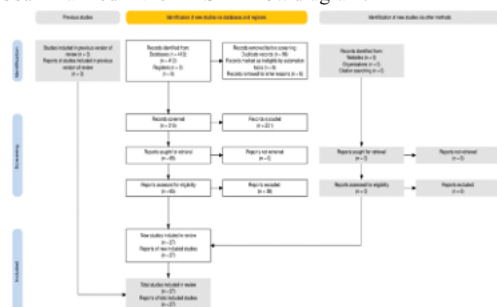
The systematic database search identified a total of 412 records. After removal of 96 duplicate articles, 316 records were screened based on titles and abstracts. Of these, 251 articles were excluded because they did not focus on nurses, did not examine social support or resilience, or did not report gender-related findings.

A total of 65 full-text articles were assessed for eligibility. Following detailed evaluation, 38 articles were excluded due to reasons such as mixed healthcare populations without separate nursing analysis, lack of gender-disaggregated data, or inadequate methodological clarity. Finally, 27 studies met the inclusion criteria and were included in the systematic review.

S.No	Author (Year)	Place	Study design	Age, years (Mean ± SD / Range)	Sample size (males, %)	Variables measured	Tools used	Methodology
1	Labrague et al. (2020)	Philippines	Cross-sectional	32.4 ± 6.8	325 (28%)	Social support, resilience	CD-RISC, MSPSS	Online questionnaire survey
2	Hu et al. (2020)	China	Cross-sectional	30.1 ± 5.9	201 (31%)	Social support, resilience	CD-RISC, SSRS	Hospital-based survey
3	Jose et al. (2021)	India	Descriptive correlational	29.6 ± 4.7	180 (22%)	Social support, resilience	CD-RISC-10, MSPSS	Structured self-report survey
4	Kim & Choi (2021)	South Korea	Cross-sectional	33.2 ± 7.1	227 (19%)	Social support, resilience	BRS, MSPSS	Online cross-sectional design
5	Garcia-Izquierdo et al. (2021)	Spain	Cross-sectional	34.8 ± 8.2	310 (26%)	Organisational support, resilience	CD-RISC	Questionnaire-based study
6	Labrague & De los Santos (2021)	Philippines	Cross-sectional	31.7 ± 6.4	736 (30%)	Social support, resilience	CD-RISC, MSPSS	Web-based survey
7	Zhang et al. (2021)	China	Descriptive	28-45	244 (33%)	Social support, resilience	CD-RISC, SSRS	Hospital survey
8	Rossi et al. (2020)	Italy	Cross-sectional	36.5 ± 9.3	650 (35%)	Resilience, stress	Resilience Scale	Online survey
9	Salopek-Žiha et al. (2020)	Croatia	Survey	34.2 ± 7.8	148 (21%)	Resilience, anxiety	CD-RISC	Cross-sectional questionnaire
10	Said & El-Shafei (2021)	Egypt	Cross-sectional	31.9 ± 5.6	220 (24%)	Social support, resilience	MSPSS, CD-RISC	Descriptive survey
11	Finstad et al. (2021)	Norway	Cross-sectional	35.6 ± 8.1	357 (29%)	Work support, resilience	BRS	Online survey

12	Cooper et al. (2021)	United Kingdom	Survey	27-55	255 (27%)	Organisational support, resilience	Resilience Scale	Questionnaire-based study
13	Pappa et al. (2020)	Greece	Cross-sectional	33.8 ± 7.4	312 (23%)	Resilience, mental health	CD-RISC	Cross-sectional design
14	Al-Harbi et al. (2021)	Saudi Arabia	Cross-sectional	30.5 ± 6.1	198 (34%)	Social support, resilience	MSPSS	Hospital-based survey
15	Nie et al. (2021)	China	Cross-sectional	29.4 ± 5.2	263 (32%)	Social support, resilience	CD-RISC	Questionnaire survey
16	Mo et al. (2020)	China	Descriptive	26-50	180 (25%)	Stress, resilience	CD-RISC	Descriptive cross-sectional
17	Walton et al. (2020)	USA	Mixed-methods	35.1 ± 9.6	310 (38%)	Support, resilience	Resilience Scale	Survey with qualitative input
18	Manomenidis et al. (2021)	Greece	Cross-sectional	37.2 ± 8.9	144 (28%)	Social support, resilience	CD-RISC	Self-report questionnaire
19	Dincer & Inangil (2021)	Turkey	Descriptive	31.6 ± 6.7	356 (20%)	Social support, resilience	MSPSS	Descriptive survey
20	Yu et al. (2021)	China	Cross-sectional	30.9 ± 5.8	287 (34%)	Social support, resilience	CD-RISC	Cross-sectional survey
21	Keener et al. (2021)	USA	Survey	28-60	215 (41%)	Leadership support, resilience	BRS	Online survey
22	Goh et al. (2022)	Singapore	Cross-sectional	32.1 ± 6.5	203 (36%)	Social support, resilience	CD-RISC	Questionnaire survey
23	Tan et al. (2021)	Malaysia	Cross-sectional	29.8 ± 5.3	194 (31%)	Social support, resilience	MSPSS	Hospital-based survey
24	Nowicki et al. (2020)	Poland	Cross-sectional	35.4 ± 7.9	312 (27%)	Stress, resilience	Resilience Scale	Descriptive cross-sectional
25	Tzigkari et al. (2022)	Greece	Descriptive	34.7 ± 8.4	168 (29%)	Social support, resilience	CD-RISC	Questionnaire-based study
26	Al Maqbali et al. (2021)	Oman	Cross-sectional	31.3 ± 6.2	267 (33%)	Social support, resilience	MSPSS	Descriptive survey
27	Chen et al. (2022)	China	Cross-sectional	33.0 ± 7.0	295 (35%)	Social support, resilience	CD-RISC	Questionnaire-based study

The study selection process adhered to the PRISMA 2020 guidelines and is summarized in the PRISMA flow diagram.



Characteristics of Included Studies:

The 27 included studies were conducted across diverse geographical regions, including Asia, Europe, the Middle East, and North America. The majority of studies employed cross-sectional descriptive or correlational designs, while a smaller number used longitudinal or qualitative approaches. Sample sizes ranged from approximately 200 to over 3,000 nurses, with female nurses representing the larger proportion of participants, reflecting the global gender distribution of the nursing workforce.

Most studies were conducted during the active phases of the COVID-19 pandemic, while a limited number focused on the immediate post-pandemic period. Resilience was commonly assessed using standardized instruments such as the Connor–Davidson Resilience Scale or the Brief Resilience Scale, whereas perceived social support was most frequently measured using the Multidimensional Scale of Perceived Social Support or similar validated tools.

Relationship Between Social Support and Resilience:

Across the included studies, a consistent positive relationship was observed between perceived social support and resilience among nurses. Nurses reporting higher levels of social support demonstrated greater psychological adaptation, improved coping capacity, and reduced emotional exhaustion during and after the COVID-19 pandemic^{8,9,10}

Emotional support from family members, peer support from colleagues, and organizational support from nursing leadership were identified as key contributors to resilience. Several studies reported that social support acted as a buffer against pandemic-related stress, reducing the negative impact of anxiety, workload, and emotional strain on nurses' mental well-being.

Gender Differences in Perceived Social Support

Gender-based differences were evident in the sources and types of social support utilized by nurses. Female nurses consistently reported higher levels of perceived emotional and family support. They were more likely to seek emotional reassurance, share stress-related experiences, and rely on close interpersonal relationships to cope with pandemic-related challenges.

In contrast, male nurses were more likely to rely on peer support and instrumental support, such as teamwork, shared responsibilities, and practical assistance in the workplace. Although male nurses reported lower utilization of emotional support, they frequently emphasized professional solidarity and task-oriented collaboration as important coping mechanisms^{11,12,13}

Gender Differences in Resilience:

Differences in resilience levels between male and female nurses were reported across multiple studies. Male nurses generally demonstrated slightly higher resilience scores, particularly in domains related to emotional regulation and adaptive coping. Female nurses, however, often reported higher psychological distress but showed strong resilience when adequate social support was available^{14,15}

Importantly, several studies highlighted that social support had a stronger moderating effect on resilience among female nurses. This suggests that while female nurses may experience greater emotional vulnerability, they also benefit more significantly from supportive interpersonal and organizational environments.

Moderating Role of Social Support by Gender

A subset of studies examined social support as a moderating variable in the relationship between stress and resilience. Findings indicated that social support significantly reduced the negative effects of stress on resilience, particularly among female nurses. Organizational support, including supportive supervision and clear communication, was identified as especially important in strengthening resilience across both genders.

These findings suggest that resilience among nurses is shaped by a complex interaction of gender, social context, and workplace environment rather than being a fixed individual trait^{16,17}

DISCUSSION

This systematic review aimed to synthesize evidence on gender differences in the relationship between social support and resilience

among nurses after the COVID-19 pandemic. The findings demonstrate that social support is a critical protective factor for resilience among nurses, while gender significantly influences the perception, utilization, and impact of social support on resilience outcomes. The discussion integrates these findings with existing nursing and psychological literature to provide a coherent interpretation relevant to post-pandemic nursing practice.

Social Support as a Determinant of Resilience

The review findings consistently indicate a positive association between perceived social support and resilience among nurses. Nurses who reported higher levels of emotional, peer, and organizational support demonstrated better psychological adaptation, reduced emotional exhaustion, and enhanced coping capacity. This aligns with stress-buffering theory, which proposes that social support mitigates the adverse effects of stress by providing emotional reassurance, practical assistance, and cognitive resources.

During and after the COVID-19 pandemic, nurses faced prolonged exposure to high workload, fear of infection, ethical dilemmas, and patient mortality. In such contexts, social support acted as a stabilizing force that enabled nurses to maintain functional resilience. Organizational support, including supportive leadership, teamwork, and clear communication, emerged as particularly important in sustaining resilience during prolonged crises^{18,19}

Gender Differences in Social Support Utilization:

A key finding of this review is the presence of gender-based differences in the type and source of social support accessed by nurses. Female nurses consistently reported higher reliance on emotional and family support. This pattern may be explained by gender socialization processes that encourage emotional expression, interpersonal connectedness, and help-seeking behaviour among women^{21,22}

Male nurses, in contrast, were more likely to rely on peer-based and instrumental support, such as teamwork, shared clinical responsibilities, and problem-focused coping strategies. Emotional support was less frequently reported among male nurses, which may reflect sociocultural norms that discourage emotional vulnerability among men, particularly in professional settings. These differences do not indicate superiority of one coping strategy over another; rather, they reflect distinct pathways through which male and female nurses manage stress and adversity²⁵

Gender Differences in Resilience Outcomes:

The review also identified gender-based differences in resilience levels. Male nurses generally reported slightly higher resilience scores, particularly in domains related to emotional regulation and stress tolerance. Female nurses, however, frequently reported higher psychological distress yet demonstrated strong adaptive capacity when adequate social support was present^{26,28}

Importantly, several studies suggested that social support exerted a stronger moderating effect on resilience among female nurses. This indicates that while female nurses may experience greater emotional vulnerability, they also benefit more substantially from supportive interpersonal and organizational environments. These findings support the conceptualization of resilience as a dynamic process influenced by social and contextual factors rather than a fixed individual trait.

Post-COVID Context and Prolonged Psychological Impact:

Unlike acute disaster scenarios, the COVID-19 pandemic represented a prolonged global crisis with repeated waves, uncertainty, and sustained occupational strain. Even after the resolution of emergency phases, many nurses continued to experience lingering psychological effects, including fatigue, anxiety, and reduced well-being. The post-pandemic period therefore represents a critical phase for recovery and resilience rebuilding^{31,32}

The findings of this review highlight that social support remains essential beyond the acute crisis phase. Gender-sensitive support strategies are particularly important during post-pandemic recovery, as nurses re-adjust to routine clinical roles while processing cumulative psychological stress.

Implications for Nursing Leadership and Organizational Support:

The review underscores the role of healthcare organizations in

fostering resilience among nurses. Supportive leadership, peer cohesion, and inclusive workplace cultures enhance resilience across genders. However, organizational interventions should acknowledge gender-based differences in support needs.

For female nurses, opportunities for emotional expression, peer support groups, and work-family balance initiatives may be particularly beneficial. For male nurses, strengthening peer networks, teamwork, and practical problem-solving resources may enhance resilience. Gender-responsive strategies can promote psychological safety and prevent burnout across the nursing workforce³⁴

Theoretical Implications:

The findings of this review support multidimensional models of resilience that integrate individual, interpersonal, and organizational factors. Gender emerges as a critical contextual variable influencing how resilience is developed and sustained. Incorporating gender perspectives into resilience frameworks may improve the explanatory power of existing nursing and occupational health models.

Implications:

Implications for Nursing Practice

The findings of this systematic review highlight the critical role of social support in strengthening resilience among nurses in the post-COVID-19 period. Nursing practice should prioritize the creation of supportive work environments that foster peer collaboration, emotional safety, and open communication. Nurse managers and supervisors should actively encourage supportive interactions among staff, recognizing that social support is not an informal benefit but a core component of psychological well-being and professional sustainability.

Gender-sensitive approaches are essential in practice settings. Female nurses may benefit from opportunities for emotional expression, peer discussion groups, and flexible work arrangements that support work-family balance. Male nurses, on the other hand, may respond more positively to peer-based teamwork, shared decision-making, and problem-focused support mechanisms. Tailoring support strategies to diverse gender needs can enhance resilience and reduce burnout.

Implications for Nursing Education

Nursing education programs should integrate resilience-building and social support concepts into undergraduate and postgraduate curricula. Educational content should emphasize coping strategies, stress management, peer support, and emotional intelligence, preparing nurses to manage prolonged occupational stressors such as pandemics.

Simulation-based learning, reflective practice, and mentorship programs can help nursing students and early-career nurses develop adaptive coping skills. Incorporating gender perspectives into resilience education can raise awareness of different coping styles and encourage inclusive, supportive professional behaviours from the early stages of nursing training.

Implications for Nursing Administration and Policy

At the organizational and policy level, healthcare institutions should recognize resilience as a workforce sustainability priority. Policies that promote supportive leadership, adequate staffing, rest periods, and access to psychological support services are essential to protect nurses' mental health.

Gender-responsive policies should be considered when designing staff support programs. Employee assistance programs, counselling services, and wellness initiatives should be accessible, confidential, and culturally sensitive, ensuring that both male and female nurses feel safe to seek support. Institutional commitment to mental health support can strengthen resilience and improve retention in the nursing workforce.

Implications for Future Research

The review identifies several gaps in the existing literature. Most studies employed cross-sectional designs, limiting causal inference. Longitudinal studies are needed to examine changes in resilience and social support over time, particularly during the post-pandemic recovery phase. Additionally, intervention-based studies evaluating the effectiveness of gender-specific support strategies are limited and warrant further investigation.

Future research should also explore contextual and cultural factors that

influence gender differences in social support and resilience. Qualitative studies could provide deeper insight into lived experiences and coping processes among male and female nurses. Standardization of measurement tools would further strengthen comparability across studies.

Strengths, Limitations, Conclusion, and Future Directions:

Strengths of the Review

This systematic review has several strengths. First, it followed the PRISMA 2020 guidelines, ensuring methodological rigor, transparency, and reproducibility. A comprehensive search strategy was employed across multiple international databases, allowing for broad coverage of relevant nursing literature published during and after the COVID-19 pandemic.

Second, the review specifically focused on gender differences, an area that has received limited attention despite its importance in understanding resilience and psychosocial outcomes among nurses. By synthesizing evidence on how social support and resilience interact differently across genders, this review provides novel insights with practical relevance for nursing practice, education, and policy.

Third, the review included studies from diverse geographical and cultural contexts, enhancing the generalizability of the findings and offering a global perspective on post-pandemic nursing resilience.

Limitations of the Review:

Despite its strengths, this review has certain limitations that should be acknowledged. Most included studies employed cross-sectional designs, which limit the ability to establish causal relationships between social support and resilience. As a result, conclusions regarding directionality should be interpreted with caution.

Additionally, heterogeneity in measurement tools for resilience and social support limited the feasibility of conducting a meta-analysis, necessitating a narrative synthesis approach. Variations in cultural context, healthcare systems, and pandemic severity across study settings may also have influenced reported outcomes.

Finally, although gender differences were examined, many studies reported gender as a demographic variable rather than a primary analytical focus. This limited the depth of gender-specific analysis in some cases.

CONCLUSION:

This systematic review provides comprehensive evidence that social support is a key determinant of resilience among nurses in the post-COVID-19 period, with meaningful gender-based differences in support utilization and resilience outcomes. Female nurses tend to rely more on emotional and family support and demonstrate greater benefit from supportive environments, while male nurses more commonly utilize peer-based and instrumental support strategies.

The findings underscore the importance of gender-sensitive support mechanisms in healthcare settings to strengthen resilience, promote psychological well-being, and sustain the nursing workforce in the aftermath of prolonged public health crises. Resilience should be viewed as a dynamic process shaped by interpersonal and organizational factors rather than solely as an individual attribute.

Future Directions:

Future research should prioritize longitudinal and intervention-based studies to better understand how social support and resilience evolve over time in the post-pandemic context. Evaluating the effectiveness of gender-responsive resilience-building interventions will be essential to inform evidence-based nursing practices.

Further exploration of cultural, organizational, and contextual influences on gender differences in resilience is also recommended. Qualitative studies may provide deeper insight into nurses' lived experiences and coping processes. Standardization of assessment tools would enhance comparability across future studies and strengthen the evidence base.

Final Statement:

By synthesizing current evidence through a PRISMA-guided approach, this review contributes meaningful insights into the complex interplay between gender, social support, and resilience

among nurses after the COVID-19 pandemic. The findings support the development of targeted, inclusive, and sustainable strategies to protect nurses' mental health and reinforce healthcare system resilience in future crises.

PRISMA 2020 CHECKLIST: Supplementary File / Appendix.

Section	Item No.	PRISMA 2020 Checklist Item	Reported (Yes/No)	Page No.
Title	1	Identify the report as a systematic review	Yes	1
Abstract	2	Structured summary	Yes	1
Introduction	3	Rationale for the review	Yes	2–3
Introduction	4	Objectives	Yes	2
Methods	5	Eligibility criteria	Yes	4
Methods	6	Information sources	Yes	4
Methods	7	Search strategy	Yes	4
Methods	8	Selection process	Yes	5
Methods	9	Data collection process	Yes	5
Methods	10	Data items	Yes	5
Methods	11	Study risk of bias assessment	Yes	6
Methods	12	Effect measures	NA	–
Methods	13	Synthesis methods	Yes	6
Results	16	Study selection	Yes	7
Results	17	Study characteristics	Yes	7
Results	18	Risk of bias in studies	Yes	7
Results	19	Results of individual studies	Yes	8
Discussion	23	Interpretation of results	Yes	9–11
Discussion	24	Limitations	Yes	12
Discussion	25	Conclusions	Yes	12
Other	27	Availability of data	Yes	13

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