TRAUMA-INFORMED CARE IN HIGH STRESS ENVIRONMENTS: SCOPE, CHALLENGES AND FUTURE DIRECTIONS

Abstract

Trauma is an intense form of stress characterized by overwhelming experiences accompanied by a lack of safety, agency and helplessness when exposed to a significant perilous event or series of events (either real or perceived). Unhealed traumas may result in re-traumatisation, triggering memories of the past trauma and reliving trauma all over again in the present moment as if it is happening now. Further, the potential risk for re-traumatisation increases with trauma survivors' exposure to high-stress environments. Globally, individuals, communities and societies' exposure to traumatic stress is quite common, causing horrendous impacts on biopsychosocial and spiritual domains across life and generations. As a result, to foster basic needs of safety, connection and regulation among trauma survivors in non-clinic settings, Trauma-informed care(TIC) is framed with the basic assumption to 'do no harm' through re-traumatisation, ensured employing of psychoeducation and training for service providers. However, fulfilling these assumptions relies on practical implementation and improvisation of TIC over a period of time across various contexts and levels. Therefore, in this chapter, the authors discuss the scope of TIC, the challenges in its implementation and offer future recommendations.

Keywords: Trauma; re-traumatisation; trauma-informed care; contexts; scope; challenges; future directions.

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I. INTRODUCTION

Globally, individuals, communities and society's exposure to traumatic stress are quite common, causing prolonged horrendous impacts on biopsychosocial and spiritual domains across life and generations. In contemporary societies, the lifetime prevalence of potentially traumatic events among individuals accounts for 80.7% [1]. Chronic trauma robs the survivor of human freedom [2], limiting their response flexibility [3] and a sense of power and control [4].

1. **Trauma and Re-Traumatisation:** Trauma is an intense form of stress characterised by overwhelming experiences accompanied by a lack of safety, agency and helplessness when exposed to a significant perilous event or series of events (either real or perceived). The trauma overwhelms the mind and brain's capacity to cope effectively. Trauma at different stages of development has different impacts on the development and maturation of the mind and brain. As a result, traumatised individuals live altogether in different universe both psychologically (how their brain perceives the surroundings) and somatically or physiologically (how their body/organism perceive the world [5, 6].

   Trauma is not a fact (an event that happened once in the past); indeed, it is reliving the overwhelming maladaptive traumatic stress responses for the past traumatic event in the present moment, as if it is happening right now. This process of reliving trauma is called as re-traumatisation. It implies that the survivors of trauma experience the trauma over again when triggered by any over generalised stimuli that are perceived in the present context. Re-traumatisation amongst trauma survivors continues until they find a safe environment with secure attachments and healthy boundaries with others or gain control over life through trauma healing. Further the potential risk for re-traumatisation increases with trauma survivors' exposure to high-stress environments.

2. **Types of Traumas:** Psychological traumas are categorised into three basic types, i.e., acute, chronic, and complex, based on the exposure and impact of traumatic stress on the individuals. *Acute Trauma:* The individual's exposure to a single intense, dangerous, or life-threatening stress associated with an overwhelming experience of safety vulnerability and emotional dysregulation, which results in a certain degree of loss of agency, is called acute trauma. Examples of acute trauma include sexual assault, road accidents, violence by shooting, pandemics, and natural disasters etc. Acute trauma can develop into Acute Stress Disorder, which usually transpires within a month of exposure to a traumatic stressor. *Chronic Trauma:* Chronic trauma is the individual's recurrent and prolonged exposure to intensely threatening events resulting in a maladaptive overwhelming experience that has a potential impact over a long duration. Exposure to physical abuse, emotional/verbal abuse, domestic violence, etc., are examples of chronic trauma. *Complex Trauma:* Complex psychological trauma is defined as exposure to severe stressors that are repetitive or prolonged, involve harm or abandonment by caregivers or other ostensibly responsible adults, and occur at developmentally vulnerable times in the victim's life, such as early childhood or adolescence. Complex post-traumatic sequelae are the changes in mind, emotions, body, and relationships experienced following complex psychological trauma, including severe problems with dissociation, emotion dysregulation, somatic distress, or relational or spiritual alienation [7].Van der Kolk [8] describes complex trauma as “the experience of multiple, chronic and prolonged,

developmentally adverse traumatic events, most often of an interpersonal nature...and early life onset". Further, the nature of traumas (as presented in Table 1) depends upon the source of the traumatic event concerning the different contexts across an individual's life.

Table 1: Nature of Trauma and Sources[1]

Nature of Trauma	Sources/Triggers/Causes/Events
Attachment trauma	Early childhood neglect, impaired caregiving, loss of beloved ones, physical or emotional neglect, multiple attachment/relationship disruptions, etc.
Interpersonal/Developmental Trauma	Adverse childhood experiences include rape, emotional/verbal/sexual abuse, intimate partner/significant other violence, bullying etc.
Significant event trauma	Financial loss, job loss, homelessness, failure in life goals/exams, etc.
Physical/ Medical Trauma	Road/industrial accidents, disability due to terminal illness, improper diagnostics, treatment, anaesthesia and surgery, reproductive pain due to childbirth, etc.
Collective trauma	Historical, institutional, intergenerational slavery, oppression, discrimination and genocide, prejudice and sexism, terrorism and war, etc.
Vicarious trauma	Exposures to other traumas by caregivers or service providers, trauma experienced indirectly.
Environmental trauma	Natural disasters like floods, cyclones, tsunamis, droughts, earthquakes, landslides, flash fires, climate change, pandemics etc.

II. PREVALENCE AND IMPACT OF TRAUMA

1. **Prevalence of Trauma:** In contemporary societies, the lifetime prevalence of potentially traumatic events among individuals accounts for 80.7% [1]. About 70% of them experience one or more traumatic stressors across their lifespan [9].Chronic trauma robs the survivor of human freedom [2], limiting their response flexibility [3] and a sense of power and control [4].

2. **Adverse Childhood Experiences (ACEs):** Adversity in childhood is highly prevalent across societies and cultures. According to a study [10]in the US, about 60% of individuals experience a minimum of one ACE and about 21% experience more than three adversities across their life span. Moreover, socially and economically disadvantaged individuals experience more adversities than others. Similarly, in the Indian context, adversities such as early childhood neglect (70.6%), suffering physical abuse (68.9%),surviving sexual abuse (53%), and experiencing emotional abuse (48.4%) are highly prevalent [11].A study of ACE [12] found multiple adversities experienced by adolescents and young adult age groups in India. Substance use, negative gender stereotypes, early sexual relationships, violent behaviour and suicidality were associated

[1] Source: Authors

with health risk behaviours among them. Boys who had three or more ACEs were twice at risk of early sexual relationships in comparison to girls who were thirteen times at risk for the same frequency of adversities. Boys(34.11%) were more likely to indulge in substance use than girls(6.65%) and hold more negative gender attitudes. The prevalence of sexual abuse and suicidal thoughts was higher among girls (6.2%, 5.05%, respectively) than boys (1.67%, 2.19%, respectively), whereas boys(58.94%) survived physical abuse more compared to girls (35.91%).

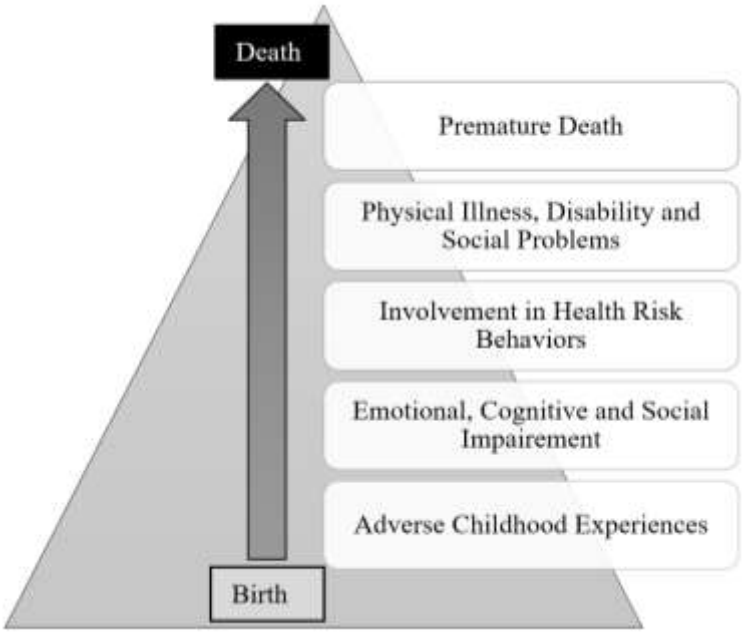

Figure 1: Impact of Adverse Childhood Experiences Across the Lifespan[2]

The historical findings of the ACE study reveal that heightened exposure to unsafe and insecure psychosocial and physical environments during the early stages of child development contribute as risk factors towards hampered mental health (sedentary behaviour, depression, suicidality, drug abuse and alcoholism) and physical health (obesity, skeletal fractures; cardiovascular, respiratory and liver diseases) leading to decreased life span and premature mortality [13], as depicted in Figure 1. Since ACEs are prevalent across societies and significantly influence health status and potential health risk behaviours, further contributing deleteriously to disease and mortality, prophylactic measures at various levels, such as primary, secondary and tertiary, are required [13]. These measures contribute towards preventing ACEs and health risk behaviours and promoting healthy behaviours while facilitating modification of risky behaviours. As a result, it enhances the quality of life and well-being among adults with ACEs. Though, in general, there has been a perilous impact of childhood adversities reported on health and well-being across the lifespan of an individual, all adversities are not equal in their impact [14], and the protective factors available or facilitated across the lifespan (i.e., from childhood to old age) equally play a pivotal role in buffering the negative impact of the ACEs [15].

[2] Source: Framework by authors; conceptualisation adopted from Historic ACE Study by Felitti et al. (1998).

3. **Dysregulated Physiological System and Acute Traumatic Stress Reactions:** A healthy nervous system detects both the cues of safety and danger from the environment. On the contrary, traumatised individuals' nervous system becomes conditioned to sense predominantly the cues of danger and threat alone. Traumatic stress responses (fight/flight/freeze) are basic survival mechanisms the brain stem (survival brain) mobilises when encountering real threats or danger in the immediate environment. Upon extinction of the threat or dangerous environmental stimuli, the sympathetic nervous system perceives safety. As a result, the parasympathetic nervous system initiates the process of restoration of stress response to normal level (called homeostasis). Over time, frequent unrestored traumatic stress responses become maladaptive, which aborts natural homeostasis even for non-threatening or dangerous stimuli. Chronic maladaptive traumatic stress response severely impacts individuals' flourishing across personal, social, professional and spiritual domains.

4. **Window of tolerance and New Normal of Chronic Hyperactivation and Hypoactivation:** The window of tolerance is a term coined by Dan Siegel [16]. Furthermore, it has developed as a concept [17]. Currently, it is extensively used in trauma-focused therapy, education and training, and it has become a framework to explore and understand psychological and physiological responses to various stressors in everyday life, including the triggers of past traumatic stress experiences. The window of tolerance model proposes three zones of arousal that every individual possesses: one within the window of tolerance, i.e., optimal arousal zone and two zones outside the window of tolerance, i.e., hyperactivation (also called hypervigilance) and hypoactivation (also called hypovigilance). The optimal zone of arousal within the window of tolerance facilitates the individuals to sense safety and agency in the face of stressful events and challenges of everyday life and, as a result, enhances the effective management of distress. However, trauma experience narrows the window of tolerance, giving scope for the outer zones of hyperactivation and hypoactivation to widen. When an individual experiences an overwhelming reaction (of hyperactivation or hypoactivation) to intense stress, accessing a repertoire of resources and strategies to manage the distress becomes highly challenging. The individuals can re-enter and expand the window of tolerance as they regain the sense of safety, agency and connection with self (by mindful regular reflection and regulation of arousal on the model of the window of tolerance with active engagement in trauma-informed self-care practices), others and environment (when it is safe and secure).

5. **High-Stress Environments and Risk of Re-Traumatisation:** A respectful and caring approach is crucial in any human services delivery. High-stress environments, such as childcare care centres, schools, health care settings, community care centres, sports and fitness training centres, rehabilitation centres, military and police organisations, and the criminal justice system, are highly likely to contribute to stress and burnout among the service providers [18]. Irritability, anxiety, lack of attention and ineffective coping mechanisms are quite common among individuals who experience distress or burnout due to organisational commitments and demands. The survivors' dysregulated psychological needs and physiological systems condition their nervous system to selectively perceive danger cues from the environment while failing to neuroleptic safety cues. Therefore, the experience of high stress and burnout symptoms among service providers hinders

fostering a safe, compassionate and regulated environment for trauma survivors, posing a risk for re-traumatisation.

III. ROAD TO TRAUMA-INFORMED CARE

1. **Limitations of Healing Traumain side the Clinical Settings:** Chronic maladaptive coping mechanisms employed as a defence against intruding and pervasive overwhelming experiences among trauma survivors disrupt how their minds and bodies perceive the surroundings and the world. Considering the severe impact of trauma on individuals' bodies, brains and spirits, during the past three decades, there has been exponential growth in the development of trauma-focused therapeutic interventions such as somatic experiencing, sensory-motor psychotherapy, EMDR, Internal Family Systems, Poly Vagal Theory etc. towards effective treatment and healing survivors of trauma. However, professional training in these interventions demands years of formal education and training under expert supervision.

2. **Trauma Healing outside the Clinical Settings: Role of Ecological Model:** Researchers [19] explored the healing pathways of trauma survivors in various contexts outside the clinical setting. Harvey [20] proposed a multidimensional definition of trauma healing. The definition states, "The efficacy of trauma-focused interventions depends on the degree to which they enhance the person-community relationship and achieve "ecological fit" within individually varied recovery contexts". Further, this conceptualisation of trauma healing incorporates an ecological model [21]. It proposes that addressing trauma in the context of traumatisation (such as home, communities, society, culture, politics, etc.) by recognising traumatic experiences among trauma survivors may foster healing without any clinical interventions. The effectiveness of such a healing process is enhanced by the presence of crucial enabling factors such as immediate reactions (by the caregivers or first responders), active support associated with awareness and understanding by significant other individuals and groups involved, and their attitudes and behaviours towards the trauma survivors in the recovery context [19, 20].

   Traumatisation is prevalent among service seekers and experienced by service providers or caregivers, which may aggravate the potential risk for re-traumatisation [22]. As a result, along with the experience of vicarious trauma due to chronic exposure to traumatic experiences of survivors among service providers, their personal history of traumatic experiences may get compounded in the employee working environment [23, 24]. This is specifically true for high-stress environments where organisational demands and expectations add stress across the organisational system, ranging from service providers, service delivery, human care and outcomes. Recognition of the challenges that service seekers and providers face sets the foundation for trauma-informed measures to address the concerns of re-traumatisation and vicarious trauma while optimising satisfaction and outcomes in human service collaboration [25].

3. **Trauma-Informed Care (TIC):** To foster basic safety needs, connection and regulation among trauma survivors in non-clinic settings (by adopting the ecological model), the TIC framework is developed with the basic assumption to 'do no harm' through re-traumatisation, ensured through psycho education and training for service providers. Based on the context and need, researchers conceptualised different definitions of TIC.

TIC is a care approach in which services are organised to ensure that all staff understand the potential impact of traumatic stress and can amend care to promote safety, choice, autonomy, collaboration, and respect. Staff in TIC settings are not necessarily expected to treat the symptoms of trauma, but pathways for care recipients to access treatments for trauma are known and used by all staff [26]. Another comprehensive definition of TIC states, "A program, organisation, or system that is trauma-informed realises the widespread impact of trauma and understands potential paths for recovery; recognises the signs and symptoms of trauma in clients, families, staff, and others involved with the system; and responds by fully integrating knowledge about trauma into policies, procedures, and practices, and seeks to actively resist re-traumatisation" [27]. TIC provides clients with more opportunities to engage in services that reflect a compassionate perspective of their problems. TIC can provide a greater sense of safety for clients with trauma histories and a platform for preventing more serious consequences of traumatic stress [28]. The practical implementation of TIC in various contexts for vulnerable individuals and populations can provide the necessary needs of trauma survivors and alleviate hindrances to human health care and health disparities prevalent among them [29]. The amalgamation of basic principles of TIC (which can be applied to several settings) i.e**.** safety; trustworthiness and transparency; peer support; collaboration and mutuality; empowerment, voice, and choice; and cultural, historical, & gender issues.

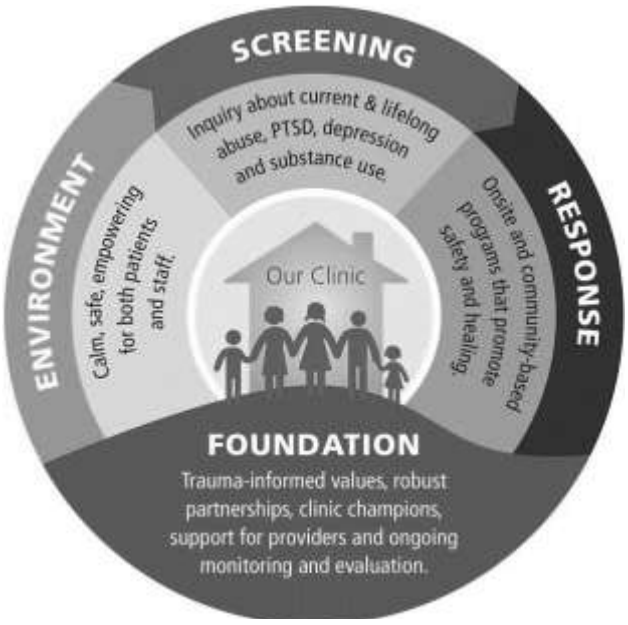

Figure 2: Principles of TIC in Healthcare Settings[3]

IV. SCOPE OF TRAUMA-INFORMED CARE

1. **Contexts and Levels of Trauma-Informed Care:** During the individual's lifetime, potential risk factors of psychological trauma can come from various contexts and levels (as displayed in Figure 3). According to Seigel [30], humans are Intra Connected with self, others, society and nature. From a broader perspective, he unveils the individual

[3] Source: Adapted from https://hiveonline.org/trauma-informed-care-collaborating-enhance-safety-healing/

human mind and experiences to be beyond the brain and body, which form the basis for our environment (social and natural). As a result, individuals share not only the happiness and well-being but also the burden of trauma and re-traumatisation through bidirectional interaction between the survivors of trauma and significant others involved (either directly or indirectly) in various contexts and levels of nature and society. Implementing TIC at multiple contexts and levels has better outcomes and satisfaction for service seekers and providers.

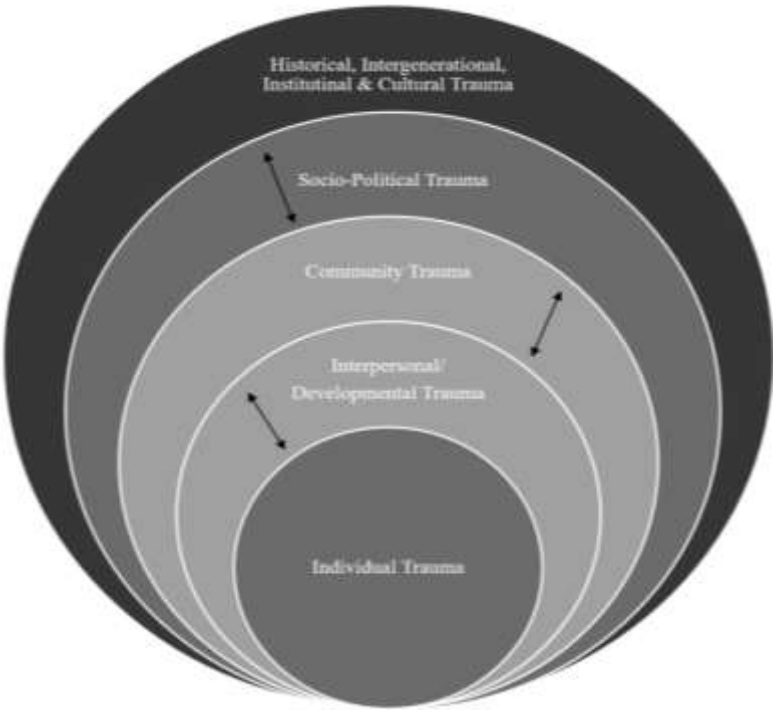

Figure 3: Contexts and Levels of Trauma with Bidirectional Interaction[4]

2. **Out of Home Care: Trauma-Informed Secure Attachments, Social Regulation, and Resilience:** Out-of-home contexts, child day care and welfare centres are extensions of the early caregiving system of attachment, safety and regulation. During early childhood, the child's nervous system is most vulnerable to trauma when the basic needs of safety, love and care are unmet. Therefore, early childhood development (emotional, cognitive and social) depends on early caregiving systems of attachment embodied with warmth and connection. Childhood adversities significantly influence contexts of caregiving systems, which can potentially affect children even in out-of-home contexts, child day care and welfare centres [31]. However, despite adversities in the early stages of development, children are not the victims of trauma. Early childhood trauma survivors thrive and evolve more resilient if exposed to positive and compassionate experiences by caregivers [32]. In the continuous delivery of compassionate caregiving for children (with past traumas) in home settings, caretakers can risk developing empathetic distress fatigue or vicarious trauma [33].

[4] Source: Authors

Complex developmental or relational traumatic experiences are highly prevalent among children who live in out-of-home settings. Therefore, implementing TIC frameworks in out-of-home settings fosters secure caregiving attachments through caregiver availability (physical, emotional and psychological) for children and has improved positive outcomes for both children and caregivers [34]. Thus, TIC practice in out-of-home contexts can achieve the goals of developing secure connections (attachments) embodied with warmth and love to promote healthy living among the children to thrive in the face of adversities and evolve resiliently.

3. **School: Trauma-Informed Teaching, Mentoring and Learning and Achievement:** Researchers revealed a high prevalence of exposure to ACEs among children. These adversities during the developmental phase of children adversely impact their brains and neurobiology [35]. This, in turn, affects their capacity to learn and remember the concepts learned. The trauma survivor child fails to regulate his reactions to intrusive thoughts and emotions due to a dysregulated physiological system, significantly interfering with learning, academic achievement and behaviour at school (with peers and teachers). Next to home, the school plays a significant role in providing support and care to children who are trauma survivors. Trauma-informed education facilitates the service providers at school (such as teachers, administrators and staff) the skills to recognise reactions to trauma among the students and respond compassionately to co-regulate and prevent re-traumatisation inside the classroom.

   Further, TIC prevents unwarranted punitive punishments and facilitates service providers to engage in necessary measures for child trauma healing through regular referral to trauma professionals outside the agency. As a result, teachers in the classroom can play a crucial role in providing a safe environment for traumatised students to facilitate learning and achievement among them. This way, TIC in schools satisfies the students' and service providers' needs and requirements, finally fulfilling the common objectives of teaching, learning and achievement.

4. **Health Care: Trauma-Informed Consultation, Diagnosis, Treatment, Rehabilitation and Care:** Services in healthcare settings risk triggering past traumatic memories among the healthcare seekers, causing re-traumatisation. Re-traumatisation restricts the sense of freedom, choice and control among trauma survivors. [5, 6]. Exposure to potential risk factors(even if unintentionally executed by healthcare providers such as doctors, nurses, physiotherapists, medical technicians, staff and administrators)that prevail in various contexts in healthcare settings (as presented in Table 2) can cause re-traumatisation of trauma survivors.

Table 1: Risk Factors of Re-Traumatisation among the Trauma Survivors in Hospital Settings[5]

Hospital Context	Risk factors of re-traumatisation of trauma survivors
Emergency inpatient Wards	Touching the patient, undressing the wounded parts/body and executing physical health check-ups without patients' consent and comfort; carrying out diagnostic tests in closed spaces; delivering

[5] Source: Authors

	anaesthesia without preparation; executing surgical procedures without insufficient time to calm patients' physiological activation, etc.
Consultation rooms	Touching and carrying physical check-ups without patient's consent and comfort; crossing personal boundaries in physical proximity, etc.
General inpatient wards	We are discharging patients who need proper or sufficient surgery recovery, etc.
Palliative care	Abruptly giving injections, changing dresses, carrying out dressings for wounded body parts, emotional neglect etc.
Rehabilitation centres	Massage and physiotherapy with patients' permission and articulating the intentions behind the procedures clearly etc.
Gynaecology & Obstetrics (Maternity) wards	Hurrying and imposing physical check-up procedures without permission and comfort of the patient, invading personal boundaries through proximity and touch, carrying out deliveries for survivors of physical abuse and sexual trauma, etc.
Paediatric departments	Carrying out investigations, surgical procedures, physical check-ups and giving injections when children are anxious or scared or collapsed with distress reactions.

These potential risk factors may trigger dysregulated physiological systems of hyperactivationand/or hypoactivation among trauma survivors, impacting the quality of life, satisfaction and effectiveness of healthcare service delivery[7].Effective implementation of TIC interventions in health care settings fosters trauma survivors' well-being, decreases health risk behaviours (such as alcohol consumption and drug use) among them, and improves trauma-informed skills among the staff by enhancing collaboration.

5. **Sport, Dance & Fitness Contexts: Trauma-Informed Coaching, Training and Injury Rehabilitation:** Body-based (interoceptive) pathways have a significant role in fostering trust in the traumatised body by nurturing safe emotional and social engagement among children with a history of trauma. Researchers propose that the last things that should be cut from educational institutions/school schedules are chorus, physical education, recess, and anything else involving movement, play, and joyful engagement [6]. Apart from schools, such joyful and motivational engagements are facilitated by community sport [36] dance and fitness centres to nurture the skills of emotional and social regulation. For trauma survivors, sports can facilitate a safe environment for healthy psychological engagement (outside the trauma context) and promote a sense of belongingness, embodiment and agency[37].However, the coaches and trainers (when not trauma-informed) directly encounter several athletes with trauma histories by omitting the screening for early adversities [38].

Consequently, these contexts risk exposing these athletes to additional adverse experiences such as punitive coaching practices, the overwhelming pressure of training and performance from ego-centric environments, and bullying [39].Injuries are inevitable in physical (sport, dance and fitness) training and performance, leading to intervention by several sport rehabilitation professionals for diagnosis, treatment, conditioning, massage,

physiotherapy, occupational therapy etc. In the process of injury rehabilitation, physical assistance (without consent and comfort of traumatised athletes) invades their personal boundaries and sense of safety, triggering re-traumatisation. Such risk is significantly higher for athletes from under-resourced and disadvantaged communities [37].

Trauma-sensitive sport, dance and fitness programs incorporate a holistic approach to athlete overall development by both deficit-reduction approaches (i.e., promoting a culture of intentional athlete engagement to alleviate the adverse impact of trauma) and strength-based approaches (e.g., fostering a safe and engaging environment to nurture response flexibility and resilience in athletes to thrive in adversities). According to researchers [38], in being trauma-sensitive in these contexts, staff are educated and trained about the *adverse impact of trauma*–psychological (emotional dysregulation), social (disrupted social engagements), and physical (maladaptive coping); *behavioural symptomology of trauma* displayed in sport, dance and fitness contexts (e.g., bursts of anger, irritability, lack of attention, peer conflict); *pathways for modelling sports based resilience* for thriving from athletes exposure to trauma (e.g., motivating and safe environments, secure and warmth attachments between the staff and athletes); and *modifications and re-designing of sports environment* (in terms instructional rules and regulations, equipment, playing structures and spaces, and roles) to promote trauma healing and promote resilience among the athletes. However, extensive implementation and assessment of the trauma-sensitive approach in sport, dance and fitness settings is yet to be explored.

6. **Spiritual Centres: Trauma Sensitive Yoga, Meditation, Breath work and Confessions:** The interest in Eastern contemplative practices in society has been growing for the past three decades. Specifically, to optimise individuals' health and well-being, there has been extensive research, education and training in mindfulness yoga, meditation, pranayam and chanting (vocalisation) across the Eastern and Western world in both clinical and non-clinical settings. Often, with the inquisitiveness of its benefits, naive spiritual counsellors or leaders, yoga teachers, traditional healers, and even mental health professionals (who are not trauma-informed) consider these contemplative practices as the panacea to address clients' traumatic experiences- physical mental and spiritual.

The researchers in trauma reveal that the body keeps intrusive and implicit memories [40] of psychological traumas in the form of physical sensations and emotions through chronic dysregulated defence states of hyper and hypoactivation. Therefore, traumatologists and psychotherapists recommend body-based (interoceptive) pathways to work towards healing trauma, which have potential benefits in restoring the sense of safety, control and freedom. Though yoga, pranayam (breath work), mindfulness meditation and chanting (vocalisation) have been considered adequate resources for healing trauma, they act as a double-edged sword for trauma survivors. For clients during the practice, these contemplative tools have the potential to surface the past traumatic events and cut through the present stressful experiences by heightened awareness of bodily sensations, memories, emotions and behaviours associated with past traumatic events. For the trauma survivors, when not guided skilfully in a safe and trauma-sensitive manner, such heightened awareness might result in reliving past traumatic events, causing

re-traumatisation. For survivors of trauma, breath might not be a safe anchor during the practice of meditation, yoga and pranayam.

Instructional instructions over invitational instructions with assistance (of touch or movement) to execute yoga posture inhibit choice, freedom and agency, triggering helplessness and victimisation among the trauma survivors [41]. Pranayam constitutes several variations of breathing practices. Deep, prolonged and intense patterns of breathing practices each can open up the frozen physical sensations or movements in the body, thus re-traumatising the survivor of trauma. The physical sensations of vibrations created by intense vocalisation and breathing practices also have a similar impact on them. Research has proven that self-disclosure as a coping mechanism and buffering nature of social support relieves distress and fosters mental health and well-being among individuals suffering from distress and depression [42].

In contrast, trauma gets aggravated with the disclosure of traumatic events. The deliberate and fast recall of intense past traumatic events by trauma survivors puts them at risk of re-traumatisation by resurfacing traumatic memories. As a result, trauma history taking in clinical settings happens gradually after building grounding resources of self-regulation among the trauma survivors. This contrasts the nature of traumatic experience, i.e., "too fast, too much, too soon" for the individual to cope. Confessions of adverse traumatic experiences by the clients in spiritual centres will likely result in adverse consequences (re-traumatisation) if they are not guided sensitively and safely in a trauma-informed lens by a spiritual guide, counsellor or healer. Therefore, it is the responsibility of the spiritual leaders, mindfulness and yoga teachers and therapists to adapt these contemplative practices with compassion to the specific needs of trauma survivors as opposed to expecting them to adapt to the teachers or therapists [43] to facilitate a safe environment to foster healing among the trauma survivors.

7. **Military and Veteran Service Contexts: Trauma-Informed Military and Veteran Care:** According to the literature, the symptoms of traumatic stress (now called post-traumatic stress disorder, PTSD) were first recorded in the post-combat contexts [44]. In recent times, it has been proven by researchers and mental health professionals that combat-related stress has an adverse impact on both military personnel and their families, which leads to the mushrooming of trauma-informed interventions and care. Military contexts pose a high risk of exposure (direct or indirect) to traumatic events resulting in developing PTSD. According to research, during military deployments, about 49.2% of the German soldiers experienced a minimum of one traumatic stress event, and 13% of them experienced more than three such events, which increased the prevalence of post-deployment PTSD by two to four times among the soldiers [45]. However, only half of them considered seeking professional treatment for PTSD; such professional help-seeking behaviours are usually low in underdeveloped and under-resourced countries due to the unavailability of effective services.

Due to chronic exposure to traumatic stress events (e.g., extreme weather conditions, forced social disconnection, shelling, loud explosions, destructions, violence, threat to life, severe injury or causality of the unit member, etc.), the trauma survivors lose sense of power, freedom, and control over their lives both psychologically and physically. Further, to avoid the symptoms of trauma, the soldiers who are trauma

survivors are at high risk of adopting maladaptive coping mechanisms, engaging in addictive behaviours (such as alcohol, smoking and drug abuse), over/abuse of internet and media, uncontrolled behaviours of aggression, irritability, anxiety, social disconnection, and loneliness. In such scenarios, authoritative leadership demanding absolute power and control over subordinates with undisputable obedience poses a risk of re-traumatisation among them. Military leaders who are not trauma-informed are highly likely to fail to recognise the trauma survivor's needs and incur harm by resorting to punitive actions. This gives scope for implementing trauma-informed care approaches in military and veteran service contexts to emphasise understating the impact of trauma on soldiers and their families and early recognition of trauma symptoms to foster a safe working environment and promote healing through effective trauma-informed care interventions.

Military contexts are usually closed settings [46] due to limitations in transparency, external civil agency collaboration and authoritative regimen, which require exorbitated time and efforts to recognise and implement contemporary developments in trauma-informed care. Even today, the traditional therapeutic approaches are in vogue towards treating trauma and PTSD. Pharmacotherapy merely suppresses trauma symptoms (and does not address complete treatment), and traditional therapeutic interventions such as cognitive approaches are found ineffective in healing trauma[6]. As a result, the delayed implementation of trauma-informed care has severe repercussions on the quality of life and well-being of soldiers, families and veterans who are trauma survivors. Therefore, to effectively address the impact of traumatic stress in military and veteran contexts, it is high time for military leaders and organisations to re-think implementing the emerging developments of research and practice in trauma-informed care and promote a safe and healing environment for trauma survivors.

V. CHALLENGES IN ADOPTINGTRAUMA-INFORMED CARE

The established evidence on the impact of trauma and potential risk factors or triggers that result in the re-traumatisation of service seekers and providers has led to the implementation of TIC across various contexts such as out-of-home, schools, health care settings, etc. However, systematic review findings revealed that there have been several challenges at various levels in the effective implementation of TIC in these contexts [47].

The challenges at *the individual level* include lack of awareness, staff resistance to change, lack of confidence, fear of re-traumatisation and low perceived relevance. At *the organisational level*, lack of screening and monitoring, insufficient training and ongoing training, prolonged complex training, competing in priories, lack of intra-organisational effective communication and collaboration, staff time constraints, staff turnover, financial constraints, confined physical space, lack of multidisciplinary collaborative teamwork, inflexible policies and procedures, lack of organisational support were found to be the significant barriers in effective implementation of TIC [47].

VI. FUTURE DIRECTIONS

1. **Trauma-Informed Care and Effectiveness:** Adopting TIC in specific contexts (within the community level) effectively fosters well-being and satisfaction among service seekers and providers. However, there is a long way to extend TIC beyond these contexts to socio-political and cultural contexts adopting the Socio-Ecological model [21], which deliberates the dynamic interplay amongst the individual, family, community, societal, cultural and environmental factors. TIC offers scope for understanding the factors that put service seekers and providers at risk of vicarious trauma and prevent them from re-traumatisation. Besides understanding these factors and their interplay at various levels, the model also suggests that to prevent trauma and re-traumatisation, it is essential to act simultaneously at various levels of the model. Such an approach is highly likely to endure prophylactic measures in the long run towards fulfilling the desired impact of TIC at the socio-political and cultural levels. Supplementing TIC with a socio-ecological model and principles of positive psychology [48] to foster positive aspects and strengths (over the negative aspects and weaknesses) among individuals, communities, and societies offers the best way to foster TIC and promote scope for effective trauma healing.

   Researchers have identified several enabling factors to enhance TIC adoption in various contexts effectively. The facilitating factors include at the *individual level*—staff self-care of the staff, openness to change to TIC and enough time to develop confidence with resources provided; at *the organisational level*— ongoing training with audiovisuals at all levels within the organisations, tailoring culture and linguistic sensitive interventions, embedding TIC into new employee training, existing procedures, strategic planning and policies, encouraging intra and inter-organisational collaboration and teamwork, partnership between the academic and community, offering financial resources, setting new norms of TIC through team building activities that develop shared philosophy and fosters integration, regular monitoring and supervision through engaged leadership[47]. Effectively utilising these enabling factors in implementing TIC can fulfil its assumptions faster and promote better care for trauma survivors.

2. **Trauma-Informed Care and Beyond:** TIC's assumptions and principles predominantly emphasise service seekers' (trauma survivors) care perspective. Though this approach plays a crucial role in preventing re-traumatisation among trauma survivors, it indirectly shifts attention to the 'self-care' of service providers. The way traumatic experiences have a negative impact on service seekers, vicarious trauma experienced by service providers (due to chronic exposure to service seekers' traumas)also has an adverse impact on their emotional, cognitive, social and spiritual aspects, causing long-term impairment if left unaddressed. Therefore, considering the risk of vicarious trauma for service providers in high-stress environments, incorporating self-care as a foundation in the TIC framework can foster the quality of TIC and service seekers' satisfaction while promoting resilience and mental health among the service providers[49]. Such self-care-centric TIC can potentially promote trauma healing outside the clinical settings by setting precedence for co-regulation in a safe and secure environment for trauma survivors.Further, considering the limitations of TIC, researchers have proposed a new framework called Healing Centric Engagement (HCE), a strength-based, inclusive, culture-embodied and collective trauma healing framework to restore identity and promote well-being [50] among trauma survivors.

VII. CONCLUSION

Trauma adversely impacts the individuals' pleasure and meaning in life, taking away the sense of safety, agency and power. As a result, the traumatised individuals live all together in different universe both psychologically, how their brain perceives the surroundings, and somatically, how their body/organism perceive the world[5, 6].In contemporary societies with a high prevalence of lifetime trauma, trauma-informed care has been an effective prophylactic measure in resisting re-traumatisation in high-stress environments. However, implementing TIC in under-resourced and underdeveloped communities and societies has a long way to go. Establishing new norms of TIC in these societies requires appreciation with practical actions towards implementation and evaluation of TIC over time. The barriers to adopting TIC must be addressed with humility and compassion towards the cause, trauma healing. Healing Centred Engagement is promising for adopting a strength-based, inclusive, culture-embodied and collective trauma healing framework. Ultimately, the goal is to heal individuals, communities and societies from exposure to traumatic stress. Besides understanding the interplay of systems, as proposed by the socio-ecological model, it is essential to act simultaneously at various contexts and levels to prevent trauma and effectively re-traumatise among trauma survivors. Finally, the TIC framework predominantly emphasises the service seekers' care perspective, which indirectly shadows attention on the 'self-care' of service providers. Therefore, considering the risk of vicarious trauma for service providers in high-stress environments, incorporating self-care as a foundation in the TIC framework can foster resilience among service seekers and service providers by setting precedence forco-regulation in a safe environment, thus promoting trauma healing outside the clinical settings.

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