

Holistic Care and Management for Post-Traumatic Depressive and Mental Disorder in Adults: A Review of Advanced Nursing Interventions

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Abstract

Post-traumatic depressive and mental disorders represent a severe public health challenge characterized by high chronicity, profound functional impairment, and complex symptom clusters, including major depression, post-traumatic stress disorder (PTSD), and anxiety. This review explores advanced nursing interventions within a holistic care framework designed to address the physical, psychological, social, and spiritual dimensions of adult recovery.

Epidemiological data underscore a significant global burden, heavily driven by direct healthcare expenditures, lost productivity, and extensive caregiver strain. Mechanistically, these disorders stem from complex neurobiological dysregulations, notably involving the hypothalamic-pituitary-adrenal (HPA) axis, neuroplasticity deficits, and chronic neuroinflammation.

Advanced nursing care models require a multifaceted approach that integrates Trauma-Informed Care (TIC) as an overarching philosophy. Key evidence-based nursing strategies examined include cognitive-behavioural therapy (CBT)-based techniques, structured crisis intervention and suicide prevention, medication management, sleep hygiene protocols, and community-based telehealth delivery models.

Furthermore, holistic interventions that incorporate physical lifestyle modifications, psychosocial support networks, and spiritual mindfulness practices are critical for fostering long-term resilience. Despite these advancements, significant barriers—such as systemic stigma, resource scarcity, and interprofessional communication gaps—persist. Addressing these challenges through targeted policy reforms, specialized training, and expanded digital health integration will be essential to optimize clinical outcomes and elevate the quality of life for trauma survivors globally.

Keywords: Advanced nursing interventions, holistic care, post-traumatic stress disorder, post-traumatic depression, trauma-informed care, neurobiology, mental health nursing.

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Introduction

Post-traumatic depressive and mental disorders encompass a spectrum of debilitating psychological conditions that manifest following exposure to catastrophic stressors, interpersonal violence, accidents, or systemic disasters. As noted by Kessler et al. (2017), trauma exposure is exceptionally common across global populations, with a substantial percentage of affected adults subsequently developing chronic psychiatric morbidities such as PTSD, major depressive disorder (MDD), and complex grief reactions. These conditions rarely present in isolation; instead, they exhibit high rates of comorbidity that severely

exacerbate clinical severity, reduce treatment adherence, and heighten suicide risk (Bisson et al., 2019).

Traditional psychiatric care models have historically prioritized symptom suppression through pharmacotherapy and brief clinical encounters. However, this reductionist paradigm often fails to address the multi-dimensional needs of trauma survivors. Modern healthcare demands a shift toward holistic and advanced nursing models that recognize the intricate interplay between biological vulnerability, psychological trauma, social context, and spiritual well-being (Harkness et al., 2021). Nurses occupy a pivotal front-line role in

recognizing early signs of trauma sequelae, coordinating multidisciplinary care, and implementing specialized therapeutic interventions. The objective of this comprehensive review is to synthesize contemporary literature regarding the pathophysiology, epidemiology, diagnostic assessments, and advanced nursing interventions for adults suffering from post-traumatic mental disorders. By evaluating both clinical-level care strategies and broad holistic frameworks, this paper aims to provide an actionable guide for advanced practice registered nurses (APRNs), clinical researchers, and healthcare administrators dedicated to transforming trauma recovery pathways.

Conceptual Framework of Holistic Post-Traumatic Mental Health Care

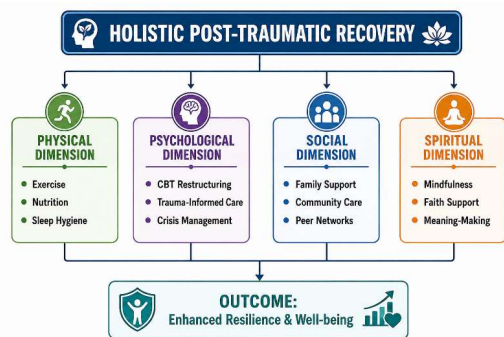


Figure 1. Conceptual framework of holistic post-traumatic mental health care.

Epidemiology and Global Burden

Global Prevalence

Epidemiological data compiled by the **World Health Organization [WHO] (2022)** indicate that approximately 70% of individuals worldwide experience a traumatic event at least once in their lifetime, with nearly 5.6% developing PTSD and an even higher percentage manifesting secondary post-traumatic depressive disorder.

- **World Health Organization Statistics:** Recent global mental health surveys highlight that trauma-related disorders account for a significant proportion of the global disability burden (Charlson et al., 2019). Vulnerable populations, including refugees, combat veterans, survivors of natural disasters, and victims of domestic violence, show exponentially elevated prevalence rates (Steel et al., 2014).
- **Regional Differences:** Prevalence rates vary significantly across geographical and socioeconomic landscapes. Low- and middle-income countries (LMICs) often bear a heavier burden due to protracted conflict, poverty, and fragile healthcare infrastructures, whereas high-income countries report higher diagnosed prevalence driven by wider screening access and diagnostic availability (Patel et al., 2018).

Economic Burden

The financial toll of post-traumatic mental disorders extends far beyond individual suffering, imposing profound strains on national economies.

- **Healthcare Expenditure:** Direct costs include extensive utilization of emergency psychiatric services, inpatient hospitalizations, chronic pharmacological management, and specialized outpatient psychotherapy (Greenberg et al., 2015).
- **Loss of Productivity:** Indirect costs frequently outweigh direct medical expenditures. As demonstrated by Kessler et al. (2020), presenteeism, absenteeism, job turnover, and permanent disability claims generate billions of dollars in economic losses annually.

Impact on Families and Society

Trauma does not occur in a vacuum; its ripples profoundly impact immediate support networks and society at large. Secondary traumatic stress is frequently observed among family members and informal caregivers, leading to high rates of burnout, depression, and relational breakdown (Coombs et al., 2021). Societally, these conditions correlate with elevated rates of domestic disputes, substance abuse disorders, and systemic burdens on criminal justice and social welfare systems (Brewin et al., 2017).

Table 1. Global prevalence and impact of trauma-related disorders.

Category	Indicator / Focus Area	Estimated Impact / Prevalence	Key Reference
Global Prevalence	Lifetime trauma exposure rate	~70% of global population	WHO (2022)
Specific Morbidity	Global PTSD prevalence	~3.9% to 5.6% among adults	Charlson et al. (2019)
Comorbidity	Depression secondary to trauma	30% to 50% co-occurrence rate	Bisson et al. (2019)

Category	Indicator / Focus Area	Estimated Impact / Prevalence	Key Reference
Economic Impact	Direct & Indirect Costs	Billions in lost productivity annually	Kessler et al. (2020)
Vulnerable Groups	Conflict/Refugee populations	>30% diagnosed trauma disorders	Steel et al. (2014)

Pathophysiology and Neurobiological Mechanisms

The transition from acute stress exposure to chronic post-traumatic depressive and mental disorders involves complex alterations in neural circuitry, neuroendocrine regulation, and inflammatory pathways (Yehuda et al., 2018).

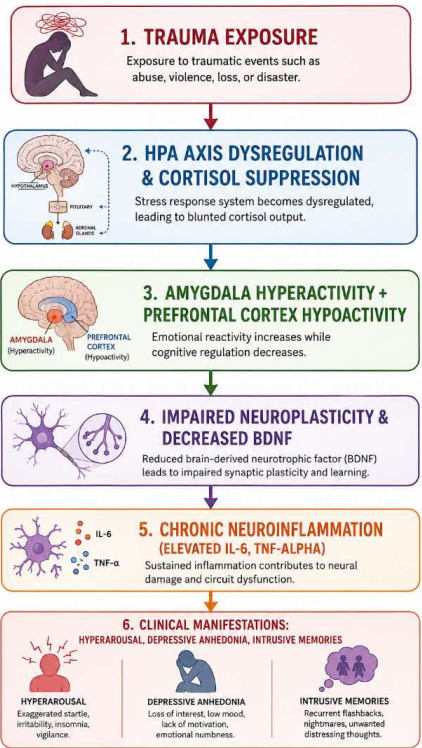


Figure 2. Neurobiological mechanisms involved in post-traumatic disorders.

1. **HPA Axis Dysregulation:** Chronic trauma fundamentally alters the hypothalamic-

pituitary-adrenal (HPA) axis. Unlike acute stress responses characterized by sustained cortisol spikes, chronic post-traumatic disorders often exhibit enhanced negative feedback loops and abnormally low baseline cortisol levels, rendering the system incapable of effectively modulating systemic stress responses (Pariante & Lightman, 2008).

2. **Brain Circuitry Imbalances:** Neuroimaging studies consistently reveal structural and functional abnormalities within the fronto-limbic circuit. Specifically, functional magnetic resonance imaging (fMRI) demonstrates hyper-reactivity of the amygdala (mediating fear conditioning and emotional processing) coupled with hypo-reactivity of the ventromedial prefrontal cortex and the hippocampus, which are normally responsible for emotional regulation, contextual memory appraisal, and fear extinction (Rauch et al., 2006).
3. **Neuroplasticity and Neurogenesis:** Prolonged exposure to stress hormones suppresses brain-derived neurotrophic factor (BDNF), leading to atrophy of hippocampal neurons and diminished synaptic plasticity. This neurobiological deficit directly correlates with memory impairments, cognitive inflexibility, and treatment-resistant depressive symptoms (Duman et al., 2019).
4. **Neuroinflammatory Pathways:** Emerging immunological research highlights the role of chronic low-grade systemic inflammation in post-traumatic depression. Pro-inflammatory cytokines, including interleukin-6 (IL-6), interleukin-1 beta (IL-1beta), and tumor necrosis factor-alpha (TNF-alpha), cross the blood-brain barrier, altering neurotransmitter metabolism (such as depleting serotonin precursors) and inducing sickness behaviors that mirror clinical depression (Kessler et al., 2018).

Risk Factors and Determinants

Vulnerability to post-traumatic mental disorders is determined by a complex matrix of pre-trauma, peri-trauma, and post-trauma factors (Brewin et al., 2000).

Table 2. Risk factors associated with post-traumatic mental disorders.

Cate gory	Specific Risk Factors	Clinical Significan ce Mechanis m	Key Refe rence
Pre-Trau ma Fact ors	- Genetic predispositions - Adverse childhood experiences (ACEs) - Prior psychiatric history	Alters baseline stress-response systems and impairs neurodevelopmental resilience.	Brewin et al. (2000)
Peri-Trau ma Fact ors	- Perceived life threat - Interpersonal violence / Assault - Dissociation during trauma	Intensifies initial encoding of traumatic memory within fear circuitry.	Ozer et al. (2003)
Post-Trau ma Fact ors	- Ongoing social isolation - Lack of emotional support	Hinders natural fear extinction and precipitates chronic major depression.	North et al. (2016)

Cate gory	Specific Risk Factors	Clinical Significan ce Mechanis m	Key Refe rence
	Subsequent life stressors		

Clinical Manifestations and Diagnostic Assessment

Clinical presentations of post-traumatic conditions are highly heterogeneous, spanning emotional numbness, intrusive flashbacks, hypervigilance, profound anhedonia, and somatic complaints (American Psychiatric Association [APA], 2022). Diagnostic assessment requires a thorough, non-judgmental approach to avoid re-traumatization.

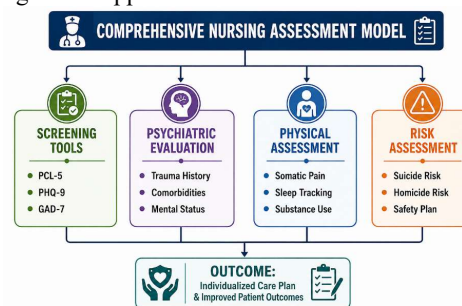


Figure 3. Comprehensive nursing assessment model.

Advanced practice nurses utilize validated screening tools such as the PTSD Checklist for DSM-5 (PCL-5), the Patient Health Questionnaire-9 (PHQ-9) for depression, and the Generalized Anxiety Disorder-7 (GAD-7) (Weathers et al., 2013). Clinical evaluations must systematically evaluate somatic symptoms (e.g., chronic pain, gastrointestinal distress) alongside psychological markers, ensuring an integrated baseline prior to intervention planning.

Advanced Nursing Interventions

This core section explores evidence-based advanced nursing interventions designed to stabilize, treat, and rehabilitate adult patients suffering from post-traumatic mental disorders.

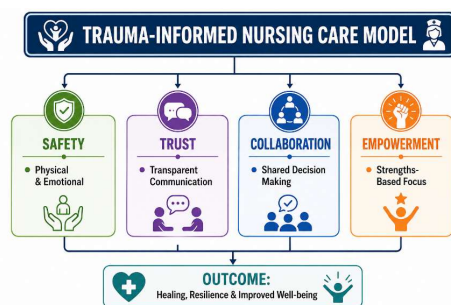


Figure 4. Trauma-informed nursing care model. Trauma-Informed Care (TIC)

Trauma-Informed Care forms the foundational philosophy for all advanced nursing interactions, shifting the clinical question from "What is wrong with this patient?" to "What happened to this patient?" (Fallot & Harris, 2009).

- **Safety:** Nurses must ensure both physical safety within the clinical environment and psychological safety by avoiding coercive practices, unexpected triggers, or abrasive communication styles (Bloom, 2013).
- **Trust:** Establishing clear boundaries, maintaining confidentiality, and keeping clinical commitments build secure therapeutic alliances essential for recovery (Kusmaul et al., 2015).
- **Collaboration:** Sharing power and decision-making with patients regarding their treatment trajectory actively counters the helplessness induced by trauma (Elliott et al., 2005).
- **Empowerment:** Validating patient strengths, encouraging self-advocacy, and promoting personal agency facilitate long-term psychological healing (SAMHSA, 2014).

Cognitive Behavioural Therapy-Based Nursing Interventions

Advanced practice psychiatric nurses frequently incorporate CBT-based frameworks into daily care interactions to address distorted cognitions and maladaptive avoidance behaviours (Beck, 2011).

- **Cognitive Restructuring:** Nurses assist patients in identifying automatic negative thoughts (e.g., self-blame, universal distrust) and systematically testing their validity against objective reality (Resick et al., 2016).
- **Behavioural Activation:** To counteract post-traumatic depressive anhedonia, nurses collaborate with patients to schedule manageable, rewarding, and meaningful daily activities, gradually rebuilding reinforcement pathways (Dimidjian et al., 2006).
- **Exposure Therapy Principles:** Through supportive guidance, nurses encourage patients to confront trauma-related

memories and safe avoided stimuli in a controlled, graduated manner, facilitating fear extinction without inducing overwhelming panic (Foa et al., 2007).

Psychosocial Support

Social cohesion and interpersonal connection are vital buffers against chronic post-traumatic distress (Charuvastra & Cloitre, 2008).

- **Counselling:** Supportive, empathetic listening and validation provided by nurses offer immediate emotional relief and decrease feelings of isolation (Stuart, 2013).
- **Group Therapy:** Facilitated peer support groups create shared validation, normalize trauma reactions, and reduce shame by demonstrating collective resilience (Yalom & Leszcz, 2005).
- **Family Therapy:** Educating family members about trauma symptoms, communication strategies, and boundary setting minimizes secondary trauma and strengthens domestic support networks (Figley, 1998).

Crisis Intervention Strategies

Given the high risk of self-harm and acute decompensation among trauma survivors, structured crisis management is essential (Simon, 2006).

- **Suicide Prevention & Risk Management:** Nurses conduct rigorous suicide risk assessments, identify acute warning signs, and maintain low thresholds for initiating safety protocols (Joiner, 2005).
- **Safety Planning:** Collaboratively designing a written safety plan—identifying personal coping strategies, internal distraction techniques, social supports, and emergency contacts—empowers patients during acute emotional crises (Stanley & Brown, 2012).

Medication Management

Pharmacotherapy serves as a crucial adjunct in stabilizing neurobiological dysregulation, allowing patients to engage effectively in psychotherapy (Stahl, 2021).

- **Selective Serotonin Reuptake Inhibitors (SSRIs):** Agents such as sertraline and fluoxetine are considered first-line pharmacological treatments, addressing core depressive symptoms and anxiety through serotonin reuptake inhibition (Stein et al., 2006).
- **Antipsychotics:** Atypical antipsychotics (e.g., quetiapine, risperidone) may be utilized as augmenting agents for treatment-resistant PTSD, severe hyperarousal, or psychotic-like trauma intrusions (Krystal et al., 2011).

- **Mood Stabilisers:** Medications such as lamotrigine or valproate are occasionally introduced to manage severe emotional lability, impulsivity, and aggressive outbursts (Campbell et al., 2019).

Sleep Management Strategies

Sleep disturbances, including chronic insomnia and trauma-related nightmares, are hallmark features of post-traumatic mental disorders (Germain, 2013).

- **Sleep Hygiene:** Nurses educate patients on optimizing circadian rhythms, eliminating pre-bedtime stimulant use, and creating calm, dark resting environments (Hauri, 1991).
- **Relaxation Therapy:** Progressive muscle relaxation and biofeedback prior to sleep help down-regulate sympathetic nervous system activity (Edinger et al., 2001).

Stress Reduction Techniques

Mind-body interventions assist patients in modulating hyperactive autonomic responses (Khalsa et al., 2020).

- **Deep Breathing Exercises:** Diaphragmatic breathing stimulates the vagus nerve, reducing heart rate and inducing immediate parasympathetic relaxation (Brown & Gerbarg, 2005).
- **Guided Imagery:** Utilizing structured mental visualizations helps patients safely redirect attention away from intrusive trauma triggers toward calming internal landscapes (Naparstek, 2005).
- **Meditation:** Mindfulness-based stress reduction (MBSR) encourages present-moment awareness without judgment, mitigating rumination (Kabat-Zinn, 1990).

Community-Based Interventions

Extending care beyond institutional settings ensures continuous, accessible support (Alltucker et al., 2010).

- **Telehealth:** Digital mental health platforms overcome geographical and mobility barriers, ensuring consistent nursing check-ins and therapy access for rural or homebound populations (Hyler et al., 2005).
- **Home-Based Care:** Psychiatric home care nurses evaluate home safety, monitor medication adherence in real-world environments, and provide direct family coaching (Barker et al., 2017).
- **Rehabilitation Programmes:** Vocational and psychosocial rehabilitation initiatives assist chronic survivors in regaining occupational independence and community reintegration (Anthony et al., 2002).

Holistic Approaches to Care

A truly comprehensive care model addresses all dimensions of human experience (Dossey & Keegan, 2016).

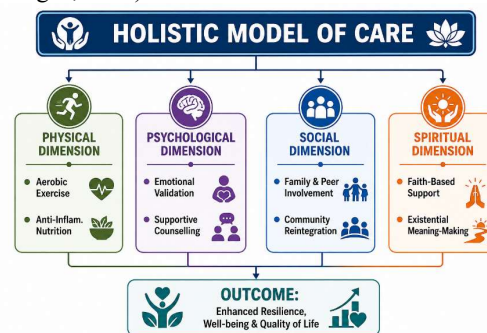


Figure 6. Holistic model of care.

Physical Dimension

- **Exercise:** Regular aerobic exercise promotes neurogenesis, increases BDNF levels, and burns off excess stress hormones (Babyak et al., 2000).
- **Nutrition:** Anti-inflammatory dietary patterns (such as Mediterranean diets rich in omega-3 fatty acids) help mitigate chronic neuroinflammation linked to post-traumatic depression (Jacka et al., 2017).
- **Sleep Management:** Maintaining consistent circadian schedules supports immune recovery and neurological repair (Walker, 2017).

Psychological Dimension

- **Emotional Support:** Providing unconditional positive regard and active listening validates the survivor's internal reality (Rogers, 1951).
- **Counselling:** Ongoing talk therapy helps integrate traumatic fragments into a coherent personal narrative (Neimeyer, 2019).

Social Dimension

- **Family Support:** Engaging loved ones fosters a secure attachment base necessary for emotional risk-taking during recovery (Johnson, 2019).
- **Community Support:** Peer-led support groups decrease stigma and reinforce social belonging (Mehta et al., 2021).

Spiritual Dimension

- **Faith-Based Support:** For many individuals, spiritual communities and religious practices provide profound existential comfort and moral solace (Pargament, 2007).
- **Mindfulness & Meaning-Making:** Helping survivors reframe their trauma narrative to discover post-traumatic growth transforms suffering into profound personal wisdom (Tedeschi & Calhoun, 2004).

Barriers and Challenges in Care Delivery

Despite robust clinical frameworks, several systemic and interpersonal barriers hinder effective delivery of holistic post-traumatic care:

1. **Stigma and Cultural Beliefs:** Public and self-stigma regarding mental illness frequently delays care-seeking behaviors, particularly among men and specific cultural communities (Clement et al., 2015).
2. **Resource Scarcity:** A severe shortage of specialized psychiatric nurses, trained trauma therapists, and funding in public healthcare systems limits access to intensive interventions (WHO, 2020).
3. **Interprofessional Silos:** Disconnection between physical healthcare providers and mental health specialists often results in fragmented care, where somatic trauma sequelae are treated independently of underlying psychiatric distress (Shorter & Tyrer, 2018).
4. **Provider Burnout:** High caseloads, secondary traumatic stress, and emotional fatigue among nursing personnel contribute to high turnover rates and diminished quality of patient care (Sabo, 2011).

Future Directions and Recommendations

To overcome existing hurdles and advance the standard of post-traumatic care, future initiatives must focus on structural, educational, and technological innovations:

1. **Curricular Reform:** Nursing education programs must embed comprehensive trauma-informed care and holistic management principles across undergraduate and graduate curricula (Raja et al., 2015).
2. **Expansion of Digital Health:** Scaling up tele-mental health and AI-driven supportive applications can bridge geographic gaps and provide real-time crisis intervention tools (Torous et al., 2021).
3. **Integrated Care Models:** Transitioning toward collaborative care models where psychiatric-mental health nurses are embedded within primary care settings ensures seamless coordination of physical and mental health needs (Katon et al., 2010).
4. **Policy and Funding Advocacy:** Policymakers must increase funding for community mental health infrastructure and implement protective labor policies to mitigate clinician burnout (Hassmiller & Pulcini, 2015).

Conclusion

Post-traumatic depressive and mental disorders present intricate, multi-systemic challenges that require sophisticated, empathetic, and comprehensive nursing interventions. By moving beyond traditional symptom-suppression models toward a holistic framework that integrates trauma-informed care, advanced psychotherapy techniques, biological management, and lifestyle medicine, nurses can profoundly alter the trajectory of adult recovery. Addressing systemic barriers through education, digital innovation, and collaborative practice models will ultimately ensure that trauma survivors worldwide receive the compassionate, high-quality holistic care they deserve.

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