Improving the Outcome of Patients with a History of Trauma By Educating Health Care Providers on Trauma-Informed Care Protocol in a Psychiatry Inpatient Treatment Center

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Table of Contents

Abstract2
Problem Identification4
Project Question6
Search Methods6
Review of Literature7
Project Context
Project Rationale20
Project Framework20
Interventions
Tools
Data Collection29
Ethics and Confidentiality29
Analysis31
Conclusion40
References42
Appendix50

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Abstract

Background

Healthcare workers are challenged to provide care while preventing re-traumatization of the staff and patients. The psychiatric hospital in North Texas experiences an increase in patient re-traumatization due to the lack of effective strategies in managing patients who have history of trauma. The aim of this project is to improve the outcome of patients with a history of trauma by educating health care providers on trauma-informed care protocol in an inpatient psychiatry hospital in north Texas.

Method

A pre-questionnaire was issued to multidisciplinary staff caring for patients with history of trauma to discover staff knowledge gaps on TIC. Training on TIC was provided to staff. The same demographic was given an identical post-questionnaire to discover if there's an increase in staff knowledge and confidence in applying TIC during care. Paired sample t-test was used to determine whether the observed changes were significant.

Result

This QI project found a significant increase in staff knowledge and confidence in applying TIC approach, rising from average of 1.84 to 4.29 (85.8%) (p-value = 0.01). Also, the rate of re-traumatization slips decreased from 37.50% to 9.52%. z=-4.03, p<.001.

Conclusion

The TIC education was successful in enhancing nurses' knowledge and confidence in providing trauma- informed care, proving its clinical significance. Adapting organizational processes to trauma-informed principles will positively impact the culture of a health care environment. This project is implemented in a psychiatric facility. Further research is needed to explore the effect of TIC application in other healthcare specialties.

Trauma continues to be a significant public health concern in the United States (US). It may have a significant impact on how a person engages in important life activities and how they perceive care (Substance Abuse and Mental Health Services Administration (SAMHSA), 2017). The management of trauma is costly to patient, families, and the health care system. Trauma treatment is in second place in terms of overall US health care spending, accounting for around 10% of total US medical expenditures (Newgard & Lowe, 2016). In addition to cost, fees related to litigation for patients add to the expense (Mills, 2015).

Adverse childhood experiences (ACEs) contribute to physical and mental health problems throughout life and are a serious public health problem due to their prevalence (Ranjbar & Erb, 2019). Childhood trauma can be defined as a situation in which a minor encounter a variety of events, including stresses during their formative years. It may be triggered by direct exposure to stressful experiences or mistreatment. It can also be experienced by observing a traumatic occurrence or by having a knowledge about other individual's trauma (Cohen & Barron, 2021).

Background

The spectrum of traumatic occurrences is extensive, spanning from war to family problems to even healthcare situations that are seen as traumatic for individuals (Amsberry,

2020). Traumatic events have long-lasting physical and psychological consequences (Raja et al. 2015). Childhood trauma, especially when significant relations are involved, may have an effect on cognitive function, neurological formation, and emotional stability (Cohen & Barron, 2021). Trauma has an effect on a child's ability to control, understand, and communicate emotions, including on the child's fundamental character and the ability to relate with anyone (Koch et al. 2019). These events may influence patients' interactions with providers and their participation in their care delivery. Additionally, it may result in mental health problems such as anxiety disorders, depression, drug abuse and posttraumatic stress disorder as these children grow up into adolescent and adulthood (Cohen & Barron, 2021).

While the phrase trauma-informed care (TIC) is often used, its application in everyday health care practice is not completely understood (Raja et al. 2015). Based on the study of literature, TIC principle is a theoretical and practical framework that can assist healthcare providers in translating TIC tenets into interactions with patients (Raja et al. 2015).

Problem Identification

This project is needed because of its potential to make a unique contribution to existing knowledge regarding the management of psychiatric patients with a history of traumatic life events. The history of trauma may go unnoticed by healthcare professionals, putting clients at risk of re-traumatization from care that is not trauma informed (Amsberry, 2020). Jackson & Jewell (2021) found a dramatic decrease in patients' distress after providers received an in-depth training and education on TIC. The six core principles of TIC include self-awareness and self-care for healthcare workers, knowledge of the patient's response to trauma, and protecting patient safety include healthcare providers' self-awareness and self-care, being aware of the patient's

reaction to trauma, ensuring patient safety, establishing trust and transparency in care, enhancing collaboration between the patient and the healthcare providers, and providing choices and empowerment throughout the care process (Chang et al., 2021). When healthcare providers understand the impact of trauma on patients and realize that their treatment has the potential to re-traumatize or improve care, they tend to deliver caring and compassionate care (Amsberry, 2020).

Azeem et al. (2017) found a decline in the use of seclusion and restraints among inpatients after the application of the six key principles of trauma-informed care. Wilson, et al. (2017) noted that the integration of TIC can help organizations foster a positive culture and enhance patient's outcome. Educating providers on TIC will strengthen their use of patient-centered skills, communication skills, and providers ability to partner with patients to establish a safe environment (Greene et al., 2016). Patients who have been traumatized may demonstrate intense emotional or behavioral responses when traumatic memories are reactivated (Chang et al., 2021). The better the providers understand what impacts and inspires the patients' behavior when interacting directly with them, the better they can serve their patients and meet their needs (Muskett, 2013).

The aim of this project is to improve the outcome of patients with a history of trauma by educating health care providers on trauma-informed care protocol in inpatient psychiatry treatment center in north Texas. This facility is experiencing devastating consequences due to the lack of effective strategies in managing patients who have experienced traumatic life events.

There is high rate of staff turnover and injuries, increase reports of nightmares, flashbacks, and displays of resistive behaviors by patients. The current care practice has led to an increase in the

use of seclusions, physical and chemical restraints that has resulted to an increase in the rate of patients and family complaints.

Project Question (PICOT)

For providers caring for hospitalized patients with a history of trauma, does the implementation of a new evidenced-based trauma-informed care protocol, compared to current practice, decrease the number of re-traumatization complaints from patients in a four-week timeframe?

Search Methods

A literature search was conducted to gather evidence to support the implementation of educational intervention targeted at enhancing providers' care practices in an inpatient psychiatric site. CINAHL, Cochrane Library, PubMed, and Google Scholar were among the scholarly electronic resources searched. Keywords from the PICOT questions such as "Trauma-informed care," "provider's education on Trauma-informed care," "Trauma informed care" and "adverse childhood experiences" "Core principles of trauma-informed care" "restraints AND trauma" "Trauma informed care AND staff training" were utilized during the search process. The search phrases were combined, and word variants were considered. To broaden or narrow the result of the search, truncation (*) and Boolean operators (AND, OR) were used to discover relevant literatures. Research was limited to peer-reviewed studies conducted in the United States within the last five years. Few articles published prior to 2016 were utilized due to significant data that buttress this project. Articles addressing trauma-informed care in a health care environment met the inclusion criteria

After modifying the search terms and limiting to peer reviewed full articles, and publications conducted in the United States in the last five years, a total of 43 articles were

returned in CINAHL. Seven articles met the inclusive criteria. PubMed returned fourteen items; three publications were selected based on relevance. Applying the same criteria, Google Scholar returned 898 articles; six articles were selected based on the inclusion criteria. The reference sections of eligible research were also checked to see whether there were any previously published publications, and in-text citation was utilized to find articles cited in eligible journal articles. After removing duplicates, reviewing abstracts, and conducting a thorough screening, eighteen articles fulfilled the review criteria for inclusion.

Review of Study Method

The literature review aims to establish the impact of trauma-informed care on health care providers and patient outcomes. The topics selected involve positive results associated with TIC adoption in various organizations, recommended methods for embracing organizational changes. Articles highlighting the importance of mental health care workers' education, training, and data core principles of TIC are included. The selected articles outlined research results from diverse environments while mainly concentrating on the impact of training on patient-provider rapport. Articles excluded are those that concentrate on a particular group, such as persons with disabilities, since their results cannot be generalized to the general population.

A review of the literature revealed twenty-one articles that met the criteria. The literature reviewed included six systematic reviews, four randomized controlled trials, five exploratory qualitative articles, four cohort studies using mixed methods, and two expert opinions

Melynk and Fineout-Overholt (2011) hierarchy of evidence ranking method was utilized to determine the level of evidence (Appendix A). In this technique, systematic reviews rated highest in terms of evidence, trailed by randomized controlled trials, and non-randomized control trails, quasi-experimental research, cohort and case control studies, descriptive reviews of

qualitative and quantitative studies, single descriptive studies, and expert opinions. These methodologies are pertinent to procure and ensure evidence-based articles. These research techniques are important to this DNP project because they highlight the impacts of trauma and support the improvement of patient outcome through provider training

Review Synthesis

Literature search provided an overview of evidence indicating that effective implementation of Trauma-informed care through staff training can increase provider's knowledge in caring for individual who have experienced traumatic events in a clinic setting. The shift towards the organizational implementation of trauma-informed training has expanded considerably in the past years (Becker-Blease, 2017). Although most publications discussing the use of TIC focus on mental health disorders and child welfare services, interest in TIC has spread to other areas such as obesity prevention and social policy, among others (Bowen & Murshid, 2016; Mason et al., 2016). The rising prevalence of organizational implementation of trauma-informed training and its growing importance in peer-reviewed literature shows the extensive consensus on the efficiency and significance of trauma-informed approaches to care.

Need for TIC Training

Unfortunately, therapy settings and therapists have the potential to generate retraumatizing situations without even realizing it, and occasionally clients are unaware that a clinical circumstance has provoked a traumatic stress response. Organizations that foresee the possibility of re-traumatization and work actively to modify treatment methods to stay attentive to the histories and needs of patients with traumatic experiences, are more likely to succeed in retaining patients and providing optimal care. (SAMHSA, 2014; Wilson et al, 2017). The

findings from a systemic review by Wilson et al (2017), demonstrate the critical significance of mental health nurses defining their role in providing and assessing TIC, and the urgency for training care providers. They further argue that TIC may help organizations foster a healthy culture and enhance patients' experiences with care. By acknowledging the close connection between traumatic events and its consequences on behavioral health disorders, providers on the front lines and community-based organizations may begin to foster a traumainformed culture across the spectrum of service. (SAMHSA, 2014).

To offer TIC, it is imperative for healthcare staff to understand the adverse impact of trauma on their patients' lives. The scholars recommended that health facilities adopt training that enlightens health care providers on fundamental principles of TIC (Chernomas & Mordoch, 2013). Chernomas and Mordoch (2013) further argue that the existing education structure for health care practitioners is inadequate. Resources used to educate staff do not impart the knowledge and skills required to care for traumatized groups. Muskett (2014) supports this argument after establishing in their research that mental health nurses who were further trained still struggled to use the acquired knowledge in their everyday tasks. (Foster et al, 2010) acknowledges the importance of training caregivers in TIC when working with persons with mental disorders and substance abuse disorders (SUDs). Nonetheless, the researchers also concede that it is crucial to make sure that healthcare administrators recommend this model and support translation. Hodgdon et al. (2013) defined the way practitioners profited from traumainformed training at diverse stages. These researchers argued that practitioners acquired the required skills and capabilities to work with patients with complex trauma. Their newly created de-escalation methods aided in minimizing the number of interventions needing physical interaction.

Green et al. (2016) revealed in their RCT study that following trauma-informed care training, patients rated providers highly on relationship issues. Additionally, they recognized that when a patient has previously experienced trauma and post-traumatic stress disorder, they often do not perceive their caregivers as partners in their recovery process due to lack of trust. Health care providers were found to be undecided on the appropriate strategy to handle their patients' awareness of prior trauma. With TIC training, health care staff can appropriately relate and care for their patients, especially those who have experienced trauma.

The result of a qualitative study by Palfrey et al. (2019) confirms that a short TIC training course provided to a diverse group of health professionals relates to an improvement in their trauma awareness, self-confidence, and attitude toward assessing and treating persons who have experienced trauma and adversity. Along with an increased readiness to include a person's trauma history into their evaluations, participants expressed increased confidence in their capacity to recognize and manage an individual's traumatic background.

By practicing trauma informed care (TIC), nurses gained a better knowledge of the connection between earlier trauma and its influence on a patient's current mental disorder, and prevent a patient from experiencing re-traumatization, and decreased utilization of restrictive intervention (Hall, et al., 2016). Healthcare staff value TIC as important to patient care expressed a desire to utilize a TIC framework (Nandi et al., 2018, Hall et al. 2016).

During coercive interventions, patients with a history of trauma may be re-traumatized (Cohen & Baron, 2021). It's also been hypothesized that trauma increases the likelihood of being restrained or confined (Perers et al., 2021). TIC aims to promote healing and progress rather than causing further pain or reliving prior traumas. Perers et al. (2021) confirms through a systemic review that TIC is one of the methods that has been utilized to reduce the use of seclusion and

restraints when caring for teens in psychiatric inpatient units. Azeem et al. (2017) emphasizes that reduction in use of coercive interventions can be achieved through effective TIC

Recognizing the indicators of trauma, reacting in a manner that promotes healing on a personal and organizational level, and creating an environment that resists re-traumatization are always that healthcare providers may effectively overcome barriers and address adverse trauma outcomes.

TIC and Organizational Changes

To effectively embrace the trauma-informed care (TIC) paradigm, an organization must first establish a trauma-informed mission and resources must be allocated to support it. Without a thoroughly trained workforce, no organization can execute the TIC model (SAMHSA, 2014). Staff education on trauma-informed approaches is the first step an institution takes when committing to trauma-informed practice, according to (SAMHSA) (2014), emphasizing that these trainings educate participants on the principles of trauma-informed practice, with the goal of improving employees' understanding and transforming behavior. Staff training regarding trauma informed practice has the potential to contribute significantly to the development of trauma-informed organizational and systemic transformation (Purtle, 2020). Thus, traumainformed care is beneficial and important not just in high-risk settings, but also in clinics and school nurse offices (Boles, 2017). Muskett, (2014) concluded that leaders in the medical industry who advocate for a trauma-informed approach and functional changes to everyday routines have seen consistent good outcomes. Such desirable outcomes also correlate with the enforcement of educational aid, trauma-sensitive regulation, and continuing management leadership and supervision.

Theme Development

Trauma is recognized as the fundamental cause of a wide range of behavioral and psychiatric problems. Healthcare workers are challenged to provide care while preventing re-traumatization of the staff and patients. Research indicates that TIC is universally applied notwithstanding trauma disclosure (Fleishman et al., 2019; Purkey et al., 2018; Racine et al., 2020; Sweeney et al., 2018). TIC is founded on an awareness of the effects of trauma on patients, healthcare providers, and the entire workforce. According to Fleishman et al. (2019), TIC offers a lens for examining and modifying policy and procedures to guarantee safe and inclusive environments for both patients and healthcare staff. SAMHA (2014) advocates for a universal trauma-informed model of care that requires providers and institutions to recognize the existence and permeating effect of trauma in patients' live and to develop trauma approaches to decrease re-traumatization and improve health outcomes.

Re-traumatization in organizations

Literature on trauma-informed care suggest a need for organizational preparedness, assessment, and transformation in order to implement trauma-informed care (Sweeney et al., 2018).

Providers in a therapeutic context may re-enact a past trauma for some patients. Organizational reforms that are sensitive to the needs of traumatized patients are required to transform a workplace into trauma-informed system. TIC Integration necessitates top-level support to take steps to address gaps and barriers such as providers' lack of knowledge, and vicarious trauma, recognizing the role of ACEs on trauma, understanding trauma survivors' perceived barriers to care, and the use of coercive measures

Adverse childhood experiences and trauma

Childhood abuse and neglect may negatively impact physical, emotional, and social development farther in adulthood and later life (CDC, 2021; Goddard, 2021; SAMHA, 2014; Kealy & Lee,

2018; Mason et al., 2016; Perers et al., 2021; Ranjbar & Erb, 2019). There is a link between the number of ACEs and behavioral problems in children, as well as psychosis, anxiety, depression, and suicidal ideation in adults (Oral et al., 2016, CDC, 2021, SAMHA, 2014). Children who grow up in toxic environments may struggle to build healthy and secure relationships (Oral et al., 2016; Sweeney et al., 2018).

A cohort study by Kealy & Lee (2018) demonstrated a significant proportion of healthcare providers' failure to inquire or document about childhood trauma among adult mental health patients during assessments. A lack of awareness of childhood trauma in this demographic undermines a trauma-informed approach to treatment delivery. Understanding how ACEs affect health, identifying clinical symptom presentation, ACEs screening protocols, and the health care provider's ability to react to patients without re-traumatizing them while delivering evidence-based therapy are all part of the trauma-informed care strategy (Kealy & Lee, 2018; SAMHA, 2014). It is imperative that all members of the healthcare team receive ongoing education about ACEs and trauma-informed care as part of their continuous professional development.

Provider's lack of knowledge and re-traumatization

Re-traumatization is a problem that trauma survivors face frequently and as healthcare providers, being aware of the potential for this to occur is crucial. Unfortunately, some research reveals that nurses are often perplexed by ambiguous concepts of TIC and struggle to integrate TIC principles into their daily practice (Hall et al., 2016; Muskett, 2014). A patient's history of trauma may not be brought to light if the care provider does not ask the right questions, or if the care provider feels unprepared to address trauma-related concerns proactively. Healthcare workers may overlook a patient's trauma history, placing them at danger of re-traumatization from treatment that lacks trauma-informed approach (Amsberry, 2020).

Cross-sectional study by Bruce et al. (2018) assessed health care provider knowledge, attitudes, behaviors, competence, and identified obstacles to adoption of TIC. While great majority of the participants had positive opinions on incorporating TIC into their practice, one third of the 147 participants reported that they did not have peers they can rely on for support with a patient suffering substantial traumatic stress. A study by Hall et al. (2016) found that primary health care providers' communication skills improved after attending a one-day TIC course.

Findings from a study by Palfrey et al. (2019) after a brief training on TIC, demonstrated that health professionals acknowledged a better understanding of how to assess and treat patients who have been traumatized, as well as a higher desire to incorporate patients' trauma history in their evaluation. A result of RCT conducted by Green et al. (2016) to examine the feasibility and evaluate the effectiveness of TIC showed that trained PCP were rated higher by patients on patient-provider relationship following a TIC training. The research goes on to prove that providing healthcare providers with communication skills training has an effect on patients' health behavior and patient satisfaction

Without adequate knowledge of TIC, trauma is rarely adequately assessed or addressed. Trauma-informed care training identify and limit potential triggers and protect patients' mental and emotional health to ensure that trauma-informed activities are practiced by staff (SAMHA, 2014).

Coercive measures and re-traumatization

Despite limited scientific evidence on effectiveness, restraints and seclusions are frequently used in psychiatric units with the justification of maintaining patient safety. Adequate use of coercion requires legal and ethical justifications. Coercive interventions may re-traumatize patients

(Cohen & Baron, 2021). Trauma may also increase the probability of being constrained or confined (Perers et al., 2021).

Strout (2010) conducted an integrated evaluation of the qualitative literature available on patients' attitudes of restraints. The review identified four themes: negative psychological implications, re-traumatization, views of unethical practices, and the crushed spirit.

Muskett (2014) conducted a systematic review of literature about TIC practices in acute mental health settings. Results indicated that among the 27 identified interventions, one of the three most likely to reduce the number of restraint occurrences in clinical settings included trauma-informed care. Azeem et al. (2011) conducted a retrospective study of medical record review of 458 youth to investigate the effect of TIC strategies on reducing restraints and seclusion usage in children and adolescents in psychiatric hospitals. This study showed a correlation between TIC and a downward trend in the numbers of restraints and seclusion episodes. Study also found that TIC is a preventive approach against physical and emotional harm to patients and staff, as well as an evidence-based intervention for the problem of restraints and seclusions (Muskett, 2014).

Trauma survivors' perceived barriers

Stigma and embarrassment are among the factors that impede individuals from seeking mental health treatment, whereas positive experiences with prior mental health treatment and support from care providers seemed to promote patients' willingness to seek treatment (Kantor et al., 2017). Individuals who have been neglected or abused by a caregiver may encounter significant difficulties in attempting to participate in a therapeutic relationship in the future, fearing rejection or angry responses from a new caregiver (Kealy & Lee, 2018).

A finding from a systemic review by Kantor et al. (2017), showed that patients with the history of trauma encounter unique barriers to accessing psychiatric treatment, including concerns

related to stigma, humiliation, and abandonment, as well as fears of re-experiencing the traumatic events. Healthcare providers and patients must develop trusting relationships and practice transparency, honesty, and respect. This is critical since many patients with trauma history have encountered betrayal, and subjugation (Sweeney et al., 2018). Care that is guided by trauma-informed principles calls for a provider's commitment to listen and value the patient's perspective. Recognition of trauma and its consequences can help providers become more sensitive to the needs of traumatized patients as well as shape policies and practices to better service patients that have experienced trauma. (Kealy & Lee, 2018).

Vicarious trauma

Mental health professionals should create strategies to alleviate the emotional stress that might result from learning about somebody else trauma. Also, providers who have already experienced trauma may be less willing to question patients about trauma for fear of triggering their own trauma (Sweeney et al., 2018). This can be an occupational hazard for mental health professionals (Kantor et al., 2017).

One of the core principles of TIC is healthcare workers' self-awareness and self-care (SAMHA, 2014). Providers who provide TIC must examine their own emotional responses and prejudices to trauma (Raja et al., 2015). Trauma informed care is a sensitive practice; therefore, providers must endeavor to care for patients without vicarious projection of their own trauma in order to prevent the detrimental impacts of weak provider and patient bond (Raja et al., 2015). Organizations must recognize how trauma affects healthcare workers, create a trauma-informed environment by completely integrating knowledge about trauma into policies and procedures, provide ongoing training in trauma-informed care, and proactively avoid re-traumatization.

Relevant Background

Trauma experiences have a profound effect on individuals' physical, emotional, and psychological well-being both during and years after the trauma (SAMHSA, 2014). Traumatic experiences may take many forms, spanning from war to family conflict, and even healthcare interactions can be distressing for such patients. Adverse childhood experiences (ACEs) can elicit chronic stress reactions and alter the brain's future response to stress (CDC, 2019). Whether the individual experienced trauma at any stage in life, they are at an elevated risk of developing mental and chronic physical health issues (Ranjbar & Erb, 2019). Healthcare workers are challenged to provide care while preventing re-traumatization of the staff and patients. Individuals present to healthcare settings with symptoms related to their past experiences that are traumatic. Such traumatic experiences may go unrecognized by providers, placing the patient at danger of re-traumatization.

What is Currently Understood

TIC has been shown to enhance health, boost well-being, and reduce healthcare expenses.

Bothe et al. (2020) postulates that individuals with post-traumatic stress disorder, appear to have significantly more general health issues and incur substantially more expenditures than the average insured. In comparison to persons who have never encountered trauma, individuals who have experienced trauma are more likely to utilize expensive health-care services (Raphael et al., 2009). In the Unites States, child abuse is projected to cost \$5.87 trillion (Institute for Trauma and Trauma-Informed Care, 2016). Davis and Maul (2015) state that adopting a trauma-informed care may assist healthcare staff in building trust with patients and may result in improved care quality and cost efficiency.

With the aftereffects of COVID-19, there is an increased need for health providers to develop and modify fundamental practice skills that will enable them to manage the dynamic

needs of individuals with history of trauma in other to avoid re-traumatization and enhance their recovery.

Advocates of a trauma-informed approach acknowledge the existence of trauma victims in healthcare settings and acknowledge that the care environment can also generate trauma (Wilson et al, 2017; SAMHSA, 2014). The absence of societal acceptance of trauma and its consequences resulted in inadequacy of national health care measures (Kazlauskas, 2017). While efforts to adopt and refine trauma-informed practices are occurring at a national level, crosssystems collaboration that might bolster these initiatives has remained restricted, strained, or absent (Kazlauskas, 2017). Care providers have a better chance of influencing the experience of patients and their peers. However, some scholars also note that it can be challenging to implement TIC where what to do is unclear (Fleishman et al., 2019). In a systematic review, Bryson et al (2017), discovered that numerous TIC frameworks and techniques have shown excellent outcomes during the last two decades, however, the characteristics that contribute to the effective application of TIC, particularly inpatient psychiatric settings, remain largely unexplored. Thus, there is a need to develop an efficient framework for the implementation of TIC in healthcare.

National Guidelines

Increased awareness of trauma's pervasiveness and its links to physical and behavioral health and wellbeing has prompted an increasing number of organizations and service systems at the national and state level to explore ideas to enhance their services more sensitive to individuals who have experienced trauma. The implementation of the TIC framework in health is governed by SAMHSA guidelines that provide a trauma-informed strategy and foster a common understanding across service systems. SAMHSA's approach to TIC is founded on a set of four

R's and six core principles. According to SAMHSA (2014), the six core principles of TIC are physical and mental safety for patients and staff, transparency in organization's choices that promote honesty and integrity, peer support to foster trust, cooperation, and feelings of empowerment, partnering and resolving power imbalances between staff and patients and overcoming cultural prejudices and biases. The four R's include a realization of trauma and its effects on patients, the ability to understand trauma indicators, the development of a trauma-responsive system, and the ability to resist re-traumatization. (SAMHSA, 2014). According to SAMHSA's Trauma informed care in behavioral services study, these R's include recruiting and retaining trauma-informed caregivers, training behavioral health care professionals in the fundamentals of TIC, developing and promoting a set of TIC-specific counseling skills, resolving ethical concerns unique to TIC promotion, clinical supervision that is trauma informed, and commitment to the management of secondary trauma experienced by care providers in the organization (SAMHSA, 2014). Together, the four R's and the six principles build a healthcare environment that values individuals' experiences and actively controls re-traumatization

Contextual Information

There's a need for systemic changes at different organizational levels to implement a trauma-informed approach. TIC serves as a blueprint for formation and modification of organizations' policies and procedures to provide a care environment are safe for both patients and healthcare providers. Whether a patient's experience with healthcare professionals is directly related to earlier trauma, the danger of re-traumatization is significant. Successful implementation of TIC demands continuing commitment and a desire to learn at all levels of an organization (Perers et al 2019; SAMHSA, 2014). Recognizing how trauma has impacted

patients' lives, is critical for designing a healthcare system that meets these patients' goals and fosters improved mental health outcomes.

Project Aims

The aim of this quality improvement project is to decrease the number of retraumatization complaints from patients with the history of trauma in an inpatient setting through provision of TIC training for healthcare providers.

Project Objectives

In the timeframe of this DNP Project, the DNP lead will:

- 1. Implement an evidence-based trauma informed care protocol to the multi-disciplinary team that provides care to trauma patients at the DNP project site.
- 2. Administer an education seminar for the multidisciplinary team to educate staff who provide care to patients in the DNP project site.
- 3. Improve provider compliance with national standards for care pertaining to trauma-informed care.
- 4. Improve rates of patient satisfaction by reducing re-traumatization complaints by 40% within a 5-week implementation timeframe.

Implementation Framework

As with other healthcare fields, mental health is always evolving to suit the requirements of patients and to enhance the quality of treatment offered. An organizational change requires a systematic process of movement from one condition to another. Change in an organization should be approached as a multistage process. Integrating trauma-informed care and practice

concepts into an inpatient environment can result in practice improvement and cultural transformation (Jackson & Jewell, 2021).

To effectively translate the SAMHSA's six core principles of TIC, into practice, Lewin's Three-step change theory is utilized. Lewin's change theory (LCT) explains both the doubt and resistance to change which may exist at all levels of an organization's workforce. Employee resistance to change, a general suspicion of new methods, or a fear of departing from established practice style, are some prevalent impediments to implementing change (Blunt & Carroll, 2017). Lewin's three-step model of change is applied with the goal of bridging the divide between the current practice at the practicum site and the use of TIC.

Historical Development of the Theory

Kurt Lewin was a German American social psychologist who rose to prominence in change management in the early 20th-century. Kurt Lewin was born on September 9, 1890. He earned his Ph.D. from Berlin University in 1914 and served four years in World War 1. After the war, he taught philosophy at the University and became Professor of Philosophy and Psychology 1926. Lewin pioneered the scientific study of group dynamics by proving that group experiments could be performed under properly controlled settings (Cummings et al., 2016). To study group dynamics, Lewin created the 3 Stage Model of Change to analyze two aspects: The process of transformation in workplaces and how the status quo can be challenged in order to bring about meaningful change (Hussain et al., 2018).

Lewin postulates that individuals' reactions to a new idea are a result of group behavior and that individual behavior and the capacity to adjust to new situations are directly influenced by group dynamics (Cummings et al., 2015). Therefore, to execute organizational change, it is vital to take into account the group's setting.

Major tenets of Lewin's Change Theory

Kurt Lewin proposed a model of the transition process that includes three step change model through unfreezing old practice pattern, moving to a new pattern, and refreezing new behavioral pattern (Sararyreh et al., 2013; Cummings et al., 2016; Hussain et al., 2018). Lewin believes that human behavior is built on a quasi-stationary equilibrium that is kept up by a multifaceted system of forces. Before old behavior can be changed and new behavior can be accepted, the equilibrium must be disrupted (Cummings et al, 2016). The first step towards unfreezing is to prepare for change. The second step, change, investigates how people respond to new ideas or changes. Clear and open communication and staff involvement assist to avoid the ambiguity that might arise during the implementation period. Lewin postulated that effective change is the result of a team effort, as a result, individual behavior improvement can only be sustained if group norms and practices are also changed. (Sarayreh et al., 2013). The refreezing phase entails accepting the alteration and establishing a new equilibrium. This quality improvement initiative will aid in the transition to become a trauma-informed organization, with the goal to decrease retraumatization.

Applicability of Major Tenets of Theory to Current Practice

To achieve systemic change the Lewin 3 stage model is applied. Many quality improvement programs have shown to be effective using Lewin's paradigm using the 3-stage model

Unfreezing

According to the study of Lewin, to implement a successful organizational transformation strategy, unfreezing the system must be involved (Hussain et al., 2018). During the unfreezing stage, the organization prepares for the healthcare providers to receive trauma-informed treatment. Leadership teams are selected, tasks are assigned, and information on TIC and training

process are reviewed. TIC training is provided to healthcare providers. Staff who are pleased with present methods and processes may lack the desire to change. Making the staff understand the significance of TIC and how it will result in a positive outcome for patients and staff is critical to unfreezing. It is imperative to provide training and mentoring in a setting that prioritizes collaborative learning and support over fear, so that staff may develop the skills and behaviors that align with their preferred values (Ginex, 2018).

Change/Moving

This stage examines how staff responds to the change. The TIC training works as a catalyst for change in this quality improvement process by increasing care providers' trauma-informed care knowledge, skills, and competence. At this stage, there is an ongoing monitoring of staff compliance in adhering to TIC principles. According to Blunt & Carroll (2017), employees are the greatest impediment to effective organizational transformation. Because employees are pushed to review and improve their behavior, opposition to assertive organizational change is unavoidable. Resistance helps to maintain equilibrium until the reasons for the change are both clear and persuasive. Clear communication, sufficient time, support to staff and addressing any concern that emerges, helps to alleviate any ambiguity that may arise throughout this transition period. Evaluating health providers' learning and retraining may be necessary until desired goal is achieved.

Refreezing

Refreezing takes place when staff embraces and incorporates the new behavior into their daily practice. At the stage, the healthcare providers express acceptance for the adoption of TIC.

During the refreezing process, TIC become a part of the norm. The leadership team is made aware of the positive application outcomes in the expectation that they may be mirrored. Success is celebrated. Refreezing is required to avoid old behavior from resurfacing.

Setting

The host site is located in North Texas, serving individuals from different parts of the world. It specializes in mental health treatment and substance detoxification, including counseling, recovery housing, and FDA-approved medication-assisted treatment. The host site has given permission for this QI project, and human subjects will not be used. The host site has a capacity of 104 beds and is licensed and accredited by the Joint Commission who works in collaboration with stakeholders to ensure quality healthcare is being provided. This facility primarily provides services and therapeutic programs to inpatient adults and adolescents who are grouped on different units based on their ages and disorders. Also, it has two separate trauma units for adults and for adolescents developed for the treatment of patients with disorders related to unresolved traumatic events. The facility operates 8-hour shift during the weekdays from Monday to Thursday and 12-hour shifts on Weekends from Friday to Sunday. This facility has not implemented an electronic medical record. There are no electronic medical records, all documentation is paper based. It is a Medicare, Medicaid facility and it's also in-network with most major insurance companies. The host site has partnership with the National Action Alliance for Suicide Prevention to prevent suicide and promote innovative care. It also works with the County department of Mental Health and Mental Retardation (MHMR), Lifepath systems, the Veteran Administration, Mental Health America, and Substance Abuse & Mental Health Services Administration (SAMHSA).

Population of Interest

The TIC project will be implemented on the adolescent trauma unit. This trauma unit comprises of patients from age 13 to 17 years with a history of traumatic life events that can exhibit intense emotional or behavioral responses. The participants of this QI project will include both clinical and non-clinical healthcare providers who are assigned to the adolescent trauma unit. This group includes the registered nurse (RN) staff, advanced practice registered nurses (APRNs) Mental health technicians (MHTs), therapists, house managers and supervisors, and ancillary staff. A total of approximately 24 staff are expected to participate in the TIC training. There are two RNs, and four MHTs, for each shift on the adolescent unit. There are also two psychiatrists, two APRNS and two therapists caring for the patients on this unit. The inclusion criteria for this project are all MHTs, RNs, therapists, physicians, APRNs and any other provider that interacts with adolescent patients on the trauma unit. Exclusion criteria are RNs, MHTs, therapists and psychiatrists that are not assigned staff on adolescent trauma unit. Prior to the project's execution, prospective participants will be screened to ensure they are part of the staff that provide care to adolescents on trauma unit. Even though, there will be no direct interaction with the patients on adolescent unit, the TIC training provided to the staff is expected to indirectly impact them.

Stakeholders

Stakeholders of the host site includes the hospital administrator and the chief nursing officer (CNO) who oversee the QI project and financial data, the quality improvement personnel monitor the progress of the QI project and provides guidance. Lead trauma therapist works closely with the DNP lead to design educational materials on trauma, and to coordinate educational training. The clinical director provides information on the organization's clinical

protocols. The house supervisor and managers assist the DNP lead to ensure staff engagement and compliance. The adolescent patients are not directly involved.

The affiliation agreement was not needed, and the host site has granted permission to carry out the project and patients will not be involved. Involving stakeholders at all levels brings unique perspectives on challenges on subjects that would not otherwise be explored. Key stakeholders at the host site such as the chief nursing officer (CNO), quality improvement director, Trauma unit lead therapist, house supervisors, Trauma unit RN, will meet to discuss the input, process and expected outcomes of increasing the knowledge and skills of adolescent unit staff through TIC training with the hope of decreasing re-traumatization of patients.

Interventions

Utilizing the Lewin 3 stage model, and as part of the 'unfreezing' stage, a pre-post questionnaire will be provided to the participants to assess knowledge and skills related to caring for patients with the history of trauma. Participants will include the healthcare providers which include MHTs, RNs, therapists, physicians, APRNs and any other provider that interacts with adolescent patients on trauma unit.

Prior to the intervention, the DNP student will work with the house supervisor at the host site to collect baseline data on the number of re-traumatization complaints from patients received by the host site within a 12-week period. Although the TIC training will not be mandatory, the DNP lead will ensure staff turnout by providing the TIC training during each participant's work hours. Each participant will take a paid one hour off from the unit to attend the training. TIC training will be implemented in the host site training room through an in-person presentation. Copy of the PowerPoint will be provided to the participants

Prior to implementation, a total of 5 training sessions. One training session for each shift (Day, Evening & Night) during a weekday and two sessions on a weekend (Day & Night). At the end of each session, the DNP student will allow time for questions and clarifications. The training will be completed in one week

During the first week, the DNP student will be available to address any concern that the participants may have. All participants emailed as reminder for assigned educational sessions to include the date, time, location of the training. The DNP student will ensure that training room is secured for staff education and that tools such as questionnaires, handouts are printed. DNP student will address any stakeholders' questions or concerns that may arise During the second week, the DNP student will administer pre-knowledge assessment questionnaire to the participants. Scores will be entered into SPSS program. DNP student will implement TIC training session.

During the third week, DNP student will implement TIC project. Participant will continue with their shift duties as usual. The DNP student, lead therapist and QI director will be available to monitor for any potential problems in the implementation phase. Updates will be provided to the stakeholders

During the fourth week, the participants will continue to be monitored for adherence to TIC principles. The participants will continue to receive support and clear communication to alleviate any ambiguity. The DNP student will provide retraining as needed

During the fifth week, following the completion of the project, The DNP student will administer post-knowledge assessment to participants. Scores will be entered into SPSS program

The QI director will obtain the number of re-traumatized complaint slips frm the unit box, if any, for comparison with the data prior to implementation of the TIC training. The DNP student will meet with the leadership team to discuss the project outcomes once all data is calculated.

Tools

Pre- and Post-test Questionnaire

The tools necessary to implement this QI project will include a pre- and post 5-point Likert questionnaire on trauma. This test will be series of statements that participants will choose from to rate their knowledge and skills on trauma care. Each statement will be scored by assigning one point for each answer. The scores indicate the participant's level of agreement. The response is based on a five-point Likert scale with 1 – Strongly Disagree, 2 – Disagree, 3 – Undecided, 4 – Agree, and 5 – Strongly Agree. The possible range of scores is from 1 to 5 (See Appendix C). The DNP student has developed the questionnaire while seeking guidance from the team of experts that includes the course instructor, the academic mentor, the project mentor and the lead trauma therapist at the host site. The tool will be submitted to the doctoral-prepared instructors for content validation.

PowerPoint

Educational PowerPoints on TIC are developed by DNP student and the trauma therapist (See Appendix D), as guided by the SAMHSA's six core principles of TIC. These principles provide a framework for the content of the TIC training. The PowerPoint will be validated by the course instructor, the academic mentor, and the project mentor.

Audit Tool

Participant will be provided with pre- questionnaire prior to TIC training to assess the staff's knowledge and confidence in providing care that is trauma informed. The post-questionnaire will

be served at 5 weeks following a TIC implementation, to assess the impact of the training on the participants' TIC knowledge and confidence. Records of re-traumatization complaints will be obtained from QI director 5 weeks after the TIC training.

SPSS Software

IBM SPSS version 26 will be utilized to code and analyze the statistical data

Plan for Data Collection

Prior to TIC training, pre-test TIC knowledge assessment questionnaire will be printed, and copies will be distributed to participants. Following the TIC training, copies of the post-test knowledge assessment questionnaire will also be administered. The pre/post-questionnaires will be completed anonymously. The assessment results will be compiled, scanned and saved in a secure, password-protected computer that belongs to the PM, for pre/post-knowledge comparison. The number of patients' re-traumatization complaints will be retrieved from the QI director. A statistician will be contacted to guarantee accurate statistical testing. The saved data will only be accessible to the DNP student, PM and trauma unit lead therapist.

The printed copies will be kept in a secured cabinet in the PM's office. Data files will be preserved for five years after the project is completed. The hard copy records will be shredded and disposed. Digital records will be deleted.

Ethics/Human Subjects Protection

The institutional review board (IRB) requires that all projects be reviewed prior to implementation. The DNP student submitted a determination form to the IRB. The IRB determined that the project was a quality improvement/assessment initiative, and that no IRB review was necessary. IRBs are responsible for reviewing whether or not a planned study is ethically appropriate, evaluating the possible bias of clinical researchers, and ensuring that

regulations and procedures established to protect human participants are adhered to (Grady, 2015). The DNP student submitted a determination form to the IRB. This DNP project received approval May 19, 2022, as a quality improvement project and therefore, should not be submitted for IRB review. This QI project aims at improving organizational processes. All participant's data will be kept anonymous. This QI project's effort does not pose any risk to human subjects. Financial remuneration will not be provided to participants. There will be no interaction with patients or collection of patients' personal health information.

Plan for Analysis

The TIC pre- and post-questionnaire for knowledge assessment will be used to measure the outcome of the TIC training. Participant scores will be reviewed. Based on the 5-item pre-post questionnaire, the possible range of scores that could be recorded using a response scale from 1 to 5, will be a minimum total value of 5 and the maximum total value of 25. High score will indicate the participant's high levels of TIC knowledge and confidence in providing trauma-informed care to patients. A paired-sample t-test is an appropriate statistical technique to analyze this intervention. A parametric paired-samples t-test is used when there's only one group of individuals and data is obtained from them on two separate occasions or under two different conditions (Pallant, 2020). Pre-test and post-test experimental designs will be employed to assess the staff's knowledge on TIC. DNP will assess each staff on the TIC knowledge at Time 1, prior to training, and then again at Time 2 after exposing the participants to training. A paired-samples t-test will allow the DNP student to determine if there is a statistically significant difference in the mean scores of the two variables (pre-training and post-training). The data will be coded and analyzed using IBM SPSS version 26. The level of significance (p) is set at .05

Analysis of Results

The target of this quality improvement project was to prevent re-traumatization of patients, educate the nursing staff on an evidence-based TIC practice, thereby decreasing the number of re-traumatization complaint slips patients fill and drop into the unit box.

Education to the trauma unit staff was provided in collaboration with the project site leadership that included five session courses over five days using a PowerPoint presentation containing information regarding the evidence-based TIC. This training included the definition of trauma, the three 'E's of trauma, biology of trauma, the relationship between trauma and mental health, explanation of the core principles of TIC and the key assumptions in TIC approach. The pre-knowledge TIC assessment questionnaire was administered to the participants prior to training and post-knowledge assessment questionnaire was also provided following the TIC training. There were 16 participants. Table 1 presents a summary of the demographic characteristics of the 16 participants in the study. 62.5% were female participants (n=10) while 37.5 % of the participants were male (n=6). Ages of the participants ranged from 18 years to 60 years. Participants in the age range 26-35 years made up 50% (n=8). Clinical specialties dominated the sample with 81.3% (n=13) being clinical workers. The job title with the highest representation in the sample was RN at 31.3% (n=5) followed by MHT at 25% (n=4). The participants with over one year of service represents 62.5% of the participants (n=10). 31.3% of the sample had more than five years of service (n=5). Only 6.3% of the participants had more than 10 years of service (n=1).

Table 1: Summary of the Demographic Characteristics of the Sample

		Frequency	Percent	Cumulative Percent
Gender	Female	10	62.5	62.5
	Male	6	37.5	100

Age	18-25	3	18.8	18.8
	26-35	8	50	68.8
	36-45	3	18.8	87.5
	46-60	2	12.5	100
Specialty	Clinical	13	81.3	81.3
	Non-clinical	3	18.8	100
Job Title	MHT	4	25	25
	RN	5	31.3	56.3
	Physician, NP	3	18.8	75
	Other	4	25	100
Years of Service	1+ years	10	62.5	62.5
	5+ years	5	31.3	93.8
	10+ years	1	6.3	100.0

Table 2 provides a summary of the changes in responses to the items used in assessing the efficacy of the intervention.

Table 2: Summary of Changes in Responses

	Pre-interv	ention	Post-intervention			
	Frequency	Percent	Frequency	Percent		
	I understand the relationship between trauma and mental health symptoms					
Strongly Disagree	0	0	1	7.1		
Disagree	1	6.3	0	0		
Undecided	0	0	2	14.3		
Agree	9	56.3	4	28.6		
Strongly Agree	6	37.5	7	50		
	I can recognize the signs and symptoms of trauma					
Strongly Disagree	8	50	1	7.1		
Disagree	1	6.3	1	7.1		
Undecided	2	12.5	0	0		
Agree	2	12.5	6	42.9		
Strongly Agree	3	18.8	6	42.9		
	I can elicit details of a traumatic event from patients without retraumatizing them					
Strongly Disagree	7	43.8	0	0		

Disagree	4	25 2		14.3			
Undecided	4	25	0	0			
Agree	0	0	3	21.4			
Strongly Agree	1	6.3	9	64.3			
	I believe I have sufficient knowledge in handling traumatic responses						
Strongly Disagree	7	43.8	0	0			
Disagree	5	31.3	0	0			
Undecided	2	12.5	2	14.3			
Agree	0	0	0 5				
Strongly Agree	2	12.5	7	50			
	I feel confident in my abilities to apply trauma-informed care principles when caring for my patients						
Strongly Disagree	9	56.3	0	0			
Disagree	5	31.3	1	7.1			
Undecided	0	0	1	7.1			
Agree	0	0	6	42.9			
Strongly Agree	2	12.5	6	42.9			

Figure 1 presents a comparison of the pre-intervention and post-intervention mean scores across all five knowledge items. Paired-sample t-test was conducted to determine if there was a statistically significant difference between the mean scores of the pre-post knowledge assessment, with the aim of determining whether there was a gain in knowledge and confidence following TIC training. A total of 16 staff that was assigned to trauma unit completed the pre-test questionnaire prior to TIC training. Out of the sixteen staff, fourteen completed and returned the post-test questionnaire. From the figure, there was no change in the participant's understanding of the relationship between trauma and mental health symptoms following TIC training. However, there was considerable improvement in all remaining areas. The participants confidence in their ability to apply trauma-informed care principles improved from 1.64 to 4.21 (85.8%) after the intervention. The participants' belief in the sufficiency of the knowledge that

they have in handling traumatic responses also improved from 1.93 to 4.36 (85.7%). The participants capacity to elicit details of traumatic events from patients without retraumatizing them improved from 2.00 to 4.36 (85.7%).

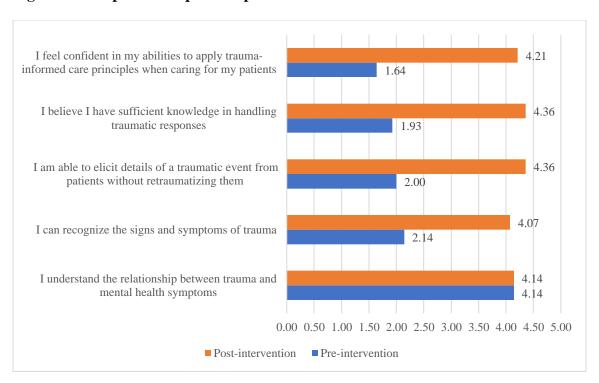


Figure 1: Comparison of pre-and post-intervention scores

Paired sample t-test was used to determine whether the observed changes were significant. Table 3 presents the results of the paired sample t-test. A p-value of ≤ 0.05 was set as the threshold for statistical significance of the difference between the means for pre-intervention and post-intervention result. Of the five items that were considered, four had statistically significant mean differences between the pre-intervention and post-intervention. There was no statistically significant mean difference in the participants' understanding of the relationship between trauma and mental health symptoms between the pre-intervention and post-intervention, t (13) =0.00, p=1.00. There was a statistically significant mean difference in the participants'

capacity to recognize the signs and symptoms of trauma between the pre-intervention and post-intervention, t (13) = -4.07, p<.01. There was a statistically significant mean difference in the participants' capacity to elicit details of a traumatic event from patients without retraumatizing them between the pre-intervention and post-intervention, t (13) = -5.09, p<.001. There was a statistically significant mean difference in the participants' belief in the sufficiency of their knowledge in handling traumatic responses between the pre-intervention and post-intervention, t (13) = -7.43, p<.001. There was a statistically significant mean difference in the participants' confidence in their ability to apply trauma-informed care principles when caring for their patients between the pre-intervention and post-intervention, t (13) = -6.88, p<.001.

Table 3: Paired sample t-test results

	Mean Difference	Std. Deviation	Std. Error Mean	t	Degrees of Freedom	p
I understand the relationship between trauma and mental health symptoms	0.00	1.41	0.38	0.00	13.00	1.00
I can recognize the signs and symptoms of trauma	-1.93	1.77	0.47	-4.07	13.00	0.001
I can elicit details of a traumatic event from patients without retraumatizing them	-2.36	1.74	0.46	-5.08	13.00	0.000
I believe I have sufficient knowledge in handling traumatic responses	-2.43	1.22	0.33	-7.43	13.00	0.000
I feel confident in my abilities to apply trauma-informed care principles when caring for my patients	-2.57	1.40	0.37	-6.88	13.00	0.000

From the findings, it is apparent that the TIC led to statistically significant improvements in the participants' confidence in their ability to apply trauma-informed care principles when caring for their patients, their belief that they have sufficient knowledge to handle traumatic responses, and their capacity to elicit details of traumatic events from patients without retraumatizing them and to recognize the signs and symptoms of trauma. However, the TIC did not lead to statistically significant changes in the participants understating of the relationship between trauma and mental health symptoms.

During the four weeks of project implementation, the project lead kept in constant communication with the project site leadership team that acted as a constant resource on the unit for the staff. Re-traumatization complaints metric data was collected in form of slips from the information box on Trauma unit. Data was collected for the entire four weeks prior to the TIC training. The patient census for that time frame on trauma unit was 24. Re-traumatization metric data was also obtained for another four weeks following the quality improvement implementation. The patient census on trauma unit for that time frame was 21. Table 4 presents the results of the re-traumatization complaints slip for the two separate timeframes.

Table 4: Re-traumatization complaint slips

	Number	Re-			
	of	traumatization	Percentage	z	p
	Patients	slips			
Pre-					
implementation	24	9	37.50%	-4.03	<.001
Post-					
implementation	21	2	9.52%		

Two proportion z-test was used to compare the pre-intervention and post-intervention proportions of re-traumatization slips. Before the implementation of the intervention, the rate of re-traumatization slips stood at 37.50%. After the implementation of the intervention, the rate dropped to 9.52% (Table 4). Using the z-test to test the null hypothesis that the two proportions are the same, the findings revealed that the corresponding p-value was less than 0.05. Thus, the null hypothesis should be rejected. The rate of re-traumatization slips after the intervention was significantly different from the rate of re-traumatization slips before the intervention, z=-4.03, p<.001. Thus, there is sufficient statistical evidence to conclude that the intervention led to an improvement (or drop) in the rate of re-traumatization slips.

Summary

During the four-week QI project period, this DNP project was successful in implementing training for an evidence-based TIC to the trauma unit care providers in an inpatient psychiatric facility. The intended outcome of the evidence-based practice (EBP) transformation initiative were greater nursing staff awareness of TIC and increased confidence in its application. The nursing staff's knowledge of TIC and confidence in implementation were measured before and after the TIC training. From the findings, it is apparent that the mental health staff has a good understanding of the relationship between mental health and trauma but lacked the knowledge and confidence in caring for patients with trauma. However, the TIC training led to statistically significant improvements in staff knowledge to handle trauma responses, , the confidence in their ability to apply TIC principles and their capacity to elicit details of traumatic event from patients without retraumatizing them. About 85.8% of

participants expressed confidence in providing TIC. Re-traumatization complaints slips decreased by 87% after four weeks following TIC training.

The strength was the stakeholder's support who worked relentlessly to support the success of the project implementation. The weakness of this project was the absence of financial resources for staff coverage for the training sessions. However, the DNP student navigated this weakness by providing TIC training on each shift to allow on-duty staff to attend without additional cost to the host site.

Interpretation

The incorporation of evidence-based practice (EBP) into the daily practice of healthcare professionals has the potential to improve both the practice environment and patient outcomes (Abu-Baker et al., 2021). Staff education about TIC is an evidence-based intervention to prevent re-traumatization. The intervention was focused on staff education about TIC. The intended outcomes were increased nursing staff knowledge of TIC and increased confidence in applying it without re-traumatizing patients. Based on the analysis of the knowledge of TIC and confidence in implementation scores, the project intervention was determined to have been effective. There was a statistically significant mean difference in the participants' confidence in their ability to apply trauma-informed care principles when caring for their patients between the pre-intervention and post-intervention, t (13) =-6.88, p<.001.

The result of this quality improvement project supports the outcome of the RCT study by Greene et al. (2016) which showed that following trauma-informed care training, patients rated providers highly on relationship issues, and that healthcare staff were able to better care for their patients with trauma history after receiving TIC training. Also, Palfrey et al. (2019) study

showed that participants expressed increased confidence in their capacity to recognize and manage individuals with history of trauma following TIC training.

The TIC serves as a guide for the creation and revision of organizational practices to ensure a safe environment for both patients and healthcare professionals. At all organizational levels, TIC implementation necessitates an ongoing commitment to improvement (Perers et al 2019; SAMHSA, 2014). Important contextual factors, such as leadership interest in TIC and their recognition of the practice gap that existed in the care of patients with history of trauma, teamwork, and clear communication at the host site positively influenced the implementation process of the TIC and its adoption into daily care practice. Understanding how trauma has affected patients' lives is essential for creating an environment that fits their needs and promotes better outcomes. The goal of this quality improvement project was to determine whether the TIC training increased the nursing staff's knowledge of TIC and their confidence in implementing it. The anticipated outcome of enhanced nursing staff understanding of TIC and implementation confidence were achieved following the implementation of the TIC training at the host site. This outcome indicates that TIC has a positive correlation with a reduction in patient retraumatization. There was no significant financial expenses involved in the implementation of this project. Materials and equipment used are facility-owned and were readily available for the project team to utilize. TIC training were provided to participants based on their work schedule to avoid any additional cost to the host site.

Limitations

Limitations of this project include a small sample size (n=16) identified through convenience sampling. Convenience sampling could have oversaturated the sample with highly motivated nurses interested in modifying their care approaches for the benefit of their patients.

The project was implemented within a short duration, making it hard to predict whether the beneficial effects would be maintained in the long-term. Perception of re-traumatization may vary from patient to patient and because there was a continuous discharge of patients and admission of new patients, this can affect the number of re-traumatization complaints. This QI project was conducted at a psychiatric facility and intervention was only measured in trauma population. Transferability & applicability may be open to debate. There were limited resources and financial support for a one-time cohesive staff training and because the participants were on duty, this created time constraint for a longer question-and-answer sessions. The DNP student adjusted the financial constraint by providing TIC training on each shift to allow on-duty staff to attend without additional cost to the host site. Also, the DNP student made herself available on the unit for any follow-up questions.

Conclusion

Trauma affects the whole person, causing changes neurologically, biologically, and behaviorally and can create long-term effects, ranging from mild to debilitating consequences. This QI projected was implemented in an inpatient mental health facility following increased complaints of re-traumatization of patients by care providers. Mental health patients can often experience flashbacks to traumatic events, resulting in aggressive behavior, a lack of trust in staff, or a refusal to engage in treatment. This quality improvement initiative emphasizes the potential impact of training healthcare professionals to recognize the signs of trauma, respond in a way that promotes healing on a personal and organizational level, and create an atmosphere that resists re-traumatization. The participants of this QI project validate the importance of TIC education in increasing healthcare providers' understanding of trauma and improving staff confidence to provide care to patients. Building a provider's foundational knowledge of trauma-

informed techniques should begin early in their education and should be maintained throughout their careers. In an effort to successfully address and avoid re-traumatization, the TIC approach can be integrated into healthcare policy and practice. Successful adoption of the TIC approach requires buy-in across all level of the workforce. It is imperative that the senior leaders stay on board with creating a TIC workforce and culture. The leaders can maintain the TIC training by continually retraining employees, incorporating trauma and trauma-informed care education into new hire orientation, and updating job descriptions and performance reviews to reflect the importance of trauma-informed care. All employees should have a fundamental understanding of trauma and trauma dynamics, which they can utilize to build service delivery systems that take into account the vulnerabilities of trauma survivors, prevent re-traumatization, and encourage patient involvement in their care.

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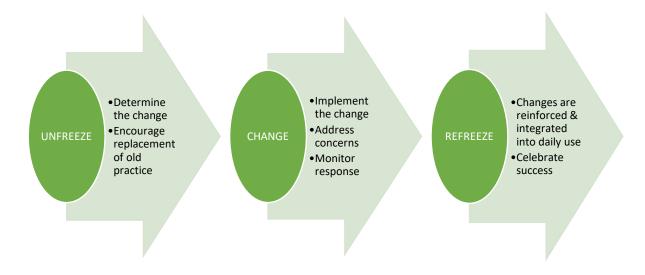
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Appendix A
Melynk & Fineout-Overholt (2011) Hierarchy of Evidence

Types of Evidence	Level of Evidence	Description
Systematic review or Meta-analysis	1	A synthesis of evidence from all randomized control trial (RCT)
Randomized control trial	11	A study in which participants are randomly assigned to either a treatment or a control group.
Control trial without randomization	111	A study in which participants are placed non-randomly to a treatment or control group.
Case control or Cohort study	1V	Case control: A comparison of subjects with a condition(case) with those without the condition(control) Cohort: An observation of a group to determine the development of an outcome
Systematic review of qualitative or descriptive study	V	A synthesis of evidence from qualitative or descriptive study to answer a clinical question
Qualitative or Descriptive Study	V1	Qualitative: A rich collection of data from various sources to gain a deeper understanding into a nature of an event Descriptive: Provides background information on what, when and where of a topic of interest
Expert opinion or Consensus	V11	Evidence from the opinion of authorities or reports of expert committee

Appendix B Kurt Lewin's Three Steps Change Model



Appendix C

PRE-Questionnaire

Questionnaire items and codes

Instructions: This questionnaire is designed to measure your knowledge and confidence regarding trauma-informed care.

Circle the number that best represents your answer. Please answer all questions.

- 1: Strongly disagree
- 2: Disagree
- 3: Undecided
- 4: Agree
- 5: Strongly agree

Items	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
I understand the relationship	1	2	3	4	5
between trauma and mental					
health symptoms					
I can recognize the signs and	1	2	3	4	5
symptoms of trauma					
I'm able to elicit details of a	1	2	3	4	5
traumatic event from patients					
without retraumatizing them					
		_			
I believe I have sufficient	1	2	3	4	5
knowledge in handling					
traumatic responses					
1 feel confident in my abilities	1	2	3	4	5
to apply trauma-informed care					
principles when caring for my					
patients					

TIC Power-point

Trauma-Informed care

What is Trauma

- An individual experiences, witnessed event(s) involving threatened death or serious injury or threat to the physical integrity of self or others.
- Emotional response involves intense fear, helplessness or horror

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The Three "E's" Of Trauma

- Event(S),
- Experience Of Event(S)
- Effect

Biology Of Trauma

- Response to stress begins in cortex through input from the senses
- The limbic brain assigns an emotional weight to the stress
- The hypothalamus responds to arousal by biochemical signaling
- Adrenaline (epinephrine) release stimulates the CNS
- Norepinephrine release "locks in" the memory of stress.
- Hormones shift response to the reactive limbic system and away from the logical thinking cortex
- Fight or flight response is activated
- Psychic and physical arousal remain until the stress is removed or the person becomes exhausted
- Memory, concentration, and overall mental efficiency is significantly decreased in favor of physical survival

Trauma and Mental Health Problems

- Usually not a single incident/event
- Occurs in childhood and adolescence and may extend over an individual's lifespan

Post-Traumatic Stress Disorder

- Re-experiencing the event
- Intrusive thoughts,
- Nightmares, or
- Flashbacks
- Avoidance

Substance use disorders

- Craving regularly
- Being unable to stop or limit amount
- Needing greater amounts to feel the same effect
- Withdrawal symptoms when not drinking
- Neglecting responsibilities to drink/smoke
- Using substance not withstanding health problem
- Not being able to stop drinking

Anxiety Disorder

- Restlessness, on-edge
- Fatigue
- Difficulties concentrating.
- Irritability
- Muscle aches, pains
- Inability to control worry.
- Sleep problems

Depression Disorder

- Feelings of sadness, hopelessness, helplessness
- Sleep disturbances
- Lack of energy
- Appetite and weight loss or weight gain
- Difficulties with concentration
- Feelings of worthlessness and guilt
- Recurrent thoughts of death, suicidal thoughts

Dissociative Identity Disorder

- Memory loss (amnesia)
- A sense of being detached from self
- Distorted unreal perception
- A blurred sense of identity
- Inability to cope well with emotional or professional stress

What is Trauma Informed Care

- Not specifically designed to treat symptoms or syndromes related to sexual or physical abuse or trauma... rather informed about and sensitive to trauma-related issues occurring in survivors
- All components have been reconsidered related to role that violence plays in the existence of patients seeking treatment
- Systems are designed to avoid re-traumatization

Core Principles of Trauma-Informed Care

- Safety
- Trustworthiness & transparency
- Peer support
- Collaboration & mutuality
- Empowerment & choice
- Cultural, historical & gender issues

Four "R's: Key Assumptions in a Trauma-Informed Approach

- Realizes the widespread impact of trauma and understands potential paths for recovery
- Recognizes the signs and symptoms of trauma in patients, families, staff,
- Responds by fully integrating knowledge about trauma into practices
- Re-traumatization: actively seeks to resist

Providers' Outcomes of Trauma Informed Care

- Reduced use of force
- Reduced use of seclusion
- Reduced use of restraint
- Reduced paperwork (monitoring)
- Increased patient satisfaction
- Improved staff morale
- Reduced staff injuries
- Reduced risk legal

Appendix E



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Trauma-Informed Care in Behavioral Health Services

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Disclaimer

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Appendix F

POST Questionnaire

Questionnaire items and codes

Instructions: This questionnaire is designed to measure your knowledge and confidence regarding trauma-informed care.

Circle the number that best represents your answer. Please answer all questions.

- 1: Strongly disagree
- 2: Disagree
- 3: Undecided
- 4: Agree
- 5: Strongly agree

Items	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
I understand the relationship	1	2	3	4	5
between trauma and mental					
health symptoms					
I can recognize the signs and	1	2	3	4	5
symptoms of trauma					
I'm able to elicit details of a	1	2	3	4	5
traumatic event from patients					
without retraumatizing them					
I believe I have sufficient	1	2	3	4	5
knowledge in handling					
traumatic responses					
1 feel confident in my abilities	1	2	3	4	5
to apply trauma-informed care					
principles when caring for my					
patients					
_					