

The Role of Coping Mechanisms in Nurses' Distress in the Hospital Emergency Department

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ABSTRACT

Nurses working in hospital emergency departments are healthcare professionals at high risk of experiencing distress due to intense work pressure, emotional burden, and unpredictable working conditions. This situation may affect nurses' mental and physical health as well as their performance. Therefore, effective coping mechanisms are required to manage distress, maintain well-being, and ensure the quality of healthcare services. This study aimed to analyze the role of coping mechanisms in addressing distress experienced by nurses in hospital emergency departments. The study employed a systematic literature review approach. Articles were searched through the Google Scholar and ScienceDirect databases using the keywords *coping mechanism*, *distress*, *nurse*, and *hospital emergency unit*. From a total of 48,117 articles identified, selection was conducted based on the following inclusion criteria: (1) articles published in English or Indonesian, (2) published between 2020 and 2025, and (3) discussing coping mechanisms and distress among emergency department nurses. The selection process consisted of identification, eligibility screening, and full-text review. The final results yielded 12 articles that met the criteria and were analyzed based on research design, methods, measurement instruments, and the alignment between study objectives and findings. From these 12 articles, various coping strategies were identified as effective in reducing distress, including coping-related training and education, psychological interventions, mindfulness, spiritual coping, social support, and social behavioral changes. Several interventions also focused on organizational improvements and the development of compassion skills. In conclusion, coping mechanisms play an important role in reducing distress among emergency department nurses through both individual- and organizational-oriented interventions. The implementation of continuous training and support is essential to strengthen nurses' coping capacity, create a healthy work environment, and improve the quality of hospital services.

Keywords: coping mechanism; distress; nurses; emergency department

INTRODUCTION

Stress is considered a disease of the 21st century, accounting for approximately 31% of illnesses and work absenteeism among healthcare personnel [1]. In clinical medicine, the term stress is used to describe a cluster of risk factors associated with various diseases of unknown or psychosomatic origin. Physicians sometimes distinguish between two types of stress, namely positive stress (eustress) and negative stress (distress). According to Hans Selye (1974), eustress stimulates motivation and adaptive functioning, whereas distress indicates that an individual is under pressure, experiencing negative emotions that may ultimately lead to adverse physical health outcomes [2]. Stress is defined as a psychological and physiological condition arising from responses to demands or pressures from the work environment that exceed an individual's capacity [3]. Distress occurs when the burden experienced by workers surpasses their knowledge, skills, or abilities, thereby making coping and problem management difficult [4].

Work-related stress is a psychosocial phenomenon widely experienced by healthcare workers worldwide and has become a serious issue in modern workplaces. The International Labour Organization (ILO) describes stress as a "collective workplace challenge" that can reduce productivity and workforce well-being [5]. Globally, the World Health Organization (WHO) reports that more than 25% of healthcare workers experience symptoms of anxiety, depression, and exhaustion due to high work pressure, and this figure had not shown significant decline up to 2022. This condition indicates that stress, particularly distress, constitutes a real threat to the mental health and performance of healthcare workers [6]. One of the groups most vulnerable to distress is nurses working in Emergency Departments (EDs). The ED is one of the most high-pressure work environments in hospitals, as it requires rapid decision-making, clinical accuracy, and readiness to handle unpredictable emergency cases. Heavy workload, high emotional demands, long working hours, insufficient staffing, and frequent exposure to critically ill patients can generate substantial psychological burden [7].

Several studies support this evidence. Sasso et al. (2019) and Boulton & Farquharson (2024) state that emergency room environments are characterized by high patient acuity and intense emotional pressure, which consistently contribute to burnout, job dissatisfaction, and impaired physical and mental health among workers [8, 9]. This finding is consistent with an international survey conducted in 41 countries showing that 100% of those countries experienced patient overcrowding in emergency departments. Such overcrowding poses risks to patient safety while simultaneously increasing worker stress and fatigue [10]. A systematic review conducted across multiple countries (Brazil, Portugal, South Africa, Australia, Iran, Argentina, Chile, China, Spain, the United States, Japan, Norway, the Netherlands, Pakistan, the United Kingdom, Switzerland, Taiwan, Turkey, and Venezuela) involved participants from various occupational sectors, dominated by healthcare workers (45%) and teachers (20%), with the remainder from other professions [11]. Another study conducted in The Gambia reported that 72.9% of ED nurses experienced severe psychological distress, primarily caused by human resource shortages, continuous pressure, and sleep disturbances [12]. In Sweden, more than 60% of ED nurses reported job dissatisfaction due to fatigue and weak social support [10]. Meanwhile, in Indonesia, research by Gressia et al. (2022) identified a high incidence of violence against ED nurses that often goes unreported, thereby exacerbating emotional pressure and insecurity in the workplace. These findings indicate that distress not only affects nurses' individual well-being but also threatens service quality, patient safety, and the stability of hospital health systems [13].

To cope with such high-pressure situations, coping mechanisms become an essential strategy that helps nurses manage stress and maintain emotional balance. Coping mechanisms refer to individuals' ability to regulate responses to stressors through cognitive and behavioral efforts, either oriented toward problem resolution (problem-focused coping) or emotional regulation (emotion-focused coping) [14]. Studies conducted in various countries show that the appropriate use of coping strategies—such as mindfulness, social support, spiritual coping, and stress management training—has been proven to reduce distress levels among ED nurses [15–17].

However, there remains a knowledge gap regarding the extent to which different types of coping mechanisms are effective in reducing distress among ED nurses. Some studies highlight variations in outcomes and intervention approaches across hospital contexts and work cultures. Therefore, a systematic literature review is needed to comprehensively analyze empirical evidence on the role of coping mechanisms in reducing distress among ED nurses across countries and recent research approaches.

Based on this background, the research question is: *What is the role of coping mechanisms in addressing distress experienced by nurses in hospital Emergency Departments?* The objective of this study is to systematically analyze various forms of coping mechanisms and their role in reducing distress among ED nurses, as well as to identify effective strategies applicable in hospital work environments. The urgency of this research lies in the increasing levels of distress and emotional exhaustion among healthcare workers in the post-pandemic period, which may reduce service quality and increase nurse

turnover rates. By understanding and strengthening effective coping mechanisms, healthcare institutions can create more adaptive work environments, support the psychological well-being of medical personnel, and improve patient safety. The contribution of this study is to provide a scientific basis for hospital management and policymakers in designing psychological interventions, coping training programs, and sustainable social support systems for ED nurses. In addition, this study contributes to the development of nursing science, particularly in the fields of occupational health and nursing psychology.

METHODS

This study employed a systematic literature review method using a structured search strategy to identify articles from both national and international sources through the Google Scholar and ScienceDirect databases. The sample for this study consisted of all articles that met predetermined criteria following the selection process. The keywords used in this study were *coping mechanism, distress, nurse, and emergency unit*. The Boolean operator “and” was applied to narrow the search results according to the combination of research terms. From the initial search, a total of 48,117 potentially relevant articles were identified.

Subsequently, inclusion and exclusion criteria were established for the literature to be reviewed. The inclusion criteria were: articles discussing the role of coping mechanisms in addressing distress among nurses working in hospital Emergency Departments; research articles published between 2020 and 2025; articles written in English or Indonesian and relevant to the topic; and publications categorized as empirical studies, systematic reviews, or research reports that had undergone peer review. The exclusion criteria included duplicate articles from the same source, articles not available in full-text form, and publications such as editorials, opinions, or commentaries that did not present empirical data.

The selection process was conducted in three stages: 1) Identification, which involved the initial screening of 48,117 articles based on titles and abstracts; 2) Eligibility screening, which involved filtering articles to ensure compliance with the inclusion and exclusion criteria; 3) Full-text review/selection, which involved evaluating the remaining articles to assess methodological clarity, study population, measurement instruments, and the alignment of findings with the research objectives. All documentation of the search and selection process will be presented using the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) flow diagram (Figure 1).

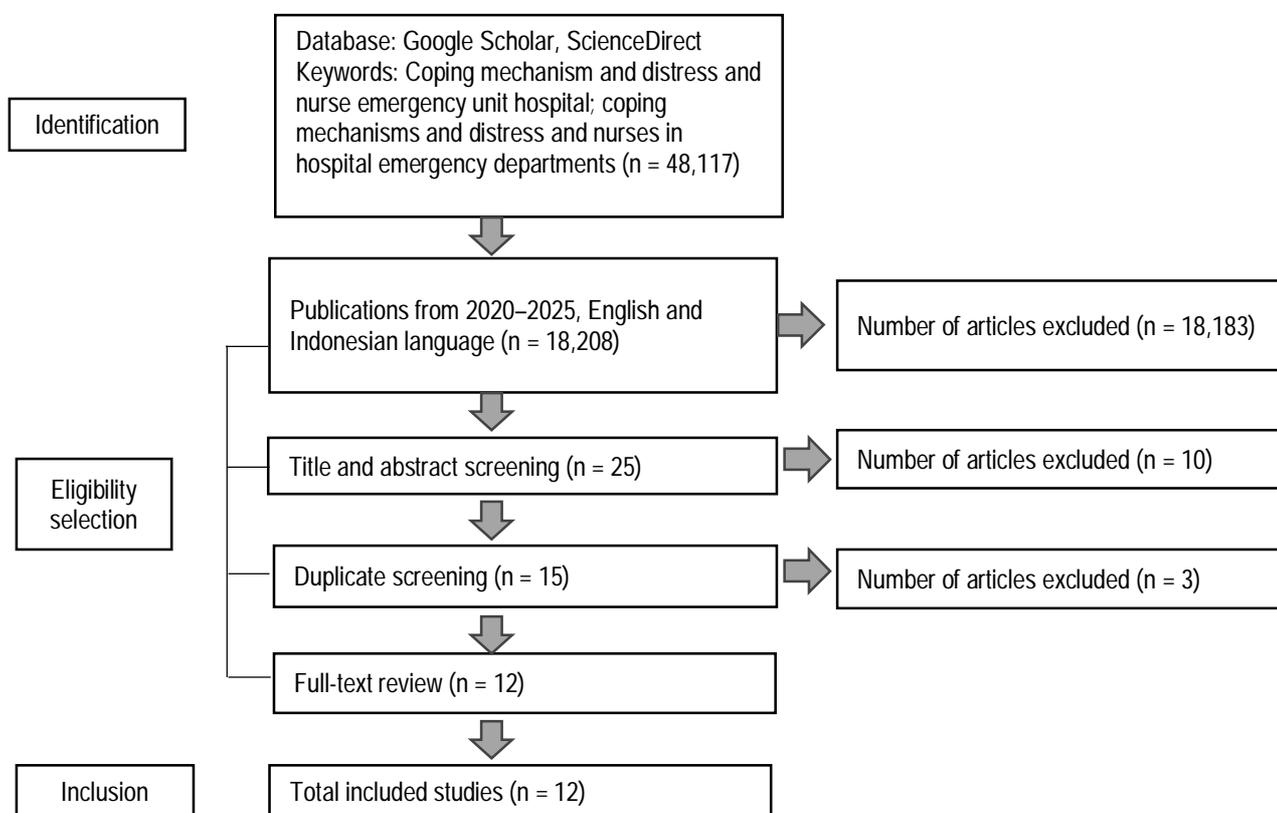


Figure 1. PRISMA flow diagram in article selection

RESULTS

The search of articles in the Google Scholar and ScienceDirect databases yielded 48,117 records. After screening and eligibility assessment, 12 articles met the inclusion criteria. Four criteria were used in the quality analysis: (1) a clear explanation of coping mechanisms and distress; (2) a clearly described population of nurses working in Emergency Departments; (3) a clear description of research methods, measurement techniques, and instruments used; and (4) consistency between research objectives and findings. The selected articles consisted of both international and national journals. Three studies used a systematic review design, three employed cross-sectional methods, one used a descriptive method, one applied a descriptive-exploratory design, two used descriptive phenomenology, one used a descriptive-correlational design, and one employed narrative inquiry.

Coping were shown to play an important role in reducing distress among Emergency Department nurses. The forms of coping mechanisms varied across studies, including interventions involving nursing work-organization redesign, education and training programs on coping techniques, problem-focused coping, emotion-focused coping, mindfulness, compassion-based approaches, spiritual coping, and social behavioral changes.

No	Author(s), year	Article title	Methods	Instrument	Findings
1	Xu Hui et al., 2020 [18]	Effectiveness of interventions to reduce emergency department staff occupational stress and/or burnout: A systematic review	Systematic review of 14 studies (four randomized trials and ten quasi-experimental studies). Sample size ranged from 14 to 392 participants	Maslach Burnout Inventory; Perceived Stress Scale; Professional Quality of Life Scale	Individual-focused interventions, including education and mindfulness, showed potential to reduce stress among ED nurses. Mindfulness-based interventions were examined in four studies, three of which reported decreased stress levels. Organizational interventions reduced stress but increased burnout.

2	Santana et al., 2021 [19]	Coping Strategies Used by Hospital Emergency Nurses	Qualitative descriptive-exploratory study involving 15 ED nurses in Bahia State, Brazil	Semi-structured in-depth interviews (April–June 2017)	Nurses applied both problem-focused and emotion-focused coping. Problem-focused strategies included strengthening social support, mutual assistance, and daily planning. Emotion-focused strategies included emotional control, self-regulation, avoiding stressors, physical activity, and recreation.
3	Kim et al., 2021 [20]	Expert nurses' coping strategies in ethically challenging situations: A qualitative study	Descriptive study with purposive sampling	Interviews with 26 expert nurses in a Korean general hospital; analyzed using Giorgi's descriptive phenomenological method	Expert nurses' coping strategies were largely grounded in ethical commitment and compassion toward others.
4	Cui et al., 2021 [21]	Impact of COVID-19 on Anxiety, Stress, and Coping Styles in Nurses in Emergency Departments and Fever Clinics: A Cross-Sectional Survey	Cross-sectional study using snowball sampling (Feb 13–20, 2020)	Online questionnaire: demographic data, Self-Rating Anxiety Scale, Perceived Stress Scale-14, Simplified Coping Style Questionnaire	Measures needed to maintain ED nurses' mental health include training, reducing night shifts, and ensuring adequate rest time.
5	Velana et al., 2021 [22]	Individual-Level Interventions for Decreasing Job-Related Stress and Enhancing Coping Strategies Among Nurses: A Systematic Review	Systematic review from EBSCOhost, Dortmund University Library, PubMed, Medline, Google Scholar, Applied Nursing Research	Individual interventions with control/placebo comparison	Twenty-seven relevant studies indicated that technology-based interventions such as relaxation and cognitive-behavioral stress management may reduce nurse stress and improve well-being.
6	Ruiz-Fernandez et al., 2021 [23]	Perceived health, perceived social support and professional quality of life in hospital emergency nurses	Cross-sectional study with 253 ED nurses in Andalusia, Spain	ProQOL v.IV; GHQ-12; Duke-UNC-11 Social Support Questionnaire	Early training and cultivation of compassion are important to improve emotional well-being and quality of life among ED nurses experiencing mental fatigue.
7	Betke et al., 2021 [24]	Sense of coherence and strategies for coping with stress among nurses	Cross-sectional study involving 91 nurses in Central Poland	SOC-29; Mini-COPE	Nurses with stronger workplace connectedness had more adaptive coping strategies. Planning and seeking emotional and practical social support were common strategies, while alcohol or drug use was rare.
8	Ozlas et al., 2022 [25]	Exposure of Emergency Nurses to Workplace Violence and Their Coping Strategies: A Cross-Sectional Design	Quantitative study with descriptive phenomenological approach	Questionnaires and face-to-face interviews with 120 ED nurses	Most ED nurses experienced workplace violence. Hospitals should implement management measures such as education and training programs on handling workplace violence.
9	Harahap et al., 2022 [26]	Experiences of Coping Mechanisms Among ED Staff Nurses Experiencing Work Stress	Descriptive phenomenology with purposive sampling; 12 ED nurses at Bunda Thamrin General Hospital, Medan	Demographic questionnaire and interviews	ED nurses' coping mechanisms were primarily problem-focused.
10	Mirzaei et al., 2022 [15]	Occupational stress and its relationship with spiritual coping among emergency department nurses and EMS staff	Descriptive-correlational study; sample 546 nurses	Spiritual Coping Questionnaire (SCQ); analyzed using SPSS v22, Pearson correlation, t-test, ANOVA, multiple linear regression	Positive spiritual coping was an effective tool for reducing stress. Education and promotion of spiritual coping should be prioritized by health policymakers.
11	Hetherington et al., 2024 [27]	Emergency Department Nurses' Narratives of Burnout: Changing Roles and Boundaries	Narrative inquiry involving 8 nurses	COREQ checklist used to ensure credibility and rigor	Social behavioral change strategies, including emotional regulation, were part of nurses' coping processes.
12	Jiang et al., 2025 [28]	A Systematic Review of Psychological Distress Reduction Programs Among Nurses in Emergency Departments	Systematic review	Databases: Science, Scopus, PubMed, CNKI; focused on randomized controlled trials	Three intervention types were identified: psychological interventions, coping-skills education programs, and organizational interventions. All contributed significantly to reductions in stress, depression, anxiety, and burnout, while improving quality of life.

DISCUSSION

The findings of this systematic literature review indicate that coping mechanisms play a significant role in reducing distress among nurses working in Emergency Departments (EDs). ED nurses are exposed to high work pressure, critically ill patients, and unpredictable clinical environments, all of which may lead to emotional exhaustion, psychological stress, and even physical health problems [18, 29]. Coping mechanisms therefore function as adaptive responses that enable individuals to manage stressors effectively. This aligns with the Transactional Stress arises from an imbalance between environmental demands and an individual's perceived ability to cope with those demands [30]. Consequently, coping competence becomes a key determinant of an individual's ability to maintain psychological stability in high-pressure settings such as the ED.

Several reviewed articles emphasize the importance of education and training interventions to strengthen nurses' coping abilities [25, 28, 29]. A study by Xu et al. (2020) found that education- and mindfulness-based interventions significantly reduced stress levels among ED nurses by up to thirty percent [18]. This finding is consistent with Cognitive Behavioral Theory, which posits that cognitive training enables individuals to recognize maladaptive thought patterns and replace them with more adaptive responses [31]. Research conducted in Spain by Ruiz-Fernandez et al. (2021) also highlighted the importance of compassion training, namely the strengthening of empathy and compassion skills when dealing with critically ill patients. The study reported improvements in professional quality of life and reductions in compassion fatigue. The balancing patient-centered care with self-care capacity can reduce emotional exhaustion among healthcare professionals [32].

From an organizational perspective, recommended multi-level intervention designs involving improvements in work systems, such as fair shift rotation and institutional psychological support [28]. These findings correspond with the Job Demand–Control–Support Model (Karasek & Theorell, 1990), which emphasizes that adequate social support and job control can reduce psychological strain among workers in high-risk environments [33]. Organizational factors therefore appear to be as crucial as individual coping skills in shaping nurses' resilience to workplace stress.

Most studies reviewed identified two primary coping strategies used by ED nurses: problem-focused coping and emotion-focused coping. Problem-focused coping includes active strategies such as planning tasks, seeking solutions, and strengthening social support networks [26]. This finding supports the theory, which states that this strategy is particularly effective when individuals perceive that the stressful situation is controllable [30]. In contrast, emotion-focused coping aims to regulate emotional responses to stressors, for example through relaxation, humor, or light recreational activities [27]. Santana et al demonstrated that these two coping mechanisms are complementary; when pressure intensifies, nurses tend to combine cognitive and emotional approaches to maintain psychological balance [19].

Research in Medan further supports this observation, showing that activities such as joking with colleagues, listening to music, or sharing experiences represent forms of emotion-focused coping that help reduce emotional tension. Meanwhile, strategies such as self-reflection and improved team communication represent problem-focused coping that contributes to better collaboration and work effectiveness [26]. These findings indicate that coping is not a single strategy but rather a dynamic process in which nurses continuously adjust their responses according to situational demands.

Meditative coping, particularly mindfulness, emerges as one of the most effective approaches for reducing nurses' distress [18]. Through enhanced awareness of thoughts and emotions, nurses are able to reassess stressors more rationally and respond without impulsive reactions. This is consistent with the Mindfulness-Based Stress Reduction (MBSR) framework, which emphasizes present-moment awareness as a means of reducing emotional strain [34]. A study conducted in Korea further indicated that mindfulness strengthens professional integrity, ethical reflection, and empathy toward patients, all of which are crucial for maintaining nurses' moral resilience in high-risk clinical environments [20].

Research in Poland demonstrated that nurses with a higher level of sense of coherence were better able to manage occupational stress [24]. This concept originates from the Salutogenesis Theory, which suggests that individuals who can comprehend, manage, and assign meaning to stressful experiences possess stronger psychological resilience [35]. Social support from colleagues and supervisors plays a major role in strengthening this sense of coherence. This is also supported by research, who found that nurses with strong social networks experienced lower levels of burnout [29]. In addition, social support functions as a buffer against stress, consistent with the Buffering Hypothesis, which proposes that interpersonal support moderates the negative psychological impact of stress [36].

Spiritual coping also emerges as an important theme in several studies. Spiritual coping may include prayer, religious practices, reflective contemplation, or other spiritual activities that provide meaning and inner calm when facing work pressure [15, 26]. According to Pargament's theory (1997), spirituality offers a meaning-making framework that helps individuals interpret suffering and confront it with acceptance and confidence [37]. A study involving 546 nurses showed that positive spiritual coping was significantly correlated with lower levels of stress, depression, and anxiety, as well as improved emotional well-being. These findings underscore the importance of the spiritual dimension in supporting the mental balance of healthcare professionals, particularly in extreme work situations such as the Emergency Department [15].

CONCLUSION

The systematic review findings indicate that coping mechanisms play a crucial role in reducing distress among Emergency Department nurses. Effective strategies include individual interventions (e.g., cognitive-behavioral training, mindfulness, and spiritual coping) and organizational approaches (e.g., social support, improved work systems, and compassion training). Proper coping enhances psychological balance, reduces emotional exhaustion, strengthens resilience, and improves nurses' professional quality of life, ultimately contributing to better service quality and patient safety.

Hospitals are therefore encouraged to implement continuous coping-training programs, strengthen institutional social support, and ensure balanced workload distribution. Nurses should enhance self-awareness and apply adaptive coping strategies, while policymakers and educational institutions should integrate occupational mental health and coping training into nursing curricula. Future research should employ quantitative and longitudinal designs to evaluate long-term coping effectiveness and explore the interaction between spiritual coping, organizational support, and psychological resilience in diverse cultural contexts.

Ethical consideration, competing interest and source of funding

- This study did not require ethical approval because it employed a Systematic Literature Review (SLR) design. The research relied exclusively on previously published studies and secondary data, without involving human participants, biological samples, or identifiable personal information. Therefore, in accordance with commonly accepted research ethics guidelines, formal ethical clearance and informed consent were not necessary. Nonetheless, the review was conducted in a transparent and responsible manner, with careful citation of all sources and adherence to principles of academic integrity and responsible research conduct.
- There is no conflict of interest related to this publication.
- Source of funding is authors.

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