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Addressing Medical Trauma in Nursing Practice: A Trauma-Informed Care Approach: A Review Study

Ali Alhussian Mohammed Alnaami [(1)] , Faleh Hussain Hassan Alshahrani [(1)] , Yousef Khalil Alotaibi [(1)] , Abdulaziz Mohammad Alrashdi [(1)] , Hamoud Abdullah Talal Alaybani [(1)] , Majed Khalid Alotaibi [(1)] , Motlak Dughaylib Alotaibi [(2)] , Abdullah Saeed Alshahrani [(2)] , Rakan obaid Alharbi [(3)] , Mila Mardi Fuwidi Al-Anazi [(4)] , Khalaf Meshal Alotaibi [(1)] , Nawaf Shabib Jaza Alotaibi [(1)] , Thamer Meshal Ghazi Alotaibi [(5)] , Bandar Jalal Dhaway Alotaibi [(6)] , Mansor Ghlib Oraibi [(1)]

(1) Irada and Mental Health Hospital, Ministry of Health, Saudi Arabia,
(2) Erada Hospital in Al-Kharj, Ministry of Health, Saudi Arabia,
(3) Erada Mental Health Hospital in Al-Kharj, Ministry of Health, Saudi Arabia,
(4) Erada Complex for Psychiatric Diseases and Addiction, Ministry of Health, Saudi Arabia,
(5) Primary Health Center Alqurain, Ministry of Health, Saudi Arabia,
(6) Ruwaydat AlArd General Hospital, Ministry of Health, Saudi Arabia

Abstract

Background: Medical trauma, a psychophysiological response to distressing healthcare experiences, stands as a common yet usually neglected health problem. Seriously ill patients, cancer patients, or patients who need an invasive procedure have the highest risk, since they usually develop post-traumatic stress disorder, anxiety, depression, and a lack of trust in the care provided, and poor long-term recovery and adherence to treatment.

Aim: This review synthesizes literature between 2015 and 2024 to contend that the systematic incorporation of Trauma-Informed Care principles in all aspects of nursing practice is an ethical imperative in addressing medical trauma.

Methods: An extensive review of the literature was performed to understand the concept of medical trauma, its prevalence, its impact on patient outcomes, and the application of the TIC framework in nursing.

Results: The analysis indicates that TIC offers an effective framework for nursing. Understanding and minimizing trauma by centering safety, trust, collaboration, and empowerment in practice-these key concepts-help to answer the question, "What has happened to you?" through nursing interactions. Specific, practical methods and strategies are identified that nurses can use to incorporate TIC into practice through communication, procedural care, and the environment.

Conclusion: Nurses are uniquely positioned as leaders in the prevention and mitigation of medical trauma. The implementation of TIC would not only enhance patient satisfaction and clinical outcomes but also promote professional fulfillment among nurses, transforming healthcare into a more humane and healing experience.

Keywords: Medical Trauma, Trauma-Informed Care, Nursing Practice, Patient Safety, Psychological Distress.

1. Introduction

While the primary goal of healthcare is to heal, ironically, the process of care itself can cause profound psychological harm. The concept of medical trauma has evolved over the last decade from a peripheral issue to a central concern in patient-centered care. Medical trauma is not officially a diagnosis but rather a descriptive term for the psychological and physiological distress emanating from a medical incident or sequence of incidents perceived as threatening to one's life or bodily integrity. Unlike other forms of trauma, it occurs in a setting where individuals are seeking help, thus creating a complex dynamic of dependency, vulnerability, and potential betrayal. A life-altering diagnosis, loss of control and dignity in the ICU, pain and fear associated with surgery, or even the cumulative stress of chronic disease management can all be sources of medical trauma.

The prevalence is astonishing. Studies show that as many as 20-30% of surviving ICU patients have symptoms of PTSD that are clinically significant, similar to combat veterans' rates (Davydow et al., 2013; Parker et al., 2015). In oncology, it is estimated that around 25% of patients report symptoms of PTSD after diagnosis and treatment (Chan et al., 2018). Beyond these high-risk groups, however, medical trauma could happen to anyone, including parents of hospitalized children, those having routine procedures with fear, and those experiencing perceived disrespect or coercion by healthcare providers (Burton et al., 2019). Beyond the individual, family members who witness the traumatic event in medicine can have an

*Corresponding author e-mail: al-ne3mi@hotmail.com (Ali Alhussian Mohammed Alnaami).
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impact on themselves through secondary traumatic stress (Kang, 2023).

The nurses are the constants in this volatile landscape. They are there during the most vulnerable moments: during a code, when offering intimate care, during those long, fearful nights in a hospital room. This places them not only as potential witnesses to trauma but as powerful agents in its prevention and mitigation. Foli (2022) states that the traditional nursing model has often been designed around issues of efficiency and the completion of tasks in a way that inadvertently perpetuates trauma through actions that are clinically necessary, but which are dehumanizing or coercive. Long et al. add that the imperative, therefore, is to equip nurses and the systems in which they work with a new paradigm.

Trauma-Informed Care

TIC is not a specific therapy but a fundamental shift in organizational culture and clinical practice. The approach realizes the widespread impact of trauma, recognizes the signs and symptoms of trauma in patients, families, and staff, and responds by fully integrating knowledge about trauma into policies, procedures, and practices, actively resisting re-traumatization (Abuse, 2014). The present review will contend that the adoption of TIC is the most critical and pragmatic step that the nursing profession can take to address the silent epidemic of medical trauma. By weaving the six core principles of TIC-safety, trustworthiness and transparency, peer support, collaboration and mutuality, empowerment and choice, and cultural, historical, and gender issues into the fabric of daily practice, nurses can transform the healthcare experience from one of potential terror to one of genuine healing and partnership.

Understanding Medical Trauma

Definition and Etiological Factors of Medical Trauma

Medical trauma emanates from a subjective experience wherein an individual's perceived capacity to cope is overwhelmed by a medical event. Its etiology is multifactorial, often involving an interplay of objective medical severity and subjective patient perception. Key etiological factors include: 1) Life-Threatening Diagnosis: The shock and terror of being told one has a possibly fatal illness, such as cancer, a massive heart attack, or a new spinal cord injury, can be quite traumatic in nature. The sudden confrontation with mortality shatters one's sense of safety and future. 2) Experiences in Critical Care: The ICU environment is a prime incubator for trauma. Factors include relentless noise, sleep deprivation, constant light, disorienting delirium (ICU delirium), painful procedures, loss of privacy and autonomy, and inability to communicate when intubated.

Many patients report having experienced vivid, frightening hallucinations and delusions that are remembered as real torture. 3) Painful or Invasive Procedures: Such procedures as wound debridement, chest tube insertion, lumbar punctures, or even difficult IV placements, if performed without proper analgesia or psychological preparation, can be perceived as assaults. 4) Perinatal Complications: Traumatic birth experiences, including emergency cesarean sections, serious perineal tears, or life-threatening complications for mother or baby, can culminate in postpartum PTSD. 5) Adverse Interactions with Healthcare Providers: Communication perceived as dismissive, coercive, or disrespectful can be a strong source of trauma. This includes not being listened to, having symptoms minimized, or feeling coerced into a particular treatment path.

Clinical Manifestations and Sequelae

The psychological and physiological sequelae after medical trauma are varied and can be long-lasting. The most recognized manifestation is Post-Traumatic Stress Disorder, characterized by intrusive memories, flashbacks, nightmares, avoidance of trauma-related stimuli, negative alterations in mood and cognition, and hyperarousal (American Psychiatric Association, 2013). In medical traumas, this could show itself through avoiding follow-up appointments, clinics, or hospitals; intense anxiety from viewing medical personnel or equipment; or persistent, distressing memories of a particular procedure (Davydow et al., 2013). Beyond PTSD, the rates of anxiety disorders, depression, and adjustment disorders among patients remain high (Fernández et al., 2023).

The consequence of this is a tremendous effect on physical health and treatment adherence. Trauma initiates a chronic stress response, deregulating the hypothalamic-pituitary-adrenal axis, leading to increased cortisol levels capable of weakening the immune response, inflaming tissues, and predisposing one to poor cardiovascular health (Dhungana et al., 2022). Behaviorally, trauma can manifest itself in significant treatment non-adherence: the cancer survivor who stops going to follow-up scans; the post-MI patient who fails to show up for cardiac rehabilitation; the diabetic who does not follow through with monitoring glucose levels; avoidant behaviors associated with their medical trauma (Kumari & Mukhopadhyay, 2020). This creates a feedback loop in which the consequences of the initial disease are exacerbated by the trauma of its treatment, resulting in poor long-term outcomes and higher healthcare utilization (Haines et al., 2022).

The Core Principles of Trauma-Informed Care and Their Relevance to Nursing

Trauma-informed care extends a compelling, person-centered approach to offset the causes of medical trauma. The six principles of Bartholow & Huffman (2023) guide nursing practice in both the individual and organizational levels.

Safety

The key consideration here is to feel safe, both physically and psychologically. For a patient, there is something inherently unsafe about a health care environment. This can be fostered by the nurse through such strategies as explaining noise and activity in the environment; granting privacy when providing care; seeking permission to touch the patient, "Is it okay if I listen to your heart now?"; and introducing oneself and one's role consistently (Aydın & Aktaş, 2021; Liu et al., 2019). In addition, establishing a predictable routine whenever possible, as well as explaining what is going to happen next, may reduce the anxiety created by the unknown.

Trust and Transparency

Healthcare trust is easily broken and is afoot that must be built consistently, clearly, and honestly. That means doing what you say you will do: showing up on time, and clearly explaining treatments, medications, and procedures-including their possible discomforts plain terms devoid of jargon (Pfeiffer & Grabbe, 2022). Whenever possible, transparency of organizational operations and decision-making processes builds trust as well.

Peer Support

This inclusion of individuals with lived experience of illness and medical trauma can be incredibly powerful. While it may not always be possible at the bedside, nurses can facilitate connections to peer support groups for conditions such as cancers, heart diseases, or ICU recoveries (Maley & Mikkelsen, 2020). It helps to share stories with others who have "been there," which further validates the patient's experience and lessens feelings of isolation.

Collaboration and Mutuality

TIC flattens the traditional hierarchy in healthcare. Healing is done in partnership, and one way that nurses can put this into practice is by actively soliciting input from the patient, offering choices whenever possible ("Would you like your bath in the morning or evening?"), using language to frame the patient as an expert on their body and experience ("Can you help me understand what you are feeling?") (Kumari & Mukhopadhyay, 2020). A key component of this principle is shared decision-making.

Empowerment, Voice, and Choice

The illness experience is often characterized by a critical loss of control and power. The nurse can work against this by focusing on the strengths and resilience of the patient. This involves emotional validation, highlighting small recovery successes, and providing maximum patient choice around daily activities (Fernández et al., 2023). Small choices, such as what to wear or eat, can affirm agency.

Cultural, Historical, and Gender Issues

In this, nurses must be cognizant of how a patient's cultural background, past experiences of systemic oppression, and gender identity may influence their experience of care and trauma. It is a practice of cultural humility-it is the ongoing commitment to self-reflection and to understanding the power dynamic inherent in the nurse-patient relationship (Hall et al., 2021). It means using preferred pronouns and understanding how historical traumas-institutional racism, for example-can leave a legacy of distrust in medical systems.

Putting Trauma-Informed Practice into Action: Integrating Theory into Practice

TIC's implementation requires a deliberate application of its concepts in every nursing intervention. The table and Figure 1 below outline practical strategies for implementation in key areas of nursing practice:

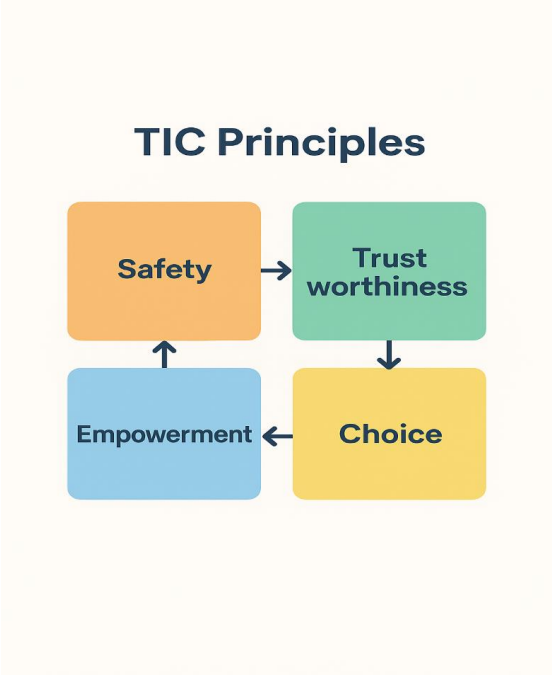

Figure 1: TIC principles.

Table 1: Practical Application of TIC Principles in Nursing Practice

Nursing Domain	TIC Principle in Focus	Practical Nursing Actions
Communication	Trustworthiness & Transparency; Empowerment	Use open-ended questions ("What is your biggest concern right now?"). Practice active listening without interruption. Provide clear, honest information. Use a calm, non-judgmental tone. Always ask for permission before proceeding.
Procedural Care	Safety; Collaboration & Mutuality	Pre-procedure: Explain what will happen, what it will feel/sound like, and how long it will take. *During*: Offer a distraction (e.g., conversation,

		music). Provide breaks if possible. *After*: Debrief and validate ("That was difficult, thank you for your cooperation").
Pain Management	Safety; Empowerment	Believe patient reports of pain. Use non-pharmacological interventions (positioning, guided imagery, mindfulness) alongside medication. Offer analgesia proactively before painful procedures.
Mental Health & Agitation	Safety; Collaboration	Approach agitated patients with a calm, non-threatening demeanor. Identify triggers. De-escalate using verbal techniques. Avoid physical restraint unless absolutely necessary for immediate safety. Frame medication as a tool for comfort, not control.
Patient Education	Empowerment; Collaboration	Assess patient readiness to learn. Present information in manageable chunks. Use teach-back method to ensure understanding. Co-create self-management goals with the patient.
Environmental Modification	Safety	Minimize noise and unexpected alarms (where possible). Ensure adequate lighting cycles to promote day/night rhythm. Provide clear signage. Create private, personal spaces for patients and families.

The Organizational Context: Creating a Trauma-Informed Healthcare System

TIC cannot be sustained if it is dependent on individual motivated nurses; it needs to be a systemic and organizational commitment that permeates policy, physical space, and workforce support.

Leadership and Policy

Health care organizations must adopt TIC at a core value level, incorporating it into strategic plans, mission statements, and performance metrics. Policies must be examined and revised through a "trauma-informed lens" to ensure that practices that are potentially re-traumatizing, such as restrictive visitation policies or the use of security to address non-violent behavioral concerns, are eliminated. Investment in ongoing, mandatory education on TIC for all staff, from executives to environmental services, is non-negotiable.

Supporting the Workforce: Addressing Vicarious Trauma

Nurses themselves are at an elevated risk for VT, compassion fatigue, and burnout from repeated engagement with traumatized patients. An organization cannot fully be trauma-informed if it does not take care of its caregivers. A trauma-informed care organization actively supports its staff by: offering mental health resources that are more accessible and confidential; creating dedicated decompression spaces for staff; maintaining peer-support programs such as "Code Lavender" teams, which provide immediate, confidential support after a stressful event; and implementing a leadership culture that encourages open communication and actively discourages stigma associated with seeking help.

Evidence-Based and Outcomes of Trauma-Informed Care in Nursing

There is mounting evidence of the effectiveness of TIC in improving a wide range of outcomes for both patients and healthcare systems, and on several levels: clinical, experiential, and operational (Table 2).

Table 2: Documented Outcomes of Implementing Trauma-Informed Care

Outcome Category	Specific Measurable Impacts
Clinical Outcomes	- Reduced symptoms of PTSD, anxiety, and depression in patients (Fernández et al., 2023; Kosir et al., 2019). - Decreased incidence and severity of ICU delirium (Bolton et al., 2021). - Improved pain management scores and reduced reliance on high-dose opioids (Bingham et al., 2023). - Improved adherence to medication and follow-up appointments (Kumari & Mukhopadhyay, 2020).
Patient-Reported Outcomes	- Significantly higher ratings of patient satisfaction and experience of care (Clark, 2023). - Increased sense of dignity, control, and empowerment (Geense et al., 2019). - Greater trust in healthcare providers and the system (Garoufali et al., 2023).

		- Reduced fear and anxiety related to medical encounters (De Schepper et al., 2016).
Operational & Staff Outcomes		- Reduction in the use of restraints and seclusion (Huo et al., 2023). - Decreased rates of staff burnout, compassion fatigue, and turnover (Long et al., 2022; Paul et al., 2022). - Improved staff morale, job satisfaction, and sense of professional efficacy (Polovitch et al., 2019). - Potential for reduced long-term healthcare costs due to better adherence and fewer complications (Kumari & Mukhopadhyay, 2020).

Challenges and Future Directions

Some of the challenges to wider implementation of TIC include a lack of standardized training and competency, time pressures in fast-paced clinical settings, and the upfront resource investment required for systems-wide culture change. Huo et al. (2023) also mention that the return on investment for TIC can be challenging to quantify, given the largely qualitative or long-term nature of many benefits.

Future directions should be directed at incorporating TIC into nursing education curricula beginning at the undergraduate level so that all new graduates are entering the workforce with this foundational competency. Research should prioritize the development of robust nurse-sensitive indicators on the effectiveness of TIC interventions. There is a need to explore applications of TIC in specific populations, such as pediatric patients, the elderly, and those with intellectual and developmental disabilities. Finally, leveraging technology, such as using the EHR to flag known trauma histories with patient consent and prompt TIC-aligned interventions-represents another promising avenue for scaling this approach.

Conclusion

Medical trauma is but a silent epidemic that not only contradicts the very purpose of healthcare but also leaves psychological scars, which may impede physical recovery and erode trust. Nurses, as the consistent and compassionate presence at the front line of care, hold the key to addressing this challenge. The adoption of a Trauma-Informed Care framework is not an optional add-on to nursing practice; rather, it represents a radical reorientation toward a more humane, effective, and ethical model of care. By focusing consistently on safety, building trust, collaborating, and empowering, nurses can avert iatrogenic psychological injury, minimize the impact of traumatic experiences that cannot be avoided, and cultivate resilience in their patients. There are two elements involved: commitment by individual nurses to demonstrate these values in daily interactions and commitment by healthcare organizations to create systems that support this approach and protect the nursing workforce's well-being. The journey to become truly trauma-informed is ongoing, but it is necessary. By acknowledging "what has happened" to our patients, we can better understand "what is wrong," and with that comes nursing's highest calling: to tend to the whole person, in body, mind, and spirit.

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