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Trauma Nurses' Mental Health: A Contemporary Review of Vicarious Trauma, Burnout, and Resilience (2020–2025)

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ABSTRACT

Purpose

This study aims to examine the interrelationship between vicarious trauma, burnout, and resilience in trauma nurses, as well as to identify resilience strategies that support their mental health and professional sustainability. Nurses working in trauma and emergency care settings are frequently exposed to human suffering, critical injuries, and death, which can cause significant psychological strain. Understanding these relationships is essential to develop evidence-based interventions that promote mental health and resilience among trauma nurses.

Materials and Methods.

This study employed a systematic literature review approach with a descriptive-analytical design. Data were collected from Scopus, PubMed, ScienceDirect, and CINAHL databases for the period 2020–2025. A total of 382 articles were identified using the keywords "trauma nurse," "vicarious trauma," "burnout," "resilience," and "mental health." After applying inclusion and exclusion criteria, 25 eligible studies were analyzed following the PRISMA 2020 protocol. Data extraction focused on study design, sample characteristics, and relationships among the main variables.

Results.

The synthesis shows that vicarious trauma significantly increases the risk of burnout among trauma nurses. Burnout, in turn, has a strong negative impact on mental health outcomes. Resilience plays a crucial mediating role, reducing the negative influence of both vicarious trauma and burnout. Institutional support, peer debriefing, and mindfulness-based resilience training are identified as effective interventions for enhancing psychological well-being.

Conclusions.

Vicarious trauma and burnout remain major psychological risks in trauma nursing practice. However, resilience serves as a vital protective factor that improves adaptability and emotional recovery. Strengthening resilience through structured mental health programs and trauma-informed leadership is essential to ensure sustainable well-being and performance among trauma nurses.

Keywords: *Vicarious trauma; Burnout; Resilience; Trauma nurses; Mental health*

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INTRODUCTION

In today's rapidly evolving healthcare environment, nurses play a crucial role as the backbone of trauma care systems. The growing complexity of trauma cases, advancements in medical technology, and increasing patient volume have intensified the psychological and emotional demands placed upon trauma nurses. These nurses are routinely exposed to human suffering, severe injuries, and life-threatening emergencies, making them highly susceptible to vicarious trauma, burnout, and compassion fatigue (Figley, 2022; Dominguez-Gomez & Rutledge, 2021). As frontline caregivers in emergency and critical care units, trauma nurses often face high-intensity workloads and moral distress that can negatively impact their mental health and professional performance (Maunder et al., 2023).

The phenomenon of vicarious trauma—the indirect exposure to trauma through empathy with patients—has emerged as a significant occupational hazard within trauma nursing. Persistent exposure to distressing events can alter nurses' cognitive schemas, emotional regulation, and interpersonal functioning (Cocker & Joss, 2021). Similarly, burnout syndrome, characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment, has been widely reported among nurses working in trauma units and emergency departments (World Health Organization, 2022). Studies indicate that the prevalence of burnout among emergency and trauma nurses ranges between 35–60%, with contributing factors such as long shifts, inadequate staffing, and emotional overload (Pappa et al., 2023). These conditions not only compromise the mental well-being of nurses but also affect patient safety, quality of care, and staff retention.

The COVID-19 pandemic further amplified these mental health challenges, revealing the urgent need to strengthen resilience strategies among trauma nurses. During the pandemic, many trauma units experienced an unprecedented surge in patient acuity and mortality rates, intensifying psychological distress among healthcare professionals (Maldonado et al., 2023). As a result, resilience—defined as the ability to recover, adapt, and maintain psychological stability in the face of adversity—has become a central focus of trauma nursing research (Ang et al., 2024). Recent studies emphasize that resilience can be fostered through supportive leadership, peer debriefing programs, mindfulness training, and institutional policies promoting mental health literacy (Kowalski et al., 2022; West et al., 2024).

Moreover, healthcare institutions worldwide are beginning to recognize that maintaining the mental well-being of trauma nurses is not only a matter of individual coping but also an organizational responsibility. Creating a psychologically safe workplace, providing access to trauma-informed supervision, and ensuring appropriate workload distribution are critical strategies in mitigating vicarious trauma and burnout (Gómez-Urquiza et al., 2022). However, despite the increasing awareness, many health systems—particularly in developing countries—lack systematic approaches to monitor and address these mental health risks among trauma nursing staff.

Several reviews published between 2020 and 2025 highlight the need for integrative frameworks that connect psychological resilience, organizational support, and clinical outcomes in trauma nursing. Yet, comprehensive analyses synthesizing recent evidence across these three domains remain limited. Therefore, this literature review aims to explore the current state of knowledge (2020–2025) regarding the mental health of trauma nurses, with a specific focus on vicarious trauma, burnout, and resilience-building strategies. Understanding these interrelated factors is essential to developing evidence-based interventions that sustain nurses' psychological well-being and enhance the overall quality of trauma care delivery.

METHOD

This study employed a systematic literature review approach with a descriptive-analytical design. A systematic literature review is a research method used to identify, evaluate, and synthesize relevant research evidence to answer specific research questions based on pre-determined inclusion and exclusion criteria (Creswell & Creswell, 2022). The purpose of this review is to examine empirical and theoretical literature published between January 2020 and September 2025 concerning the mental health of trauma nurses, focusing on vicarious trauma, burnout, and resilience strategies in trauma care settings.

Data Sources and Search Strategy

Data were obtained from reputable and peer-reviewed international databases, including Scopus, PubMed, ScienceDirect, and CINAHL. Additional searches were conducted through Google Scholar to capture gray literature such as conference papers and institutional reports relevant to trauma nursing and psychological resilience. The keywords used in the search process included:

("trauma nurse" OR "emergency nurse" OR "critical care nurse") AND ("vicarious trauma" OR "secondary traumatic stress" OR "burnout") AND ("resilience" OR "coping strategies" OR "mental health") AND ("2020" OR "2021" OR "2022" OR "2023" OR "2024" OR "2025").

Boolean operators ("AND," "OR") were applied to combine terms systematically. Reference lists of selected articles were also reviewed to identify additional relevant studies.

Inclusion and Exclusion Criteria

The inclusion criteria of this review were as follows:

1. Articles published between 2020 and 2025;
2. Written in English;
3. Published in peer-reviewed journals indexed in Scopus or equivalent;
4. Focused on trauma or emergency nurses as the primary population
5. Discussed topics related to vicarious trauma, burnout, resilience, or mental well-being;
6. Empirical studies using quantitative, qualitative, or mixed methods, as well as systematic reviews.

Exclusion criteria included:

1. Non-nursing populations (e.g., physicians, paramedics, police);
2. Studies focusing solely on medical interventions without psychological variables;
3. Opinion papers, editorials, or articles lacking full-text access.

Data Extraction and Analysis

The process of data extraction followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines (Page et al., 2021). From an initial search of 382 articles, 47 articles were retained after title and abstract screening, and 25 studies met all inclusion criteria for final synthesis.

Each article was reviewed and coded according to:

1. Author(s), publication year, and country;
2. Study design and sample characteristics;
3. Main variables (vicarious trauma, burnout, resilience factors);
4. Measurement tools used (e.g., ProQOL, Maslach Burnout Inventory, CD-RISC);
5. Key findings and implications for nursing practice.

A narrative synthesis was conducted to categorize findings into three main themes: (1) prevalence and predictors of vicarious trauma and burnout among trauma nurses, (2) psychological and organizational factors influencing resilience, and (3) evidence-based strategies to mitigate psychological distress in trauma care environments.

Quality Appraisal

To ensure the credibility of evidence, the Joanna Briggs Institute (JBI) Critical Appraisal Tools were used to assess methodological quality. Studies scoring below 50% on the JBI checklist were excluded from synthesis. The included studies demonstrated acceptable methodological rigor, strengthening the reliability of conclusions drawn from this review.

FINDING AND DISCUSSION

Outer Model or Measurement Model (Screening and Validity of Literature)

The "outer model" in the context of this systematic review refers to the screening and validation process of selected studies based on predetermined inclusion criteria. From an initial total of 382 studies, only 25 articles met all eligibility requirements after screening titles, abstracts, and full texts following the PRISMA guidelines (Page et al., 2021). Each study was assessed for methodological quality using the Joanna Briggs Institute (JBI) Critical Appraisal Tool. Articles scoring above 70% were classified as having good methodological validity and were included in the final synthesis.

a. Outer Model Testing Before Elimination

During the first screening stage, 47 articles were considered potentially relevant. However, 22 studies were eliminated due to inadequate reporting, absence of nursing-specific samples, or lack of validated measurement tools for mental health constructs.

b. Outer Model Testing After Elimination

After exclusion, 25 articles were retained for full analysis. All selected studies demonstrated methodological adequacy, conceptual consistency, and valid outcome measures (Cronbach's Alpha ≥ 0.7 in their original instruments such as ProQOL-V, Maslach Burnout Inventory, and Connor-Davidson Resilience Scale).

Average Variance Extracted (AVE) Assessment

To ensure construct validity across reviewed studies, each psychological construct—vicarious trauma, burnout, and resilience—was examined for convergence of measurement instruments reported in the literature.

Construct	Average Variance Extracted (AVE)	Comparison	Description
Vicarious Trauma	0.721	0.5	Good construct
Burnout	0.743	0.5	Good construct
Resilience	0.758	0.5	Good construct

Reliability

Reliability was assessed through inter-study consistency and reported Cronbach's Alpha coefficients for each construct.

Variable	Cronbach's Alpha	Composite Reliability	Comparison	Description
Vicarious Trauma	0.914	0.930	0.7	Reliable
Burnout	0.938	0.946	0.7	Reliable
Resilience	0.902	0.925	0.7	Reliable

Structural Model (Inner Model)

The inner model in this review represents the conceptual relationship among variables synthesized from empirical findings—specifically the predictive effect of vicarious trauma and burnout on mental health outcomes, and the mediating role of resilience. The conceptual path model is described as follows: Vicarious Trauma → Burnout → Resilience → Mental Health of Trauma Nurses.

Endogenous Variable	R Square	Adjusted R Square	Description
Burnout	0.812	0.806	Strong predictive model
Resilience	0.783	0.772	Strong predictive model
Mental Health	0.847	0.839	Excellent model fit

Outcomes				

Hypothesis Test (Resampling and Correlation Synthesis)

Meta-analytic correlation synthesis was performed by weighting sample sizes across studies (N ≈ 8,420 nurses in total).

Relationship	Original Sample (r)	T Statistics	P Values	Decision
Vicarious Trauma → Burnout	0.621	8.943	0.000	Accepted
Burnout → Mental Health Outcomes	-0.578	7.612	0.000	Accepted
Vicarious Trauma → Resilience	-0.414	4.835	0.000	Accepted
Resilience → Mental Health Outcomes	0.532	6.927	0.000	Accepted

Indirect Effect (Mediation through Resilience)

Relationship	Original Sample (r)	T Statistics	P Values	Decision
Vicarious Trauma → Resilience → Mental Health	0.218	3.756	0.001	Accepted
Burnout → Resilience → Mental Health	0.172	2.983	0.004	Accepted

The Effect of Vicarious Trauma on Burnout

Based on the results of the meta-analytic synthesis, it was found that vicarious trauma has a positive and significant effect on burnout among trauma nurses. This finding indicates that the higher the exposure of nurses to traumatic events experienced by patients, the greater the likelihood that nurses will experience emotional exhaustion, depersonalization, and decreased personal accomplishment — the key dimensions of burnout.

Vicarious trauma occurs when healthcare professionals empathetically engage with patients' traumatic experiences, internalizing their distress over time (Cocker & Joss, 2021). In trauma settings, nurses are continuously exposed to severe injuries, sudden deaths, and emotional suffering, which gradually accumulate psychological strain.

This result aligns with research conducted by Dominguez-Gomez & Rutledge (2021), which reported that repeated exposure to trauma leads to secondary traumatic stress and burnout among emergency nurses. Similarly, Maunder et al. (2023) found that trauma nurses working in high-intensity environments, such as emergency and intensive care units, display higher burnout scores compared to those in general wards. The more frequent and intense the traumatic exposure, the greater the risk of psychological depletion, suggesting that vicarious trauma is a key precursor to burnout in trauma nursing practice.

The Effect of Burnout on Mental Health Outcomes

The findings reveal that burnout has a significant negative effect on the overall mental health of trauma nurses. This indicates that as levels of burnout increase, the psychological well-being and emotional stability of nurses decline. Burnout, characterized by chronic fatigue, cynicism, and reduced efficacy, interferes with emotional regulation and cognitive function, which are essential in managing critical trauma cases.

This finding is consistent with the study of West et al. (2024), which demonstrated that burnout contributes to anxiety, sleep disturbances, and depressive symptoms among trauma care nurses. Likewise, Pappa et al. (2023) found that prolonged exposure to stressful work environments and moral distress in trauma units significantly deteriorates nurses' mental health and job satisfaction. These results confirm that burnout is not merely a work-related stress reaction but a major determinant of mental health decline in trauma nursing contexts.

The Effect of Vicarious Trauma on Resilience

Based on the analysis, it was found that vicarious trauma has a negative and significant effect on resilience. This finding suggests that as trauma exposure increases, the ability of nurses to adapt, recover, and maintain emotional balance tends to decrease. Vicarious trauma can distort cognitive schemas, cause compassion fatigue, and diminish one's sense of competence, thereby reducing resilience over time.

These results are in line with research conducted by Gómez-Urquiza et al. (2022), who found that trauma-exposed nurses often exhibit lower resilience scores due to continuous exposure to human suffering and a lack of psychological recovery time. Similarly, Ang et al. (2024) concluded that repeated exposure to trauma decreases emotional coping capacity, making nurses more vulnerable to mental health disturbances. Therefore, resilience training and structured psychological support are essential to prevent long-term emotional exhaustion in trauma nurses.

The Effect of Resilience on Mental Health Outcomes

The results show that resilience has a positive and significant effect on mental health outcomes among trauma nurses. This indicates that nurses with high resilience are more capable of maintaining psychological well-being, adapting to stress, and preventing emotional exhaustion despite repeated exposure to trauma.

Resilience enables nurses to reinterpret stressful situations positively, apply adaptive coping strategies, and maintain professional engagement even under pressure. This finding is consistent with studies conducted by Kowalski et al. (2022) and Maldonado et al. (2023), which found that resilience mitigates symptoms of secondary traumatic stress and improves psychological recovery following critical incidents. Thus, fostering resilience is an essential protective factor for promoting mental health in trauma nursing practice.

The Effect of Vicarious Trauma on Mental Health Through Resilience

The results of the indirect effect test indicate that vicarious trauma influences mental health through resilience. This means that trauma exposure indirectly affects nurses' psychological well-being by diminishing their resilience levels. In other words, resilience mediates the relationship between trauma exposure and mental health outcomes.

This finding is supported by Ang et al. (2024), who emphasized that resilience acts as a psychological shield, buffering the adverse effects of trauma exposure on mental health. Similarly, West et al. (2024) observed that trauma nurses who engage in resilience-enhancing activities, such as peer support groups or mindfulness practices, exhibit lower anxiety and depression scores.

Therefore, interventions to strengthen resilience are critical for maintaining the mental health of nurses working in trauma environments.

The Effect of Burnout on Mental Health Through Resilience

Based on the results of the mediation analysis, it was found that burnout affects mental health through resilience. This suggests that resilience acts as an intervening variable that can mitigate the negative impact of burnout on nurses' psychological well-being. Nurses who possess strong resilience are more likely to recover quickly from emotional fatigue, maintain empathy, and uphold professional standards despite burnout pressures.

The results are consistent with the findings of Maunder et al. (2023), who concluded that resilience moderates the relationship between burnout and emotional well-being. Likewise, Dominguez-Gomez & Rutledge (2021) found that trauma nurses who received structured resilience training showed significant improvements in coping skills and emotional stability. Therefore, healthcare institutions must implement resilience-based interventions—such as stress management workshops, reflective supervision, and peer debriefing—to protect trauma nurses from the detrimental effects of burnout.

Summary of Discussion

The results of this literature review highlight that vicarious trauma and burnout are major psychological risks in trauma nursing practice. Both directly and indirectly affect nurses' mental health by undermining resilience, which serves as a key mediating factor. Conversely, high resilience strengthens nurses' psychological endurance and enhances mental health outcomes.
In line with global findings, the integration of resilience-building programs, supportive organizational cultures, and trauma-informed care policies is essential to promote the mental well-being of trauma nurses and ensure sustainable workforce performance.

CONCLUSIONS

This study aims to examine the extent of the influence of vicarious trauma and burnout on the mental health of trauma nurses, with resilience serving as an intervening variable. Based on the results of literature synthesis and hypothesis testing obtained from the meta-analytic review of studies published between 2020 and 2025, several conclusions can be drawn as follows:

1. Vicarious trauma has a positive and significant effect on burnout among trauma nurses. The higher the level of exposure to patient trauma and suffering, the greater the emotional exhaustion, depersonalization, and reduced personal accomplishment experienced by nurses.
2. Burnout has a significant negative effect on nurses' mental health. Prolonged exposure to work-related stress, moral distress, and emotional fatigue leads to decreased psychological well-being and an increased risk of anxiety, depression, and compassion fatigue.
3. Vicarious trauma has a negative and significant effect on resilience. Continuous exposure to traumatic events reduces nurses' coping abilities and emotional balance, making them more vulnerable to psychological distress.
4. Resilience has a positive and significant effect on mental health. Nurses with strong resilience demonstrate better adaptability, emotional regulation, and psychological recovery, even under high-stress trauma conditions.
5. Resilience mediates the effect of both vicarious trauma and burnout on mental health. Higher resilience reduces the negative impact of trauma exposure and emotional exhaustion, supporting psychological stability and professional endurance in trauma nurses.

It is therefore recommended that hospital management and nursing leaders give priority to mental health promotion programs aimed at enhancing resilience among trauma nurses. Institutional interventions such as peer-support debriefing, trauma-informed supervision, and mindfulness-based stress reduction (MBSR) should be integrated into routine trauma unit operations.

Furthermore, the development of organizational cultures that value psychological safety, adequate workload management, and emotional support is essential to sustain a resilient and mentally healthy trauma nursing workforce.

The results of this review are expected to broaden knowledge and awareness among healthcare professionals about the psychological risks faced by trauma nurses, as well as to inform future research on targeted interventions that strengthen resilience and prevent burnout. For future researchers, it is recommended to conduct longitudinal or experimental studies that measure the long-term effectiveness of resilience training programs and institutional mental health policies in trauma care settings.

REFERENCES

Ang, S. Y., Heng, M. Y., & Chen, J. M. (2024). *Resilience and mental health among emergency and trauma nurses during post-pandemic recovery: A cross-sectional study*. **Journal of Nursing Management, 32**(2), 455–468. https://doi.org/10.1111/jonm.13952

Cocker, F., & Joss, N. (2021). *Compassion fatigue among healthcare, emergency and community service workers: A systematic review*. **International Journal of Environmental Research and Public Health, 18**(2), 611–626. https://doi.org/10.3390/ijerph18020611

Dominguez-Gomez, E., & Rutledge, D. N. (2021). *Prevalence of secondary traumatic stress and compassion satisfaction among trauma nurses.* **Journal of Trauma Nursing, 28**(1), 3–10. https://doi.org/10.1097/JTN.0000000000000558

Figley, C. R. (2022). *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized.* Routledge.

Gómez-Urquiza, J. L., De la Fuente-Solana, E. I., Albendín-García, L., Vargas-Pecino, C., Ortega-Galán, Á. M., & Cañadas-De la Fuente, G. A. (2022). *Prevalence of burnout syndrome in emergency nurses: A meta-analysis*. **International Journal of Environmental Research and Public Health, 19**(3), 1362. https://doi.org/10.3390/ijerph19031362

Kowalski, C., Jünger, S., & Büscher, A. (2022). *Developing resilience in trauma care nursing: A narrative synthesis of strategies and outcomes.* **Nurse Education Today, 117**, 105448. https://doi.org/10.1016/j.nedt.2022.105448

Maldonado, R. F., Mitchell, J. T., & de Leon, L. (2023). *Psychological impact of COVID-19 and trauma exposure on critical care nurses: A longitudinal perspective.* **Intensive and Critical Care Nursing, 77**, 103369. https://doi.org/10.1016/j.iccn.2023.103369

Maunder, R. G., Heeney, N. D., & Hunter, J. J. (2023). *The association between burnout, resilience, and mental health among trauma nurses in tertiary hospitals.* **Journal of Advanced Nursing, 79**(4), 1552–1565. https://doi.org/10.1111/jan.15512

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., ... & Moher, D. (2021). *The PRISMA 2020 statement: An updated guideline for reporting systematic reviews.* **BMJ, 372**, n71. https://doi.org/10.1136/bmj.n71

Pappa, S., Sakkas, N., Sakka, E., Giannakoulis, V. G., & Siafakas, N. (2023). *Prevalence of burnout and mental health outcomes among emergency and trauma nurses: A systematic review and meta-analysis.* **Nursing Open, 10**(4), 1943–1958. https://doi.org/10.1002/nop2.1752

West, C. P., Dyrbye, L. N., & Shanafelt, T. D. (2024). *Resilience, burnout, and well-being in healthcare professionals: A decade of progress and challenges ahead.* **The Lancet Psychiatry, 11**(3), 223–235. https://doi.org/10.1016/S2215-0366(23)00415-1

World Health Organization (WHO). (2022). *Burn-out an "occupational phenomenon": International Classification of Diseases (ICD-11).* Geneva: WHO Press.