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Trauma Informed Care (TIC): Caring for Victims of Trauma

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What is TIC?

Trauma informed care (TIC) is defined as, "an approach in the human service field that assumes that an individual is more likely than not to have a history of trauma. Trauma-informed care recognizes the presence of trauma symptoms and acknowledges the role trauma may play in an individual's life-including service staff (Buffalo Center for Social Research, 2020)."

- Key Components of TIC:
- understanding the widespread impact trauma has on individuals, families, groups, organizations, and communities (SAMSHA, 2015).
 - developing the ability to recognize signs and symptoms of trauma in others (SAMSHA, 2015).
 - integration of trauma knowledge in the framework of the organization seeking to avoid re-traumatization (SAMSHA, 2015).

Signs & Symptoms

- **Re-experiencing trauma:** flashbacks, nightmares, exaggerated startle response, and intrusive memories (Carrion & Kletter, 2012) (Lantz, 2020)
- **Avoidance of trauma:** poor coping skills, denial, learned helplessness, poor regulation of emotions, and fear of certain places and situations (Carrion & Kletter, 2012)(Lantz, 2020)
- **Negative cognition and mood:** numbness and distractiveness, less pleasure from activities they previously enjoyed, difficulty maintaining peer relationships, and high rates of depression (Carrion & Kletter, 2012)(McCance & Huether, 2019)(Lantz, 2020)
- **Hyperarousal:** aggressive behaviors, hypervigilance, difficulty sleeping, difficulty with concentration, and reckless and self-destructive behavior (Carrion & Kletter, 2012)(Lantz, 2020)
- **Emotional dysregulation:** increased emotional reactivity, lack of affect, violent outbursts (Marinova & Maercker, 2015)
- **Negative self-concept:** feelings of defeat, worthlessness, guilt, or shame (Marinova & Maercker, 2015)
- **Problems in interpersonal relationships:** difficulties establishing or maintaining relationships with others (Marinova & Maercker, 2015)

Why Choose TIC?

- Victims of trauma present in all care modalities
- Negative childhood experiences have been shown to have an impact on increasing likelihood of these conditions as an adult: Alcoholism, chronic pulmonary disease (COPD), depression, illicit drug use, liver disease, and adolescent pregnancy (Sabri & Granger, 2018) (Marinova & Maercker, 2015).
- Trauma and PTSD from complex trauma has a lasting physical and functional impact on patients (Bruce, et al., 2019).
- Incorporating TIC into patient care has been found to improve the patient experience in healthcare, decrease the use of healthcare resources, and decreased emergency department visits (Purkey, Patel, Beckett, & Mathieu, 2018).
- Use of TIC in patient care can help calm nervous system overstimulation from complex trauma/PTSD and decrease re-traumatization of patients in care settings by reinforcing nervous system stabilization (see figures 1 & 2) (Leitch, 2017).

Underlying Pathophysiology

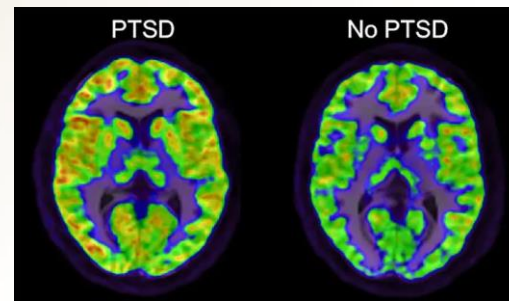
Trauma endured during childhood appears to have the longest impact on development and brain functioning due to the stage of development (Lantz, 2020). The dysregulation caused by trauma impacts neural circuits recruited in the processing of contextual information to modulate emotional responses as well as biophysical responses to stressors (Lantz, 2020) (Morris, Abelson, Mielock, & Rao, 2017). The development of complex PTSD from a traumatic experience in both childhood or adulthood can lead to the following findings in impacted individuals

- **Decreased activation of the prefrontal cortex (PFC)** (McCance & Huether, 2019) (Lantz, 2020).
- **Changes in the hypothalamic-pituitary-adrenal (HPA) axis** (Morris, Abelson, Mielock, & Rao, 2017) (Lantz, 2020).
- **Increased activity of the amygdala** (McCance & Huether, 2019) (Lantz, 2020).
- **Reduced size of the hippocampus** (McCance & Huether, 2019) (Lantz, 2020).
- Children exposed to prolonged trauma showed **decreased brain mass due to loss of elasticity** (McCance & Huether, 2019) (Lantz, 2020).
- **Hyperactivity of the sympathetic branch of the autonomic nervous system (ANS)** (Marinova & Maercker, 2015) (Lantz, 2020).
- **Telomere shortening in victims of childhood trauma** (Sabri & Granger, 2018) (Marinova & Maercker, 2015).

Significance of Pathophysiology

The significance of the pathophysiology of complex trauma is that it creates a framework for studying the implications and effectiveness of interventions. The dysregulation of the HPA axis created by prolonged/complex trauma results in decrease of circulating cortisol (Marinova & Maercker, 2015) (Morris, Abelson, Mielock, & Rao, 2017) (Sabri & Granger, 2018). Long term alterations in the HPA axis influences risk for subsequent stress exposure (Morris, Abelson, Mielock, & Rao, 2017). Functional brain changes to the prefrontal cortex, amygdala, and hippocampus have been seen on neuroimaging in individuals who have experienced complex trauma (Marinova & Maercker, 2015) (Lantz, 2020). The decreased activation of the prefrontal cortex impacts executive functioning including attention regulation, memory processing, and response inhibition (Lantz, 2020). The hyperarousal of the amygdala noted on neuroimaging studies shows hyperarousal leading to increased fear responses as the amygdala controls processing of emotions and consolidates emotional memories (Marinova & Maercker, 2015) (Lantz, 2020). The reduced size of the hippocampus noted on structural magnetic resonance imaging causes decreased ability to recall memories, especially those associated with the traumatic event (Marinova & Maercker, 2015) (Lantz, 2020). Decreased brain plasticity noted on neuroimaging also showed a decrease in pediatric patients suffering from trauma due to failure to form necessary neural connections during developmental stages (McCance & Huether, 2019) (Lantz, 2020). Hyperactivity of the sympathetic branch of the ANS leads to exaggerated responses to traumatic reminders, increased heart rate, blood pressure, and norepinephrine levels (Marinova & Maercker, 2015). And lastly, the prolonged stress response of the ANS leads to decreased supply of telomerase enzyme leading to decreased telomerase generation and subsequent accelerated aging and early disease (Marinova & Maercker, 2015) (Sabri & Granger, 2018).

Figure 3. Comparison of neuroimaging of PTSD vs No PTSD. Retrieved from <https://neurosciencenews.com/ptsd-treatments-7108/>



How the Pathophysiology of Trauma Relates to TIC

The use of trauma informed care (TIC) to treat patients in care settings who suffer from PTSD or complex trauma is not to generate trauma centered care, but to utilize the above stated pathophysiological implications of their history to better meet their care needs (Purkey, Patel, Beckett, & Mathieu, 2018). The use of TIC to prevent re-traumatization and to help patients regulate care is shown to alleviate overstimulation of the ANS and decrease chronic health conditions that lead to overuse of healthcare modalities and emergency departments (Purkey, Patel, Beckett, & Mathieu, 2018) (Leitch, 2017).

Implications for Nursing Care

Principles for the use of TIC in nursing practice include:

- **Trauma awareness and acknowledgment.** Ways to do this include being aware of the prevalence and effect of trauma, understand how trauma affects life experiences, recognizing the impact on development and coping strategies, and knowing long-term effects of violence and abuse (Purkey, Patel, Beckett, & Mathieu, 2018).
- **Providing safety and trustworthiness.** Ways to do this include helping patients feel safe, recognizing need for physical and emotional safety, avoiding interventions that may be a trigger, designing services that include flexibility in scheduling to maximize access, and consider cultural competence with respect to a person's context and life experiences (Purkey, Patel, Beckett, & Mathieu, 2018).
- **Promoting choice, control, and collaboration.** Ways to do this include allowing patients to have input to decisions on treatment, maintain a collaborative relationship, and involve service users when designing and evaluating services (Purkey, Patel, Beckett, & Mathieu, 2018).
- **Strengths-based and skills-building care model.** Ways to do this do this include supporting a patient's empowerment and highlighting a patient's strengths and resilience rather than focusing on symptoms and pathology (Purkey, Patel, Beckett, & Mathieu, 2018).
- **Incorporating cultural, historical, and gender issues.** Ways to do this include incorporating processes that are sensitive to a patient's culture, ethnicity, and personal and social identity as well as to his or her experience with trauma associated with group marginalization (Purkey, Patel, Beckett, & Mathieu, 2018).

Conclusion

The care of patients who have experience trauma is marked with difficulties for both providers and patients. Understanding the neurobiological and behavioral changes that occur as a result of PTSD, childhood trauma, and complex trauma allow for providers to better assist in meeting patient needs (Marinova & Maercker, 2015) (Lantz, 2020). The focus of TIC is to utilize evidence-based practice on caring for victims of abuse and trauma in a care model that meets patients' unique vulnerabilities and health challenges through empathic and inclusive care (Purkey, Patel, Beckett, & Mathieu, 2018). Utilizing a TIC approach has been shown to improve health outcomes, increase adequate use of health resources, decrease chronic readmission and emergency department visits, and improve patient relations and outlook on health (Marinova & Maercker, 2015) (Leitch, 2017) (Purkey, Patel, Beckett, & Mathieu, 2018).

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Figure 1. The "resilient zone" Autonomic Nervous System (ANS) rhythm strip (Leitch, 2017). Both figures retrieved from: <https://healthandjusticejournal.biomedcentral.com/track/pdf/10.1186/s40352-017-0050-5>

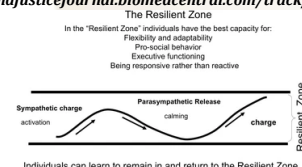
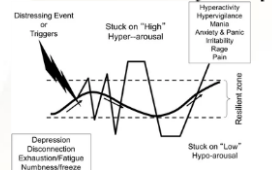


Figure 2. The "outside the resilient zone" ANS rhythm strip (Leitch, 2017).



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