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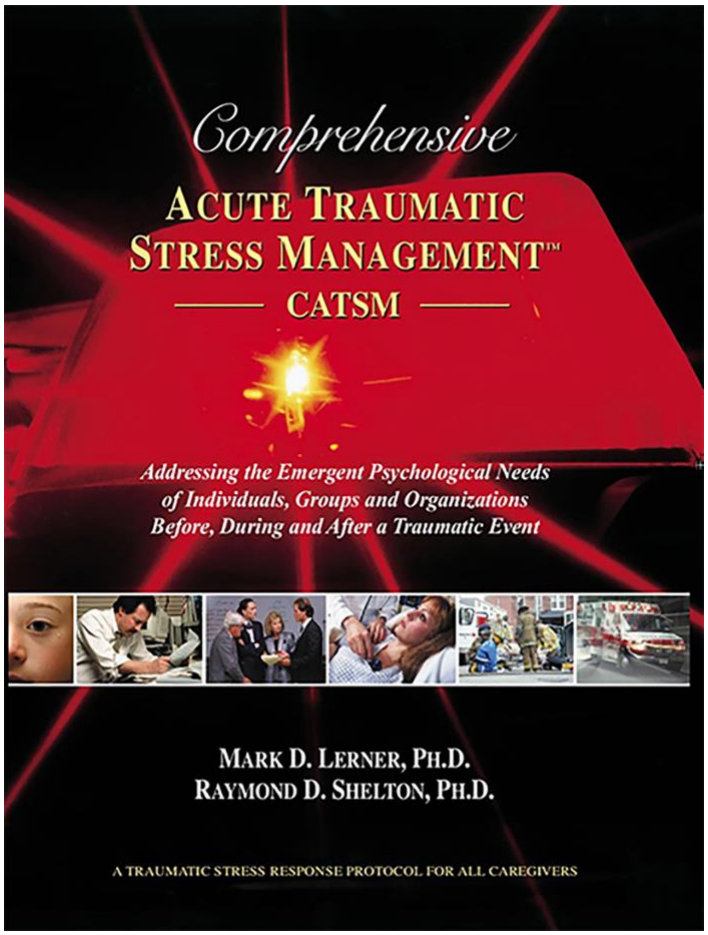

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HELPING SURVIVORS BECOME THRIVERS: A THEMATIC ANALYSIS OF POSITIVE PSYCHOLOGY CONSTRUCTS IN TRAUMA RECOVERY AND POST-TRAUMATIC GROWTH

GARY L. KESLING

ABSTRACT

This article presents a thematic analysis of positive psychology literature as it applies to trauma recovery, exploring how evidence-based constructions can ease the transition from surviving to thriving among individuals exposed to traumatic stress. Drawing upon Seligman's PERMA model, Fredrickson's broaden-and-build theory, the VIA Classification of Character Strengths, and post-traumatic growth frameworks, this analysis finds five overarching themes with associated sub-themes and factors that address the survivor-to-thriver trajectory. The themes include (a) Reframing the Trauma Narrative Through Strengths-Based Cognition, (b) Cultivating Positive Emotional Resources for Resilience, (c) Leveraging Social Connectedness and Relational Strengths, (d) Constructing Meaning and Purpose Beyond Adversity, and (e) Building Systemic and Programmatic Pathways for Sustained Thriving. This exploration integrates peer support methodologies, including Collaborative Narration and Applying Analysis of Behavior frameworks previously articulated for first responder contexts [1], as well as the Communities in Collaborative Conversation model for stakeholder-centered engagement and population health [54], extending their applicability to broader trauma-affected populations. Implications for clinical counseling, program design, and curriculum development are discussed, with particular attention to bridging the gap between pathology-focused treatment models and flourishing-oriented intervention paradigms. The analysis contributes to the growing body of literature positioning positive psychology not as a replacement for clinical trauma treatment but as an essential complementary framework for improving recovery trajectories and fostering durable well-being among trauma survivors.

Keywords: *positive psychology, thematic analysis, post-traumatic growth, PERMA model, resilience, thriving, trauma recovery, character strengths, broaden-and-build theory, peer support, collaborative narration, communities in collaborative conversation, community engagement, program design, curriculum development*

INTRODUCTION

The field of traumatic stress has historically been anchored in a disease model that prioritizes the identification, classification, and remediation of psychopathology. While this orientation has yielded invaluable diagnostic frameworks and evidence-based treatments, it has simultaneously constrained professional understanding of what is possible for trauma survivors beyond symptom reduction. As Seligman [2] argued in articulating the foundations of positive psychology, the absence of mental illness is not the presence of mental health; rather, positive mental health requires the active cultivation of positive emotion, engagement, relationships, meaning, and accomplishment. This distinction carries profound implications for the traumatic stress community, where the predominant clinical question has long been "How do we reduce suffering?" rather than the equally essential inquiry, "How do we help survivors flourish?"

The concept of helping survivors become thrivers stands for a paradigmatic expansion that does not abandon clinical rigor but enriches it with the science of well-being. Post-traumatic growth research, pioneered by Tedeschi and Calhoun [3,4], showed that a substantial proportion of trauma survivors report positive

psychological changes following their most challenging experiences, including enhanced personal strength, deeper relationships, greater appreciation for life, recognition of new possibilities, and spiritual or existential development. These findings, replicated across diverse populations and trauma types [5,6], challenge deficit-focused assumptions and suggest that trauma recovery trajectories are more heterogeneous and potentially more generative than pathological models alone would predict. Recent "word" analysis of publications on post-traumatic growth found six major research hotspots, confirming the field's expanding attention to positive adaptation mechanisms following adversity [7].

Positive psychology, set up as a formal discipline by Seligman in 1998, provides scientific architecture for understanding and helping this transition from surviving to thriving. Its core framework includes the PERMA model of well-being [2], the broaden-and-build theory of positive emotions [8], the VIA Classification of Character Strengths and Virtues [9], and the science of resilience [10]—offer both theoretical explanations and practical interventions for improving human functioning following adversity. These constructions are not peripheral to trauma recovery; they address the very mechanisms through which individuals reconstruct coherent identities, restore relational trust, and derive meaning from suffering. Recent empirical studies have shown the effectiveness of PERMA-based interventions in diverse contexts, showing significant improvements in positive emotion, relationships, and total well-being scores, alongside enhanced resilience markers including goal focus and positive cognition [11].

Contemporary trauma intervention research increasingly supports the integration of positive psychology principles with traditional treatment modalities. A 2025 study of Ukrainian spouses of disabled service members showed that experiential positive psychology interventions delivered in retreat formats can promote physical and psychological empowerment, self-efficacy, and post-traumatic growth, particularly when incorporating mindfulness and gratitude exercises [12]. Similarly, evidence from healthcare worker populations during the COVID-19 pandemic highlighted the role of deliberate positive psychological strategies in helping growth rather than merely preventing deterioration [13]. These findings converge with mounting evidence that mindfulness-based interventions, a bridge between clinical trauma treatment and positive psychology, produce measurable alterations in brain and immune function that support recovery [14].

This article employs thematic analysis as an interpretive methodology to systematically examine the positive psychology literature as it intersects with trauma recovery, resilience, and post-traumatic growth. Following principles articulated by Braun and Clarke [15], themes were found through iterative engagement with primary sources, coding of recurring conceptual patterns, and synthesis into coherent thematic clusters that address the survivor-to-thriver trajectory. The analysis draws upon cross-validated empirical findings, prioritizing research that has shown replicability across populations and methodological rigor through peer-reviewed publication. This work builds upon and extends the author's earlier contribution to this journal [1], which introduced a comprehensive peer-to-peer support framework for first responders integrating Collaborative Narration and Applying Analysis of Behavior principles within biopsychosocial and integrative resilience perspectives. It further draws upon the author's Communities in Collaborative Conversation framework [54], which reconceptualized community engagement as a stakeholder-centered process in which community members proactively take part in the design of interventions affecting their health and well-being. The present article broadens the lens from first responder populations to trauma survivors generally, while supporting the foundational commitment to strengths-based, relationally embedded, and empirically grounded intervention design.

The intended audience encompasses experts in traumatic stress, clinical counselors, program designers, and curriculum developers who recognize the necessity of expanding professional repertoires beyond pathology remediation toward the active promotion of human flourishing. Given the Academy's mission of "helping survivors to become thrivers," this analysis directly addresses the conceptual and practical imperatives inherent in that commitment.

Method: Thematic Analysis Approach

The methodological framework for this exploration follows the six-phase thematic analysis model

articulated by Braun and Clarke [15], adapted for a literature-based conceptual analysis rather than primary qualitative data collection. This approach enables systematic identification and interpretation of patterns across existing research, helping the synthesis of diverse empirical findings into coherent thematic structures that address complex phenomena such as trauma recovery and flourishing.

Phase One: Familiarization with Data. Systematic review of positive psychology, post-traumatic growth, resilience, and trauma recovery literature published between 2001 and 2026 was conducted through searches of databases using keywords including "positive psychology trauma," "post-traumatic growth," "PERMA resilience," "character strengths adversity," "broaden-and-build trauma," and "thriving after trauma." Inclusion criteria required peer-reviewed status, empirical or theoretical rigor, and relevance to the intersection of positive psychology constructs with trauma-affected populations. Cross-validation was applied by prioritizing findings replicated across a minimum of three independent studies or endorsed by meta-analytic synthesis.

Phase Two: Generating Initial Codes. Recurring conceptual patterns were systematically coded across the literature. Codes captured substantive content related to mechanisms of positive adaptation following trauma, including cognitive reframing processes, emotional resource cultivation, relational dynamics, meaning-making activities, and systemic factors influencing recovery trajectories.

Phase Three: Searching for Themes. Initial codes were organized into candidate themes through iterative clustering based on conceptual coherence. This phase involved finding broader patterns that transcended individual constructs while keeping fidelity to the empirical literature.

Phase Four: Reviewing Themes. Candidate themes were reviewed against the coded data to ensure internal homogeneity (coherence within themes) and external heterogeneity (clear distinctions between themes). Themes were refined, merged, or differentiated as necessary to improve the interpretive framework.

Phase Five: Defining and Naming Themes. Each theme was precisely defined, and constituent sub-themes and factors were found. Thematic labels were crafted to capture the essence of the conceptual cluster while supporting accessibility for practitioner audiences.

Phase Six: Producing the Report. The integrated narrative presented here links thematic findings to implications for clinical practice, program design, and curriculum development, keeping explicit connections to empirical literature throughout.

This methodological approach balances the interpretive flexibility necessary for synthesizing diverse literature with the systematic rigor needed for academic credibility. The resulting thematic structure stands for a theoretically and empirically grounded framework for understanding and easing the survivor-to-thriver transition.

RESULTS: THEMATIC FINDINGS

The thematic analysis yielded five overarching themes, each having sub-themes and factors that collectively map the positive psychology landscape relevant to helping survivors become thrivers. These themes are presented sequentially, though in practice they work as interconnected, mutually reinforcing dimensions of the thriving process.

Theme 1: Reframing the Trauma Narrative Through Strengths-Based Cognition

The first theme addresses the cognitive transformation that enables survivors to reconstruct their relationship with traumatic experience. Positive psychology offers mechanisms through which trauma narratives shift from deficit-saturated accounts of brokenness toward recognition of enduring personal capacities and emergent growth.

Sub-theme 1a: Character Strengths as Cognitive Anchors

The VIA Classification of Character Strengths and Virtues [9] finds 24-character strengths organized under six virtue categories: wisdom and knowledge, courage, humanity, justice, temperance, and transcendence. Research consistently shows that individuals who find and deploy their strengths report greater well-being, engagement, and life satisfaction [16]. In trauma

contexts, character strengths serve as cognitive anchors that prevent the collapse of self-concept into a victim identity. Niemiec [17] documented that strengths-based interventions following trauma ease post-traumatic growth by redirecting attentional resources from perceived deficits toward authentic personal capacities.

Factors within this sub-theme include strengths identification and deployment processes, the relationship between specific strengths—particularly bravery, perseverance, and hope—and trauma resilience, and the role of strengths awareness in disrupting ruminative cycles that keep trauma-related distress [7]. Recent evidence shows that deliberate rumination mediated by character strengths awareness can transform intrusive traumatic cognitions into productive meaning-making processes [18].

Sub-theme 1b: Learned Optimism and Explanatory Style

Seligman's [19] learned optimism model shows that explanatory style, the habitual manner in which individuals account for adverse events—significantly predicts resilience and recovery trajectories. Optimistic explanatory style, characterized by interpreting setbacks as temporary, specific, and external rather than permanent, pervasive, and personal, functions as a protective factor against depression and learned helplessness following trauma. Gillham et al. [20] proved through the Penn Resiliency Program that explanatory style is trainable, with durable effects on depressive symptomatology.

In the context of trauma recovery, this sub-theme encompasses factors including cognitive reframing of traumatic attributions, the distinction between realistic and illusory optimism, and the integration of optimistic thinking with validated trauma processing approaches such as cognitive processing therapy and prolonged exposure. The protective effect of optimism extends beyond symptom reduction to active promotion of resilience and post-traumatic growth [21].

Sub-theme 1c: Growth Mindset and Cognitive Flexibility

Dweck's growth mindset framework, positing that abilities and personal qualities are developable through effort rather than fixed by endowment, provides a cognitive foundation for the survivor-to-thriver transition. Trauma can rigidify self-concept, producing fixed beliefs about irreparable damage. Growth mindset interventions counter this rigidity by fostering the belief that psychological recovery and personal development remain possible regardless of the severity of traumatic exposure.

Factors include the interaction between mindset orientation and post-traumatic growth, the role of deliberate practice in cognitive restructuring, and the relationship between cognitive flexibility and adaptive meaning-making following trauma [23]. Kashdan and Rottenberg [23] established psychological flexibility—the capacity to persist or change behavior in pursuit of valued goals despite internal and external obstacles—as a fundamental aspect of health, with particular relevance to trauma recovery where rigid avoidance patterns often support distress.

Theme 2: Cultivating Positive Emotional Resources for Resilience

The second theme addresses the affective dimension of thriving, drawing upon empirical evidence that positive emotions serve functional roles in trauma recovery that extend well beyond hedonic experience.

Sub-theme 2a: The Broaden-and-Build Mechanism

Fredrickson's [8,24] broaden-and-build theory provides the most robust theoretical framework for understanding how positive emotions contribute to resilience. The theory posits that positive emotions broaden momentary thought-action repertoires, expanding the range of cognitions and behaviors available to an individual, and building enduring personal resources including social connections, coping strategies, and psychological capital. Fredrickson et al. [25] showed that positive emotions experienced in the aftermath of the September 11 attacks mediated the relationship between pre-crisis resilience and post-crisis growth, setting up an empirical link between positive emotional experience and trauma recovery.

Factors within this sub-theme include the role of ten discrete positive emotions—joy, gratitude, serenity, interest, hope, pride, amusement, inspiration, awe, and love—in counteracting trauma-related affective constriction, the positivity ratio as a marker of flourishing versus languishing [26], and the undoing

hypothesis, wherein positive emotions physiologically counteract the cardiovascular effects of negative emotional arousal[27]. The broaden-and-build mechanism works not through denial of negative effects but through cultivation of emotional resources that expand coping capacity during and after adversity.

Sub-theme 2b: Gratitude as a Resilience Mechanism

Gratitude has appeared as one of the most consistently confirmed positive psychology interventions for enhancing well-being. Emmons and McCullough [28] showed through randomized controlled trials that structured gratitude practices increase positive effect, improve sleep quality, and enhance social connectedness. In trauma contexts, gratitude works as an attentional retraining mechanism that counters the negativity bias amplified by traumatic exposure. Wood et al. [29] conducted a meta-analytic review setting up gratitude's unique contribution to well-being beyond other positive traits.
Factors include the efficacy of gratitude journaling and other structured gratitude practices, the neurological substrates of gratitude including activation of medial prefrontal cortex and anterior cingulate cortex, and the boundary conditions for gratitude interventions in acute versus chronic trauma populations. Recent applications with conflict-affected populations show that gratitude exercises incorporated into retreat-style therapeutic interventions significantly enhance emotional resilience in post-trauma contexts [12].

Sub-theme 2c: Mindfulness and Emotional Regulation

Mindfulness, defined as nonjudgmental present-moment awareness, bridges positive psychology and clinical trauma treatment. Kabat-Zinn's [30] mindfulness-based stress reduction program and its derivatives have shown efficacy across multiple meta-analyses for reducing anxiety, depression, and trauma symptomatology [31]. Within a positive psychology framework, mindfulness works not merely as symptom reduction but as a capacity-building practice that enhances emotional granularity, strengthens executive function, and promotes neuroplastic changes in prefrontal and limbic circuitry associated with emotional regulation [14].

Factors encompass meditation's effects on amygdala reactivity and prefrontal cortical thickness, the role of mindful self-compassion in trauma recovery [32], and the integration of contemplative practices with strengths-based approaches. Mindfulness practices ease the coexistence of traumatic memory with present-moment positive experience, a capacity essential for post-traumatic growth while supporting trauma processing [33].

Theme 3: Using Social Connectedness and Relational Strengths

The third theme reflects extensive evidence that social relationships make up the single strongest predictor of long-term well-being and a critical mediator of trauma recovery.

Sub-theme 3a: Relationships as the Foundation of the PERMA Model

Seligman [2] positioned Relationships as a core element of the PERMA model, reflecting decades of research showing that social connectedness predicts happiness more reliably than income, status, or individual achievement. The Harvard Study of Adult Development, spanning over 80 years, consistently finds the quality of close relationships as the strongest predictor of health and life satisfaction across the lifespan [34]. For trauma survivors, relational disruption often makes up both a consequence and a maintaining factor of psychological distress.

Factors include the role of secure attachment in trauma recovery [35], the function of social support as a buffer against post-traumatic stress symptomatology, and the distinction between perceived and received social support in predicting recovery outcomes. Research consistently shows that perceived availability of support predicts psychological adjustment more powerfully than objectively measured support receipt, highlighting the subjective and relational nature of protective social processes [7].

Sub-theme 3b: Peer Support and Collaborative Recovery

This sub-theme connects directly to the peer-to-peer support frameworks articulated in the author's previous work [1] and to the Communities in Collaborative Conversation model[54], which established that authentic community engagement requires

stakeholder-focused strategies where members of affected communities are proactively involved in designing interventions rather than serving merely as passive recipients of services. The Collaborative Narration model, with its core components of Endorsement, Scaffolding, Naming, and Categorizing, provides a structured method for relationally embedded trauma processing that aligns with positive psychology's emphasis on strengths-based, egalitarian dialogue. Kesling's [54] concept of co-communicational reciprocal process through which community members and professionals jointly navigate shared narratives—further enriches this framework by positioning collaborative conversation as a vehicle for mutual understanding and empowerment. The integration of Applying Analysis of Behavior (AAB) principles, including reinforcement of adaptive coping and antecedent-behavior-consequence modeling, enhances these relational processes by shaping behavioral trajectories toward resilience.

Evidence from the RISE (Resilience in Stressful Events) program [36] and related peer support implementations shows that structured peer interactions reduce isolation, enhance emotional regulation, and ease meaning-making processes consistent with post-traumatic growth. The Lived Experience Stressor Thermometer and 7 Cs framework [1] provide practical assessment and intervention tools that operationalize these relational support principles across diverse first responder and trauma-affected populations.

Factors include the efficacy of peer-led interventions compared with professionally delivered treatments, the role of shared lived experience in setting up therapeutic alliance, and the mechanisms through which collaborative narration helps cognitive integration of traumatic material. Kesling's [54] emphasis on navigating community narratives through open-ended exploration and selecting proper settings for collaborative conversation offers practical guidance for contextualizing these peer support processes within specific community environments. Recent systematic reviews of peer support interventions for healthcare workers and first responders confirm that these relationally grounded approaches produce meaningful improvements in resilience and psychological well-being [37].

Sub-theme 3c: Compassion, Kindness, and Prosocial Engagement

Engagement in prosocial behavior, including acts of kindness, compassionate service, and altruistic contribution, constitutes a well-validated pathway to enhanced well-being and meaning [38]. For trauma survivors, the transition from recipients of care to contributor stands for a fundamental identity shift from victim to agent. The "helper's high," documented in neuroimaging studies showing activation of reward pathways during prosocial behavior, provides biological reinforcement for this transition [39].

Factors include the role of compassion-focused therapy in trauma recovery [40], the relationship between post-traumatic growth and increased empathy, and the function of community engagement in restoring a sense of agency and purpose following traumatic disempowerment. Gilbert's [40] compassion-focused therapy integrates evolutionary, social, developmental, and Buddhist psychology to address shame and self-criticism, common sequelae of trauma that impede prosocial engagement and relational flourishing.

Theme 4: Constructing Meaning and Purpose Beyond Adversity

The fourth theme addresses the existential dimension of thriving, recognizing that sustained well-being following trauma requires not merely symptom resolution but the reconstruction of a coherent life narrative that integrates traumatic experience within a broader framework of purpose and significance.

Sub-theme 4a: Meaning as a PERMA Element and Existential Imperative

Frankl's [41] logotherapy established meaning-making as a fundamental human drive with particular relevance to trauma survival. Seligman [2] incorporated Meaning as a core PERMA element, defined as belonging to and serving something perceived as larger than the self. Park's [42] meaning-making model articulates the process through which individuals reconcile the discrepancy between global meaning systems (fundamental beliefs about the world) and appraised meaning of specific events (the perceived significance of a particular trauma). When traumatic events violate core assumptions, meaning-making processes are

activated that, when successful, produce revised global meanings, reappraisals of the event, or both.

Factors include the relationship between meaning-making and post-traumatic growth [43], the distinction between meaning-found and meaning-seeking, and the role of narrative coherence in psychological adjustment. Research shows that successful meaning-making predicts long-term adjustment than either the absence of meaning-seeking or unsuccessful meaning-seeking efforts, highlighting the importance of helping rather than merely encouraging these processes [42].

Sub-theme 4b: Engagement, Flow, and Purposeful Activity

Csikszentmihalyi's [44] flow theory describes best psychological states achieved when skill and challenge are balanced in intrinsically motivated activity. Seligman [2] incorporated Engagement as a PERMA element recognizing that absorption in meaningful activity makes up a pathway to well-being independent of positive emotion. For trauma survivors, engagement in flow-producing activities serves multiple functions: it interrupts ruminative processes, rebuilds self-efficacy through demonstrated competence, and provides experiential evidence that life holds rewarding dimensions beyond traumatic memory.
Factors include the relationship between flow states and trauma recovery, the role of vocational engagement in identity reconstruction, and the function of creative expression as both processing and growth mechanism. The experience of flow provides a counterpoint to the temporal distortions and cognitive constriction characteristic of traumatic stress reactions, offering direct experiential evidence of psychological capacities that persist beyond trauma impact.

Sub-theme 4c: Accomplishment and Mastery Experiences

The Accomplishment element of PERMA addresses the intrinsic human drive toward mastery and achievement. Bandura's [45] self-efficacy theory sets up that mastery experiences are the most powerful source of efficacy beliefs, which in turn predict behavioral persistence, emotional regulation, and adaptive functioning. Trauma often produces learned helplessness through repeated exposure to uncontrollable aversive events [46]. Structured accomplishment experiences, particularly those that provide graduated mastery within supportive contexts, directly counteract helplessness by rebuilding the belief of personal agency.

Factors include the role of goal-setting in recovery planning, the relationship between achievement striving and post-traumatic growth, and the importance of acknowledging incremental progress within strengths-based treatment models. Recent research shows that goal focus and positive cognition, both enhanced through structured accomplishment experiences, constitute key resilience markers that improve significantly with positive psychology interventions [11].

Theme 5: Building Systemic and Programmatic Pathways for Sustained Thriving

The fifth theme shifts from individual-level constructs to the systemic conditions necessary for positive psychology principles to be effectively translated into clinical practice, program design, and educational curricula.

Sub-theme 5a: Integrating Positive Psychology into Trauma-Informed Curricula

Professional mental health education has traditionally emphasized psychopathology, producing graduates well-versed in the taxonomy of suffering but inadequately prepared to help flourish. Seligman and Csikszentmihalyi [47] found this imbalance as a foundational concern motivating the positive psychology movement. For curriculum developers serving traumatic stress professionals, the integration of positive psychology content stands for an essential evolution. This integration does not require abandoning clinical training in evidence-based trauma treatments but rather supplementing it with competencies in strengths assessment, positive intervention delivery, resilience promotion, and well-being measurement.
Factors include pedagogical strategies for teaching positive psychology within clinical training programs, the development of competency frameworks that bridge pathology-focused and flourishing-oriented practice, and the role of experiential learning—including personal strengths, identification and well-being practices—in professional development. The Communities in Collaborative Conversation model [54] offers a complementary pedagogical resource, showing

how open-ended exploration and community narrative navigation can be incorporated into curricula to train professionals in stakeholder-centered engagement. Evidence-based training models increasingly incorporate PERMA assessments, character strengths applications, and positive intervention protocols alongside traditional clinical competencies [48].

Sub-theme 5b: Program Design for Thriving-Oriented Trauma Services

Effective translation of positive psychology research into programmatic intervention requires attention to implementation of science principles, including fidelity, adaptation, sustainability, and equity. The well-being continuum model [49] provides a useful framework for program design, distinguishing between languishing, moderate mental health, and flourishing as distinct points along a dimensional spectrum. Programs designed to help survivors become thrivers must address the full continuum, providing acute stabilization for those in crisis, recovery support for those managing symptoms, and growth facilitation for those prepared to pursue flourishing. Kesling's [54] Communities in Collaborative Conversation framework contributes to this continuum by offering a method through which trauma-affected communities can be engaged as active participants in intervention design rather than passive recipients, thereby enhancing program relevance, cultural responsiveness, and sustainability.

The biopsychosocial framework [50], which Kesling [1] integrated with peer support applications, reminds program designers that thriving appears from dynamic interactions between biological systems, psychological processes, and social environments. Kesling's [54] Communities in Collaborative Conversation model reinforces this principle by showing that effective community engagement requires strategies centered on stakeholder communities and their initiative-taking involvement in designing health-related interventions, rather than imposing externally conceived programmatic structures. Factors include the design of multi-tiered intervention models, the role of organizational culture in supporting or impeding positive intervention, and strategies for measuring thriving-related outcomes beyond traditional symptom-reduction metrics. Implementation research proves that organizational readiness, leadership commitment, and practitioner buy-in constitute critical determinants of positive psychology program success [51].

Sub-theme 5c: Addressing Equity, Access, and Cultural Responsiveness

Positive psychology has been critiqued for insufficient attention to structural inequities, cultural variation in well-being constructs, and the potential for strengths-based approaches to inadvertently minimize systemic barriers to recovery [52]. Responsible application of positive psychology in trauma contexts requires explicit attention to these concerns. Culturally responsive positive interventions must account for variation in how strengths, meaning, and social connection are expressed across communities while keeping fidelity to empirically validated mechanisms.

The observations about systems of change articulated by Kesling [1,54], including jurisdictional inconsistencies, resource disparities, and stigma barriers, apply equally to the broader trauma survivor population. The Communities in Collaborative Conversation framework [54] further underscores that community engagement must move beyond token consultation toward genuine co-communication, where stakeholder communities exercise meaningful agency in shaping the interventions that affect their lives. Factors include the cultural adaptation of positive interventions, the intersection of structural determinants of health with individual-level thriving, and the ethical responsibility to ensure that positive psychology complements rather than replaces advocacy for systemic justice. Recent applications with marginalized conflict-affected populations show that culturally adapted positive psychology interventions can enhance resilience while acknowledging structural oppression and trauma [12].

SUMMARY OF THEMATIC FINDINGS

Table 1 presents a combined overview of the five themes, their constituent sub-themes, and primary factors found through this thematic analysis.

DISCUSSION

The five themes shown through this thematic analysis converge on a fundamental proposition: helping

survivors become thrivers requires intentional, evidence-based engagement with the full spectrum of human psychological capacity, not merely the remediation of deficit and disorder. This proposition does not diminish the importance of clinical trauma treatment. Validated approaches including cognitive processing therapy, prolonged exposure, EMDR, and trauma-focused cognitive-behavioral therapy [53] remain essential for individuals experiencing acute post-traumatic stress symptomatology. Rather, the positive psychology framework articulated here addresses what comes next and, equally importantly, what can occur simultaneously with evidence-based trauma treatment to improve recovery trajectories.

Integration of Themes into a Coherent Framework

The cognitive theme (Theme 1) shows that thriving begins with how survivors think about themselves and their experience. Character strengths identification provides survivors with a vocabulary of competence that coexists with, rather than denying, their suffering. Learned optimism offers trainable cognitive habits that protect against the despair-inducing permanence and pervasiveness attributes characteristic of trauma-related depression. Growth mindset provides the foundational belief that recovery and development remain possible, countering the existential rigidity that traumatic exposure can produce. These cognitive mechanisms do not work in isolation but interact with emotional, relational, and existential processes to help comprehensive recovery.

The emotional theme (Theme 2) sets up that positive emotions are not luxuries reserved for the untraumatized but functional resources that directly contribute to resilience and recovery. Fredrickson's broaden-and-build theory offers particular explanatory power, showing that positive emotions expand the cognitive and behavioral repertoire precisely when trauma has constricted it. The practical implication is that interventions promoting gratitude, mindfulness, and positive emotional experience should be integrated into trauma treatment protocols, not deferred until after symptom resolution. This temporal integration stands for a significant departure from traditional sequenced approaches that prioritize stabilization and symptom reduction before addressing positive adaptation.

The relational theme (Theme 3) positions social connectedness as both the strongest predictor of well-being and the medium through which other positive psychological constructs are most effectively activated. The Collaborative Narration and Applying Analysis of Behavior frameworks introduced in the author's first responder peer support model [1] exemplify how structured relational processes can operationalize positive psychology principles within trauma-affected communities. The Communities in Collaborative Conversation model [54] extends this relational architecture to the community level, showing that engagement strategies focused on stakeholder communities and their initiative-taking involvement in intervention design create conditions conducive to both individual recovery and collective well-being. The components of Endorsement (validating felt, expressed, comparative, and normative needs), Scaffolding (building inclusion, learning, contribution, and challenge), Naming (affirming, reflective, focused, and speculative descriptions), and Categorizing (telling, asking, and appraising experiences) constitute a comprehensive relational methodology for the survivor-to-thriver transition that is consistent with both postmodern collaborative therapy traditions and behavior analytic science.

The existential theme (Theme 4) addresses the meaning-making imperative that distinguishes surviving from thriving. Survivors who merely end symptoms without reconstructing purposeful narratives are still vulnerable to existential emptiness, a condition Keyes [49] termed languishing, which stands for the absence of positive mental health despite the absence of diagnosable disorder. The integration of Meaning, Engagement, and Accomplishment from the PERMA model provides multidimensional architecture for purpose reconstruction that respects the heterogeneity of meaning-making pathways across individuals and cultures.

Table 1: Thematic Structure: Positive Psychology Constructs for the Survivor-to-Thriver Trajectory

Theme	**Sub-Theme**	**Primary Factors**
1. Strengths-Based Cognition	Character Strengths as Anchors	Strength's identification: bravery, perseverance, hope in resilience; disrupting rumination
	Learned Optimism	Explanatory style retraining; cognitive reframing of attributions; realistic optimism
	Growth Mindset	Cognitive flexibility; belief in developability; adaptive meaning-making
2. Positive Emotional Resources	Broaden-and-Build	Positive emotion repertoire; positivity ratio; undoing hypothesis; resource building
	Gratitude Mechanisms	Attentional retraining; gratitude practices; neurological substrates
	Mindfulness and Regulation	Present-moment awareness; emotional granularity; neuroplastic change; self-compassion
3. Social Connectedness	Relationships (PERMA)	Attachment security; social support buffering; perceived vs. received support
	Peer Support and CN	Collaborative Narration; AAB reinforcement; Lived Experience Stressor Thermometer; 7 Cs; Communities in Collaborative Conversation; co-communication
	Prosocial Engagement	Acts of kindness; compassion-focused therapy; helper identity shift; agency restoration
4. Meaning and Purpose	Meaning-Making	Global vs. appraised meaning; narrative coherence; logotherapy; meaning-found vs. looked for
	Engagement and Flow	Flow states; vocational engagement; creative expression; rumination interruption
	Accomplishment and Mastery	Self-efficacy; graduated mastery; goal-setting; counteracting learned helplessness
5. Systemic Pathways	Curriculum Integration	Competency frameworks; experiential learning; bridging pathology and flourishing models
	Program Design	Multi-tiered models; well-being continuum; biopsychosocial integration; stakeholder-centered engagement; outcome measurement
	Equity and Access	Cultural adaptation; structural determinants; systemic justice; responsible implementation

The systemic theme (Theme 5) recognizes that individual-level thriving cannot be sustained without supportive institutional, programmatic, and educational environments. The Communities in Collaborative Conversation model [54] reinforces this recognition by showing that effective community engagement requires moving beyond traditional top-down service delivery toward processes in which stakeholder communities exercise initiative-taking stewardship over their own health and recovery. For the traumatic stress professional community, this theme carries direct implications for how clinicians are trained, how programs are designed, and how outcomes are measured. The observation that traditional mental health education emphasizes pathology at the expense of well-being science is not a historical curiosity but an ongoing structural limitation that constrains the capacity of the professional workforce to help thriving. Similarly, program designs that define success exclusively through symptom reduction miss the opportunity to promote the positive outcomes that research consistently identifies as independently valuable and protective against future adversity.

Theoretical Contributions and Conceptual Advances

This thematic analysis contributes to the literature by synthesizing diverse positive psychology constructs into a unified framework specifically tailored to trauma recovery contexts. While earlier work has explored individual components—such as post-traumatic growth, character strengths, or mindfulness—in isolation, this analysis proves how these elements function as an integrated system with cognitive, emotional, relational, existential, and systemic dimensions. The integration of the Collaborative Narration and Applying Analysis of Behavior frameworks [1] and the Communities in Collaborative Conversation model [54] with broader positive psychology theory stands for a novel contribution that bridges interpersonal process research, behavioral science, community engagement method, and well-being scholarship.

Furthermore, this analysis explicitly positions positive psychology not as an alternative to evidence-based trauma treatment but as an essential complement. This both-and rather than framing addresses critiques that positive psychology minimizes suffering or promotes toxic positivity. By anchoring positive interventions within the context of validated trauma-focused treatments and acknowledging the necessity of addressing both pathology and flourishing, this framework provides a theoretically coherent and clinically responsible integration model.

Implications for Practice, Program Design, and Curriculum Development

For Clinical Counselors. The findings support the integration of positive psychology assessments and interventions as standard components of trauma treatment. This integration may include:

- Routine administration of the VIA Character Strengths Survey to find survivor strengths that can anchor recovery narratives.
- Incorporation of gratitude journaling, mindfulness practices, and positive reminiscence exercises alongside exposure-based interventions.
- Explicit attention to PERMA elements (Positive Emotion, Engagement, Relationships, Meaning, Accomplishment) in treatment planning and goal-setting.
- Use of post-traumatic growth inventories to track positive outcomes alongside symptom measures.
- Application of the Collaborative Narration framework and the Communities in Collaborative Conversation principles [54] to structure peer support, group treatment modalities, and community-level engagement processes.

Clinicians trained in both trauma-focused cognitive-behavioral therapy and positive psychology interventions are positioned to deliver integrated treatment that addresses the full continuum from symptom reduction to flourishing. Case formulations should explicitly incorporate assessment of character strengths, explanatory style, social support quality, meaning-making processes, and engagement in valued activities.

For Program Designers. The five-theme structure offers a comprehensive framework for developing multi-tiered services that address the full survivor-to-thriver continuum. Programs can be organized around cognitive, emotional, relational, existential, and systemic dimensions, with specific interventions calibrated to individual readiness and cultural context.

Design considerations include:

- Multi-tiered service models that provide acute stabilization, symptom-focused treatment, and growth facilitation in coordinated sequence or parallel tracks
- Integration of peer support components using structured methodologies such as Collaborative Narration
- Incorporation of the Lived Experience Stressor Thermometer and 7 Cs framework [1] as programmatic screening and monitoring protocols, complemented by the community narrative navigation and co-communication principles outlined in the Communities in Collaborative Conversation model [54]
- Development of outcome measurement systems that assess well-being and flourishing alongside traditional symptom metrics.
- Organizational culture interventions that support staff competency in delivering positive psychological interventions
- Sustainability planning that addresses funding mechanisms, workforce development, and fidelity monitoring.

Program evaluation should move beyond exclusive focus on symptom reduction to include measurement of character strengths deployment, positive emotion frequency, relationship quality, meaning-making success, and engagement in purposeful activities. These positive outcomes predict long-term adjustment and quality of life independent of symptom status [49].

For Curriculum Developers. These findings argue for fundamental revision of professional training models to include positive psychology competencies alongside traditional clinical skills. Graduates of traumatic stress education programs should appear equipped not only to diagnose and treat post-traumatic stress disorder but also to assess character strengths, help post-traumatic growth, design flourishing-oriented interventions, and measure well-being outcomes. Curricular innovations include:

- Integration of positive psychology theory and research throughout foundational courses rather than as isolated elective content
- Development of competency-based training modules addressing PERMA assessment, strengths-based intervention, gratitude and mindfulness protocols, meaning-making facilitation, and peer support methodologies
- Experiential pedagogies requiring personal engagement with strengths assessments, mindfulness practices, collaborative narration exercises, and community conversation facilitation skills [54]
- Practicum placements that provide supervised experience in delivering integrated trauma-focused and positive psychology interventions
- Continuing education requirements that keep competency in evolving positive psychology evidence base

Accreditation standards for traumatic stress training programs should explicitly require demonstration of positive psychology competencies alongside traditional clinical training outcomes. This systemic change would address the workforce development limitations that currently impede widespread implementation of thriving-oriented trauma services.

LIMITATIONS AND METHODOLOGICAL CONSIDERATIONS

This thematic analysis is subject to several limitations that warrant acknowledgment. As a literature-based conceptual analysis rather than a primary empirical study, the findings stand for an interpretive synthesis rather than a direct test of hypothesized relationships. The choice of literature, while guided by systematic search strategies and cross-validation criteria, inevitably reflects the author's theoretical orientation and professional experience. Alternative thematic structures might appear from different interpretive frameworks or literature selection criteria.

The positive psychology literature itself has been critiqued for several limitations including publication bias favoring positive results, potential cultural narrowness in construct operationalization (with disproportionate representation of Western, educated, industrialized, rich, and democratic populations), and insufficient attention to structural determinants of well-being such as poverty, discrimination, and political oppression[52]. These critiques apply by extension to this analysis, which draws primarily upon that literature base. While Sub-theme 5c explicitly addresses equity

and cultural responsiveness, the thematic framework may inadequately stand for the experiences of marginalized populations whose access to thriving is constrained by systemic barriers beyond individual psychological factors.

Additionally, while the integration of Collaborative Narration and Applying Analysis of Behavior frameworks with broader positive psychological constructs stands for a conceptual contribution, empirical validation of this integration through randomized controlled trials is still a necessary next step. The author's earlier work [1] acknowledged similar limitations on the need for multi-site implementation studies and controlled evaluation, and the Communities in Collaborative Conversation framework [54] similarly requires empirical testing across diverse community settings to set up its efficacy as a vehicle for trauma-related stakeholder engagement. The present analysis extends rather than resolves those methodological gaps.

Temporal dynamics of the survivor-to-thriver transition remain incompletely specified. The thematic framework does not explicitly address questions of best timing for positive interventions compared to trauma exposure, individual differences in readiness for growth-focused work, or the durability of positive outcomes over extended follow-up periods. These questions require longitudinal research designs that track trajectories over months and years rather than the weeks to months typical of most intervention studies.

Finally, the analysis does not fully address the integration of positive psychology with neuroscience perspectives on trauma recovery, including neurobiological mechanisms of resilience, neuroplastic changes associated with positive interventions, and the potential for biological markers to guide personalized positive psychology treatment. Emerging research in affective neuroscience and contemplative neuroscience offers promising directions for strengthening the biological foundation of positive psychology approaches to trauma [14].

FUTURE DIRECTIONS FOR RESEARCH AND PRACTICE

Future research should prioritize several directions to advance the survivor-to-thriver framework articulated here:

Controlled Evaluation Studies. Randomized controlled trials testing positive psychology interventions delivered specifically to trauma populations are needed, with attention to moderators including trauma type (single-incident versus complex, interpersonal versus non-interpersonal), trauma chronicity, developmental timing of exposure, cultural background, and co-occurring psychiatric conditions. Dismantling studies examining which positive psychology components contribute most to outcomes would inform efficiency and optimization efforts.

Implementation Research. Multi-site implementation studies evaluating the Collaborative Narration model and the Communities in Collaborative Conversation approach [54] within diverse trauma-affected communities would address conceptual limitations acknowledged in prior work [1]. Implementation outcomes including adoption, acceptability, appropriateness, feasibility, fidelity, penetration, and sustainability should be systematically assessed alongside clinical outcomes.

Longitudinal Designs. Studies tracking both positive (post-traumatic growth, well-being, flourishing) and pathological (PTSD, depression, anxiety) outcomes following integrated positive psychology and evidence-based trauma treatment over extended follow-up periods (2-5 years) would provide the most compelling evidence for the survivor-to-thriver framework. Trajectory analyses examining heterogeneity in recovery patterns and predictors of sustained thriving versus relapse would inform risk stratification and personalized intervention approaches.

Neuroscience Integration. Research examining neurobiological mechanisms underlying positive psychology interventions in trauma contexts, including neuroimaging studies of character strengths activation, gratitude practices, mindfulness meditation, and meaning-making processes, would strengthen theoretical models and potentially find biomarkers to guide treatment selection.

Cultural Adaptation Studies. Systematic investigation of how positive psychology constructs manifest across diverse cultural contexts, combined with rigorous cultural adaptation method, would address current limitations in generalizability. Particular attention to collectivist cultures, non-Western meaning-making

frameworks, and populations experiencing structural oppression would advance equity goals.

Economic Evaluation. Cost-effectiveness and cost-benefit analyses comparing integrated positive psychology and trauma-focused treatment to traditional approaches would inform policy decisions and resource allocation. Healthcare use, occupational productivity, and quality-adjusted life years stand for relevant outcomes for such analyses.

CONCLUSION

The question of how to help survivors become thrivers is not merely academic; it reflects a moral and professional commitment to the full restoration of human capacity following traumatic exposure. Positive psychology, when responsibly integrated with clinical trauma science, provides the theoretical frameworks, empirical evidence, and practical tools necessary to pursue this commitment. The five themes shown in this analysis—spanning cognitive, emotional, relational, existential, and systemic dimensions—offer a comprehensive map for clinicians, program designers, and educators who recognize that the alleviation of suffering, while necessary, is insufficient as the sole aspiration of trauma-informed practice.

As Seligman [2] saw, positive mental health is not merely the absence of mental illness; it is the presence of positive emotion, engagement, meaning, good relationships, and accomplishment. For trauma survivors, the path to this presence is neither simple nor linear. It requires courage, support, structured intervention, and the sustained belief that growth stays possible even in the aftermath of profound adversity. The science of positive psychology, integrated with the art of collaborative relational practice and stakeholder-centered community engagement [54], provides both the evidence base and the methodology to make this belief a lived reality.

The American Academy of Experts in Traumatic Stress articulates its mission as "helping survivors to become thrivers." This thematic analysis operationalizes that mission by synthesizing positive psychology literature into an actionable framework for the traumatic stress professional community. The survivor-to-thriver trajectory is not automatic, nor does it occur through exhortation or positive thinking alone. It appears from deliberate, evidence-based intervention that addresses cognitive reframing, emotional resource cultivation, relational strengthening, meaning-making facilitation, and systemic support—the five themes articulated here.

The field of traumatic stress stands at a critical juncture. The accumulated evidence base now supports both-and integration of pathology-focused and flourishing-oriented approaches. Professional training, clinical practice, and program design must evolve to reflect this integration. The continued segregation of trauma treatment and positive psychology stands for not merely a missed opportunity but a failure to provide survivors with the full complement of evidence-based resources available to support their recovery and growth.

This analysis has tried to show that positive psychology is not peripheral to trauma recovery but central to it; not a luxury for those who have already healed but a functional resource that helps healing itself; not an alternative to clinical treatment but an essential complement. The survivor-to-thriver framework calls upon the traumatic stress professional community to expand its vision of what is possible, to augment its clinical repertoire with positive interventions, to measure outcomes that extend beyond symptom reduction, and to commit to the full restoration of human flourishing as the ultimate goal of trauma-informed care.

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EVALUATING SPIRITUALLY BASED TRAUMA EDUCATION

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ABSTRACT

Western approaches to post-traumatic stress disorder (PTSD) do not always address the cultural and spiritual dimensions of trauma, creating a need for models that are more holistic and Indigenous in nature. The Trauma Recovery Certification Course was developed to respond to this gap by integrating right-hemisphere-engaging, spiritually grounded healing methods. The purpose of this study was to statistically evaluate the effectiveness of the course by examining participant learning, as measured through course-evaluation ratings, and personal healing of PTSD symptoms, as measured by pre- to post-course PCL-5 scores. This retrospective analysis used secondary data collected from 294 participants who completed the course between April 2014 and October 2024.

Results showed a statistically significant reduction in PCL-5 scores from pre- to post-course, indicating decreased PTSD symptom severity. Course-evaluation ratings were also exceptionally high, with all three items significantly exceeding the high-quality benchmark of 4.5 and demonstrating moderate to large effect sizes. These findings provide evidence that the holistic, spiritually based methods taught in the Trauma Recovery Certification Course support both trauma-related learning and reductions in PTSD symptoms. The results suggest that this approach may be beneficial for both Western and Indigenous populations and warrant further research across diverse cultural contexts.

Keywords: trauma education, spiritual methods, holistic approach, Indigenous informed practice, PTSD symptoms, PCL-5 scores.

INTRODUCTION

The global rise in human caused atrocities and natural disasters has increased interest in trauma treatment approaches that extend beyond Western frameworks (Foder et al., 2014; Lausanne Movement, 2010, para. 2, cited in Hervey, 2023). Western diagnostic criteria for post-traumatic stress disorder (PTSD) may not fully reflect the experiences of individuals whose understandings of health and illness are rooted in spiritual or spirit-based worldviews (Afana et al., 2010; Grunert et al., 2007; Mutambara & Sodi, 2018; Wahbeh et al., 2017). Spirituality plays a central role in trauma, functioning both as a coping resource and as an area of vulnerability when traumatic events disrupt belief systems and spiritual well-being (Bockrath et al., 2022; Eisenbruch, 2017; Hinton, Reis, & de Jong, 2020; Kucharska, 2020; Pargament & Exline, 2022; Parks et al., 2017; Simington, 2003). As a result, there is growing interest in holistic and Indigenous healing models that explicitly address spiritual concerns (Mutambara & Sodi, 2018; Schuman, 2016; Simington & Wagner, 2020; 2021).

Jungian psychotherapist Donald Kalsched (2013) described trauma as a form of "soul wounding," a concept echoed in many First Peoples' cultural practices often referred to as Shamanism. These traditions emphasize that spiritual healing supports the restoration of physical, emotional, and mental balance, enabling a renewed sense of wholeness (Duran & Firehammer, 2016; Engels Smith, 2014; Harner, 1990; Ingerman & Wasserman, 2010; Kharitidi, 1997; Simington & Wagner, 2020; 2021; Stonechild, 2016; Wahbeh et al., 2017; Winkelman, 2003).

Combat Veterans increasingly seek complementary therapies that address spiritual needs alongside psychological symptoms (Schuman, 2016). The National Centre for Complementary and Integrative Health identifies imagery, meditation, and traditional or cultural healing practices as the spiritually based

strategies most frequently requested by individuals with PTSD (Schuman, 2016). These approaches engage the brain's right hemisphere (Vengopal, 2012), which becomes dominant during trauma processing. Functional Magnetic Resonance Imaging (fMRI) studies by Lanius (2004) and as described by van der Kolk (2014, ch3; 2023) demonstrate that trauma memories are replayed through right hemisphere imaging functions, supporting earlier work showing that right hemisphere aligned processes facilitate emotional release and healing (Carey, 2006; Levine, 2005; Pugh, 2004; Scaer, 2005; Schore, 2008). These findings also reinforce the value of ancient cultural healing methods—such as ceremony and visioning—that naturally engage right hemisphere processes (Duran, 2017; Duran & Firehammer, 2016; Stonechild, 2016).

This growing body of literature informed Simington's (1999–2006) exploration of spiritually grounded trauma healing methods. Her clinical work with trauma survivors, collaborations with Indigenous communities, and review of neurological research highlighted the need for professional education that integrates spiritual and right hemisphere engaging approaches. In response, she developed the Trauma Recovery Certification Course (Simington, 2004), designed to address spiritual distress first, with the expectation that mental, emotional, and physical healing would then occur more effectively.

To understand how spiritually grounded, right-hemisphere-engaging approaches function in practice, it is necessary to explore the theoretical and cultural frameworks that inform the Trauma Recovery Certification Course.

COURSE OVERVIEW

The Trauma Recovery Certification Course operationalizes spiritually grounded, right-hemisphere-engaging trauma-healing principles through a structured educational model accredited by the Canadian Council of Professional Certifications (CCPC Global). Graduates are certified to provide trauma-recovery counseling in both individual and group settings.

Research indicates that traumatic experiences disrupt the brain's typical patterns of hemispheric integration. Trauma-related memories and emotions are predominantly processed within the **right hemisphere**, while functions associated with the **left hemisphere**, such as language, sequencing, and higher-order cognitive processing, become impaired. Trauma has also been linked to reductions in both the size and functional capacity of the **corpus callosum**, the neural structure responsible for interhemispheric communication, thereby diminishing overall cognitive integration (Lanius, 2004; Rothschild, 2000; van der Kolk, 2023). In recognition of the combined impact of spiritual distress and disrupted hemispheric connectivity, Simington (2013a) developed the Four-Part Integrative Model for Healing Trauma.

The Four-Part Integrative Model for Healing Trauma

Step 1: Re-Engaging Left-Hemisphere Language Networks

Trauma disrupts left-hemisphere functioning, particularly the neural systems responsible for language and verbal processing. Accordingly, the model begins by re-engaging left-hemisphere activity through structured oral language. In counseling or educational contexts, individuals are invited to describe their experiences or respond to the spoken contributions of facilitators and group members, thereby activating linguistic networks that trauma often suppresses.

Step 2: Activating Right-Hemisphere Experiential Processing

The second step introduces an experience that corresponds to the initial language exchange and activates right-hemisphere systems involved in sensory-emotional processing, imagery, and implicit memory. Within the Trauma Recovery Certification Course, these experiential tasks are sequenced to address spiritual distress first, based on the premise that restoring spiritual coherence supports subsequent emotional, cognitive, and physical healing. Experiences include guided visualization and therapeutic art. These modalities allow gentle engagement with traumatic memories and support neurological and spiritual healing (Carey, 2006; Levine, 2005; Pugh, 2004). Culturally grounded practices paralleling ancient Shamanic methods are used to access nonverbal

aspects of traumatic memory. Participants engage in practices such as soul-part reintegration, energetic cord release, and cleansing of traumatic energetic residue (Simington & Wagner, 2020, 2021).

Step 3: Strengthening Interhemispheric Integration

The third step involves intentional shifting between hemispheres to strengthen corpus callosum integration. Participants reflect on their experiential work through journaling, enabling the left hemisphere to interpret and organize the symbolic or imaginal material generated through right-hemisphere processing. This reflective activity supports cognitive

Step 4: Consolidating Insights Through Verbal Expression

In the final step, participants verbalize the experiences and emotions that emerged during the earlier stages. By articulating these insights—reactivating left-hemisphere language networks—they anchor the right hemisphere's symbolic and imaginal material in conscious awareness, completing the integrative sequence (Simington, 2019, p. 6). This verbal consolidation supports functional reintegration across hemispheres and contributes to a renewed sense of wholeness.

CONCLUSION

Together, these four steps provide a structured progression that reactivates, engages, and integrates the neural systems disrupted by trauma. By moving intentionally between verbal, experiential, reflective, and expressive processes, the model supports renewed interhemispheric communication and fosters a coherent sense of self, laying the foundation for sustained healing.

PURPOSE OF THE STUDY

The purpose of this study was to evaluate the effectiveness of the Trauma Recovery Certification Course by examining participant learning outcomes, and changes in PTSD symptom severity as measured by pre- and post-course PCL-5 scores.

METHODOLOGY

To evaluate the course's impact on both learning and personal healing, a retrospective analysis of existing course data was conducted.

Measures

Two primary sources of data were used to assess course effectiveness: standardized symptom measures and participant evaluations.

PCL-5

The PCL-5 assesses the 20 PTSD symptoms identified in the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; DSM-5) using a five-point Likert-type scale (Weathers et al., 2013). Although typically used to assess symptoms over the past month, alternative timeframes have been validated. Earlier DSM-IV versions were revised following DSM-5 publication, with studies demonstrating strong internal consistency (α = .94–.95) and test–retest reliability (r = .82) (Blevins et al., 2015). Similar reliability has been reported among first responders (α = .94; Morrison et al., 2021). The National Center for PTSD (2013) concluded that "the PCL-5 is a psychometrically sound measure of DSM-5 PTSD" (p. 3).

Course Evaluation

On the final day of the course, participants completed a five-point Likert-type evaluation (5 = Strongly Agree; 0 = Strongly Disagree) rating the following statements:

1. I learned about trauma and its effects on human functioning.
2. I gained skills that will assist me in helping others who are traumatized.
3. The methods I learned and used during this course allowed me to do some of my own healing.

Participants

A total of 294 professionals and semi-professionals working—or preparing to work—in mental health,

wellness, or social services completed a Trauma Recovery Certification Course between October 2017 and April 2024. Ethnicity was not collected. Forty participants identified as male and 254 as female. Ages ranged from 19 to 66 years (M = 42.5).

Procedure

The following procedures were used to collect and manage participant data throughout the course.

On the first day of the course, participants provided informed consent to engage in trauma-related learning and skill development, including both left- and right-hemisphere-enhancing strategies. Participants were introduced to the PCL-5 as a clinical assessment tool and completed a pre-course self-report reflecting symptoms over the past month (Weathers et al., 2013). Co-facilitators verified scoring accuracy and recorded anonymized numerical results.

Each course day began with a spiritual focus and ceremonial activity incorporating one of the four elements—air, fire, water, or earth—along with teachings on its therapeutic relevance. Spirituality in the course is defined as "the animated essence of one's being that guides one's life and gives meaning and purpose to one's existence," expressed through the three Rs of spiritual growth: Remembering. one's spiritual essence: Relating to the spiritual essence in others and Recognizing the spiritual essence in all that has been created (Simington, 2014, p. 3).

Throughout the course, trauma knowledge and trauma-helping skills were taught through consistent application of Simington's Four-Part Model. Participants personally engaged in each strategy they would later guide in others, based on the belief that helpers can accompany clients only as far as they themselves have traveled (Simington, 2004).

On the final day, participants completed the post-course PCL-5, reflecting current symptom severity. Co-facilitators again verified scoring accuracy and recorded anonymized results. Participants were then given their pre- and post-scores to compare. They also completed the five-point Likert-type Course Evaluation.

ANALYSIS

Ethical Considerations

This study involved secondary analysis of data originally collected for educational purposes rather than research. Participants provided information as part of their learning process and course evaluation. Obtaining new consent was impractical due to the elapsed time and the dispersed nature of participants. However, health directors who contracted the course provided consent for the data to be used for research purposes. The use of secondary data posed minimal risk because:

- Data were stored on password-protected devices and backed up in encrypted files.
- All data were anonymized prior to analysis.
- No identifying information is reported.
- Student files cannot be linked to individual PCL-5 scores or course-evaluation responses.
- Findings are used solely to improve trauma-recovery education and evaluate the effectiveness of a holistic trauma-healing model.

PCL-5 PRE-COURSE AND POST-COURSE SCORES

HYPOTHESIS

Null hypothesis (H_0): There is no significant difference between PCL-5 pre-course and post-course scores.

Alternative hypothesis (H_1): There is a significant difference between PCL-5 pre- and post-course scores.

Interpretation

Participants demonstrated a clinically meaningful reduction in PTSD symptoms from pre- to post-course, as reflected in a 17-point mean decrease on the PCL-5 (see table 1). The magnitude of change exceeds commonly accepted thresholds for reliable and clinically significant improvement on the PCL-5. The shift in mode from 5 (pre) to 0 (post) indicates that the most frequently reported symptom level after the course was no symptoms, suggesting strong functional improvement for many participants. The reduction in

Table 1

PCL-5 Pre- and Post-Course Descriptive Statistics (N = 294)

Metric	Range	Mean	Mode	Standard Deviation
Pre-scores	0–80	26	5	18.9
Post-scores	0–66	9	0	13.8
Score Differences	0 to -73	–17	—	—

standard deviation (18.9 to 13.8) reflects less variability in post-course scores, indicating that improvement was broadly experienced across the sample. The range narrowed (0–80 pre to 0–66 post), suggesting fewer high-severity cases after the intervention.

Statistical Analysis of PCL-5 Pre–Post Change

All score differences were zero or negative, indicating no participants worsened, and many showed substantial improvement (up to 73-point reductions). A paired-samples t-test was conducted to assess whether participants' PTSD symptom scores differed significantly from pre-course to post-course. Results revealed a statistically significant reduction in PCL-5 scores, $t(293) = 14.1067$, $p < .001$, indicating that participants experienced improvements in PTSD-related symptoms from pre-test, $M = 26$, $SD = 18.9$ to post-test, $M = 9$, $SD = 13.8$. Cohen's d = –0.82, indicated a large effect, with negative sign reflecting a reduction in symptoms.

Interpretation

The variability in both pre-scores (SD = 18.9) and post-scores (SD = 13.8) is moderate and consistent with expected distributions for PCL-5 data. The paired-samples t-test demonstrated that the reduction in symptoms was statistically significant, and the corrected effect size (d = –0.82) indicates a large and clinically meaningful reduction in PTSD symptoms.

This finding provides strong evidence that the Trauma Recovery Certification Course resulted in substantial reductions in participants' self-reported PTSD symptom severity.

COURSE EVALUATION RATINGS

HYPOTHESIS

Null hypothesis (H_0): The mean rating for each post-course evaluation item is less than or equal to the high-quality benchmark of 4.5 **(**$H_0: \mu \leq 4.5$)

Alternative hypothesis (H_1): The mean rating for each post-course evaluation item is greater than the benchmark of 4.5 ($H_1: \mu > 4.5$)

A total of 294 participants completed all three post-course evaluation items using a 0–5 Likert scale. Descriptive statistics are presented in Table 2, and the item-level distributions are shown in Figure 1. Across all items, the median score was 5, demonstrating clear ceiling effects.

One-sample, one-sided t-tests were conducted to evaluate whether mean ratings exceeded the high-quality benchmark of 4.5. Results are presented in Table 2 and indicate that all three items were rated significantly higher than the benchmark, with $p < .001$ for each item, even after Holm correction for multiple comparisons. Effect sizes (Cohen's *d*) ranged from 0.55 to 0.76, reflecting moderate to large effects across all items.

The internal consistency of the post-course evaluation items was assessed utilizing Cronbach's α. The alpha of .709 revealed acceptable reliability, indicating that the three evaluation items function coherently as a set.

Interpretation

Course evaluation data demonstrated high levels of learning, skill acquisition, and perceived personal healing among participants. Mean ratings for all three items exceeded 4.75, with extremely narrow confidence intervals (all upper and lower bounds above 4.71), and medians of 5 with zero interquartile range, indicating uniformly positive responses.

The hypothesis that course ratings would exceed the high-quality benchmark of 4.5 was supported across all items. One-sample t-tests showed significant differences from the benchmark for each evaluation item, with moderate to large effect sizes, confirming that participants consistently perceived the course as highly effective.

Finally, the internal consistency coefficient of α = 0.709 confirms that the three items measure a cohesive underlying construct related to perceived course quality and impact.

DISCUSSION

The global rise in trauma, combined with the limited availability of healing approaches for individuals who

Table 2

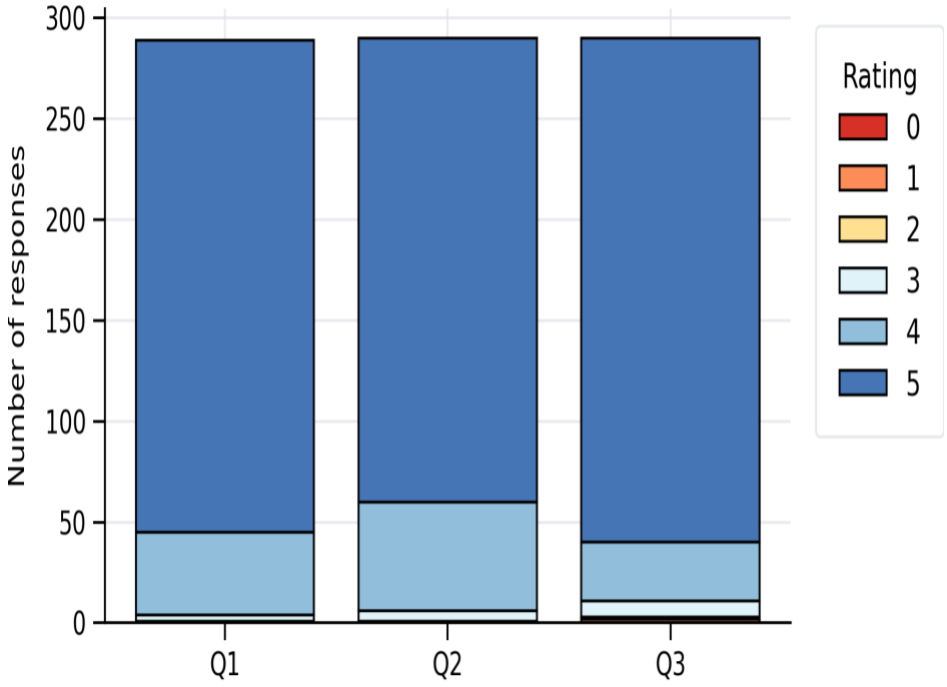
Descriptive Statistics and dependent *t-tests* for Post -Course Items (0-5 Scale)

Item	Mean	SD	95% CI	*t-test (p)*	*d*
I learned about trauma and its effects on human functioning.	4.83	.43	4.78-4.88	13.05 (<.001)	.76
I gained skills that will assist me in helping others who are traumatized.	4.77	.48	4.71-4.82	9.54 (<.001)	.56
The methods I learned and used during this course allowed me to do some of my own healing.	4.81	.56	4.74-4.87	9.43 (<.001)	.55

Note. Means and standard deviation reflect responses on a 0-5 scale.

Figure 1

Response distributions by item (0–5 scale)



Note. The distribution of responses for all items as shown in Figure 2, illustrates the pronounced ceiling effects and clustering at the highest rating point.

understand their symptoms through spiritual or spirit-based frameworks, has intensified calls for trauma-recovery models that are Indigenous, spiritual, and holistic in nature. Research consistently demonstrates that spirituality plays a central role in coping with trauma and that cultural and spiritual practices can reduce trauma symptoms and support a renewed sense of wholeness. These insights, together with neurological evidence showing that trauma disrupts left-hemisphere functioning and is processed primarily through the right hemisphere, form the conceptual foundation of Simington's Four-Part Integrative Model for Healing and the Trauma Recovery Certification Course.

The present study sought to statistically evaluate the effectiveness of this course by examining both learning outcomes and changes in PTSD symptoms. Data were analyzed from 294 participants who completed one of 26 Trauma Recovery Certification Courses offered between October 2014 and April 2024.

PCL-5 Outcomes

The first hypothesis predicted no significant difference between PCL-5 pre- and post-course scores. Results from the paired-samples t-test demonstrated a statistically significant reduction in PTSD symptoms, with $p < .001$. Accordingly, the null hypothesis was rejected in favor of the alternative hypothesis. Although the effect size was small, the consistent reduction across a large sample provides meaningful evidence that the course's holistic, spiritually grounded methods contribute to symptom improvement.

Course Evaluation Outcomes

The second hypothesis examined whether participants' post-course ratings met or exceeded a high-quality benchmark of 4.5 on a 0–5 scale. One-sample, one-sided t-tests revealed that all three evaluation items were rated significantly above the benchmark, with moderate to large effect sizes ($d = 0.55–0.76$). Internal consistency for the three-item scale was acceptable ($\alpha = 0.709$). These findings indicate that participants not only valued the course content but also perceived it as highly effective in enhancing trauma knowledge, developing trauma-helping skills, and supporting their own healing.

Overall Interpretation

Taken together, the statistically significant reduction in PCL-5 scores and the strong course-evaluation ratings provide converging evidence for the effectiveness of the Trauma Recovery Certification Course. The results support the value of integrating right-hemisphere-engaging strategies, spiritual healing practices, and holistic approaches into trauma education and treatment. These findings align with existing literature emphasizing the importance of spirituality in trauma recovery and reinforce the relevance of Indigenous and culturally rooted healing methods in addressing both the spiritual and neurobiological dimensions of trauma.

LIMITATIONS

Although the findings of this study demonstrate significant reductions in PTSD symptoms and high participant satisfaction, several limitations must be acknowledged. First, while 94 participants met the conservative PCL-5 cutoff score of 31–33 for probable PTSD at pre-course, only 14 participants met this threshold at post-course. This reduction is encouraging; however, the results reflect short-term change only. Because PCL-5 scores were collected immediately before and after the course, it is not possible to determine whether symptom improvements were sustained over time. A longitudinal design with follow-up assessments would be necessary to evaluate the durability of these effects.

Second, the study relied on secondary data originally collected for educational rather than research purposes. Although the dataset was complete and anonymized, the absence of standardized research protocols (e.g., randomization, control groups, or follow-up measures) limits the ability to infer causality.

Third, the sample consisted of professionals and semi-professionals working in mental health, wellness, or social services. Their prior training, motivation, or

openness to holistic and spiritual approaches may differ from the general population or from clinical PTSD samples, which may limit generalizability.

Finally, although the course-evaluation results were exceptionally high, they may be influenced by social desirability, the immersive nature of the course, or participants' positive regard for the facilitators. Future research should incorporate additional objective or third-party measures of learning and skill acquisition.

Despite these limitations, the findings provide promising preliminary evidence supporting the Trauma Recovery Certification Course as a holistic, spiritually grounded approach to trauma education and healing.

DECLARATION OF CONFLICTING INTERESTS

The author declares no potential conflicts of interest with respect to the research, authorship, or publication of this article.

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CONCLUSION

Difficult and traumatic life events can lead to profound spiritual struggles with significant implications for mental health (Pargament & Exline, 2022), including long-term emotional distress (Bockrath et al., 2021), increased mortality (Pargament et al., 2001), and suicidality (Currie et al., 2018). The present study contributes to the growing body of literature calling for trauma-healing approaches that address these spiritual dimensions. The statistically significant reduction in PCL-5 scores from pre- to post-course provides quantitative support for holistic models that attend to the spiritual struggles often experienced by individuals with PTSD (Hervey, 2023; Kucharska, 2020).

The global rise in trauma has intensified the need for approaches that resonate with individuals who understand their symptoms as rooted in spirit and spirituality. For many, Western diagnostic and treatment frameworks do not fully capture the lived dynamics of trauma (Afana et al., 2010; Gone & Kirmayer, 2010; Hervey, 2023; Kirmayer et al., 2010; Mutambara & Sodi, 2018; Simington, 2013b; Simington, 2018; Wahbeh et al., 2017). In this study, participants' course-evaluation ratings—reflecting gains in trauma knowledge, trauma-helping skills, and personal healing—were all significantly above the high-quality benchmark of 4.5. These findings indicate that the course's spiritually grounded, right-hemisphere-engaging methods were perceived as highly effective by participants.

Together, the PCL-5 results, and course-evaluation outcomes provide confidence in the Trauma Recovery Certification Course as a holistic approach to trauma education and healing for populations in Canada. However, further research is needed to determine whether these results replicate across cultural groups and in diverse settings.

Research on spirituality and stressful life events often merges the concepts of religion and spirituality (Breuninger et al., 2019; Exline, 2023). In contrast, the present study distinguishes spirituality as a personal, experiential process of expanding awareness—beginning with Reconnection to one's own spiritual essence, progressing to Relating to that essence in others, and culminating in the Recognition of that essence in all creation. This understanding aligns with the spiritual teachings of First Peoples worldwide. The course's incorporation of drumming, elemental practices, and guided visualization reflects these teachings and supports the integration of traditional, earth-based spiritual methods into trauma healing.

The significant reduction in PCL-5 scores reinforces the work of Hervey (2023), Simington and Wagner (2020, 2021), and Wahbeh et al. (2017), who demonstrate the effectiveness of spiritually grounded practices during times of spiritual distress. The findings of this study highlight the need for continued development and evaluation of trauma-healing models rooted in traditional and earth-based forms of spirituality, particularly for individuals who struggle with their original concepts of religion and spirituality following trauma.

In summary, this study provides quantitative and participant-reported evidence supporting the Trauma

Recovery Certification Course as an effective, spiritually grounded, and holistic approach to trauma education and healing. Significant reductions in PCL-5 scores, combined with exceptionally high course-evaluation ratings, demonstrate that participants not only gained trauma knowledge and therapeutic skills but also experienced meaningful personal healing. These findings contribute to the growing recognition that trauma recovery must address spiritual distress and right-hemisphere processes, particularly for individuals whose cultural or personal frameworks extend beyond Western diagnostic models. The results underscore the value of integrating traditional, earth-based, and Indigenous-informed practices into trauma-healing models and highlight the need for continued research to evaluate the long-term and cross-cultural effectiveness of such approaches.

Implications for Practice

The findings of this study have several important implications for trauma-informed practice. First, the significant reduction in PTSD symptoms suggests that spiritually grounded, right-hemisphere-engaging methods can be valuable additions to existing trauma-treatment frameworks. Practitioners may benefit from incorporating experiential modalities such as guided imagery, therapeutic art, drumming, and elemental practices, particularly when working with clients who experience trauma as a disruption of spiritual or soulful well-being.

Second, the high course-evaluation ratings indicate that professionals and semi-professionals find these approaches both accessible and effective. This suggests that training programs in mental health, social services, and community wellness may wish to include holistic and culturally rooted trauma-healing methods as part of their curriculum. Such training may enhance practitioners' ability to support clients whose healing needs extend beyond cognitive or language-based interventions.

Third, the alignment between the course's spiritual framework and the teachings of First Peoples highlights the importance of culturally respectful and culturally informed practice. For Indigenous clients—and for many non-Indigenous clients who resonate with earth-based or experiential spirituality—these approaches may offer a more meaningful pathway to healing than conventional Western models alone.

Finally, the study underscores the need for trauma practitioners to recognize and address spiritual distress as a legitimate and influential component of trauma recovery. Integrating spiritual assessment, culturally grounded practices, and right-hemisphere-engaging methods may support deeper healing and foster a greater sense of wholeness for individuals recovering from trauma.

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UNDERSTANDING CHRONIC HEALTH CONDITIONS RELATED TO CHILDHOOD ADVERSITIES: THE ROLE OF HEART RATE VARIABILITY AND THE ENDOCANNABINOID SYSTEM

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ABSTRACT

Childhood adversities (CA) encompass a broad range of negative life experiences, that lead to chronic health conditions effecting multiple organ systems resulting in significant morbidity and mortality among individuals who have experienced CA. Dysfunction of the stress response systems, including the endocannabinoid system (ECS), resulting from CA may play a vital role in the development of these chronic health conditions. CA are associated with low resting heart rate variability (HRV), which reflects autonomic nervous system function and serves as an important indicator of overall health. Research has shown a bidirectional relationship between HRV, and trauma- and stress-related disorders, such as post-traumatic stress disorder. The ECS is an important modulator of the stress response, and both acute, and chronic stress produce measurable changes in peripheral endocannabinoid concentrations and the time and frequency domains of HRV. The purpose of this literature review is to summarize and synthesize existing literature on the relationships among CA, chronic health conditions, HRV, and the ECS, and explore clinical and research implications. This review also aims to propose an integrative model for better understanding mechanisms underlying CA-related chronic health conditions to help guide targeted interventions for mitigating the neurobiological effects of CA, and monitor progress, and response to interventions.

KEYWORDS*: Early life stress, adverse childhood experiences, anandamide, stress response systems, autonomic nervous system*

INTRODUCTION

Childhood adversities (CA) refer to a broad range of distressing events, including both interpersonal, and non-interpersonal events (M. D. De Bellis & Zisk, 2014), encompassing a wide array of negative early-life experiences including childhood maltreatment, having a household member with substance use disorder or mental illness, separation from a parent or loved one due to death, poverty, parental divorce or incarceration, and systemic racism and discrimination (Dong et al., 2004a). These adversities effect development of an individual across multiple domains (Anda et al., 2006a; Bassi & Bozzali, 2015; M. A. Bellis et al., 2019; deRoon-Cassini et al., 2020; Gruhn et al., 2024; Hill et al., 2009; Hillard et al., 2017a; Hughes et al.,

2017a; Van der Kolk, 2003a). Current studies point to the multifaceted interactions of CA, the hypothalamic-pituitary-adrenal axis, the autonomic nervous system, system. CA leads to development of several chronic health conditions that increase the morbidity, and mortality among individuals with history of CA (Anda et al., 2006a; Dong et al., 2004b; Felitti et al., 1998). as measured by the heart rate variability, and the modulating role of the endocannabinoid signaling

The CDC-Kaiser Permanente Adverse Childhood Experiences (ACEs) Study revealed a graded relationship between the number of CA and chronic health conditions, including ischemic heart disease, diabetes, cancer, chronic lung disease, skeletal fractures, liver disease, depression, suicide attempts, alcohol and drug abuse, smoking, and physical inactivity and obesity (Felitti et al., 1998). In addition, the study found that about 66% to 80% of all attempted suicides could be attributed to CA**.** Research has shown that poly-victimization is common, causing significant neurobiological impact due to cumulative effects of different types of CA (Dong et al., 2004a). For this article, the term CA will encompass the various terms used for the different types of childhood trauma and adversities, including but not limited to adverse childhood experiences, childhood trauma, early life stress, childhood maltreatment, and child abuse, and neglect.

The purpose of this literature review is to summarize and synthesize existing literature on the relationships among CA, certain CA related chronic health conditions, HRV, and the ECS, and explore clinical and research implications. In addition, this review aims to propose an integrative model (fig 1), based on existing literature, for better understanding the neurobiological mechanisms underlying chronic health conditions. The integrative model will help highlight the complex interplay among different factors including CA, and the stress response systems including the ECS, leading to chronic health conditions resulting from CA. It will also help identify points of intervention on the different pathways that lead to CA related chronic conditions and improve our understanding of the neurobiological effects of CA on the different organ systems. This model is unique, and distinct from prior conceptual models as we aim to integrate the ECS among other stress response systems as an important modulator of different body functions and in addition to HRV, an important biomarker of stress response systems function, and CA related chronic health conditions.

We will begin by providing a brief review of how stress effects the defense cascade and allostatic load, HRV and the ECS. We will then review existing literature on the relationship among CA, and CA related chronic health conditions and the role of HRV and the ECS. We will proceed to describe our integrative model, which is based on existing literature as highlighted in this review, to understand mechanisms of CA related chronic health conditions. We will then highlight clinical implications, and future research directions.

Stress and childhood adversities (CA): effect on Heart Rate Variability (HRV) and the Endocannabinoid System (ECS)

Humans have a continuum of innate, automatically activated defense behaviors, called the *defense cascade (Kozlowska et al., 2015)*, each of which have distinctive neural patterns mediated by activation and inhibition of functional components in the amygdala, hypothalamus, periaqueductal gray, and sympathetic and vagal nuclei (Kozlowska et al., 2015). Stress involves a two-way communication between the brain and the cardiovascular, immune, and other systems via neural and endocrine mechanisms (Sigrist et al., 2021). Exposure to stress, whether physical or psychological, activates the acute stress response via the autonomic nervous system, and the hypothalamic-pituitary-adrenal (HPA) axis, along with coordinated behavioral, endocrine, and neuronal changes to facilitate survival (Hillard, 2018a). Autonomic dysfunction affects both the central and peripheral autonomic functions, leading to decreased dynamic adaptability, and if chronic can increase morbidity and mortality (Agorastos et al., 2023).

Allostatic load is an organism's ability to achieve homeostasis and is elevated in CA (Fava et al., 2019a; Finlay et al., 2022a; Wen, 1998). Elevated allostatic load is associated with poor health outcomes, including increased levels of HbA1C and total cholesterol, adiposity, metabolic syndrome, and chronic activation of pro-inflammatory, and neuroendocrine systems

leading to dysregulation of the cardiovascular, immune, and metabolic systems (Finlay et al., 2022b). When environmental challenges surpass the individual's ability to cope, allostatic overload ensues, which is an extreme state where stress response systems are continuously activated, and buffering factors are no longer adequate (Fava et al., 2019b). Brain regions that undergo structural or functional development concurrent to trauma exposure are thought to be most profoundly altered (Samson et al., 2024; Teicher et al., 2003, 2012; Teicher & Samson, 2016), which could lead to atypical patterns of neural adaptations, especially in regions involving autonomic and neuroendocrine functions (Sigrist et al., 2021).

Heart Rate Variability (HRV):

Autonomic dysfunction, resulting from CA (Gruhn et al., 2024; Heim et al., 2019), negatively effects HRV (Cohen et al., 1997; Kim et al., 2018a). HRV is a non-invasive indicator of autonomic nervous system function and provides reliable information about the interaction between the sympathetic and parasympathetic nervous system (Tiwari et al., 2021a). It also provides information about the ability of the heart to respond to a variety of physiological and environmental stimuli (Chen et al., 2023a; Dennis et al., 2014; Thayer & Sternberg, 2006a). It consists of the changes in time intervals between consecutive heartbeats called inter-beat intervals and is one of the indicators of overall health (Shaffer & Ginsberg, 2017). The oscillations of a healthy heart are complex and constantly changing which helps it to adapt to sudden physical, and psychological challenges to homeostasis (Shaffer & Ginsberg, 2017). The domains of HRV analysis are time-domain, frequency-domain, and non-linear analysis, which measure various aspects of the time intervals between heartbeats (Shaffer & Ginsberg, 2017).

Models that explain HRV include, the *Neurovisceral Integration Model* (NIM) (Thayer & Lane, 2000a), and *Neurovisceral Integration Across a Continuum of Time* (NIACT) (Kemp et al., 2017). These models provide structural frameworks for understanding brain-body integration in adaptation to the environment, highlighting the role of the vagus nerve, which is strongly correlated with HRV (Capilupi et al., 2020). According to these frameworks, higher HRV is characteristic of a healthy and adaptive organism, with higher self-regulation abilities, behavioral flexibility, and adaptability in a changing environment (Kemp et al., 2017; Thayer & Lane, 2000a). Low HRV is an indicator of impaired regulatory, and homeostatic autonomic nervous system (ANS) functions, which reduces the body's ability to cope with internal and external stressors (Chen et al., 2023a; Kim et al., 2018a). It indicates vagal impairment, associated with prefrontal hypoactivity, and amygdala hyperactivity, linked with high levels of stress and stress vulnerability (Kemp et al., 2017; Thayer & Sternberg, 2006b).

Neuroimaging studies suggest that HRV may be linked to brain networks that are responsible for assessing stressful situations (Mourtakos et al., 2022), and neural structures involved in appraisal of threat and safety (Thayer et al., 2012a; Thayer & Lane, 2000a). In their meta-analysis, Thayer et. al (Thayer et al., 2012a), reported data from eight studies examining the association between HRV, and functional brain activity using PET or fMRI, with the goal of identifying areas in which HRV was more closely associated with emotional versus cognitive/motor tasks. Areas of the prefrontal cortex (PFC) associated with HRV are in regions associated with emotions and physiological aspects of emotional responses including the ventromedial and dorsomedial PFC, the right subgenual cingulate, the right pregenual cingulate, and the left sublenticular extended amygdala/ventral striatum. CA leads to a predisposition to chronic threat perception, amygdala hyperactivation, and a large negativity bias which are all associated with lower HRV, which in turn indexes the degree to which the brain threat-detection systems produce chronic allostatic load (K. A. McLaughlin & Lambert, 2017; Thayer et al., 2012a; Van der Kolk, 2003b). High basal HRV, on the other hand, is linked to lower cortical threat perception and facilitates greater self-regulation in stressful situations (Chen et al., 2023b; Reich et al., 2024; Thayer & Lane, 2000a). HRV can measure the degree of functional integration of the areas connecting the ventromedial PFC, brainstem and peripheral anatomy, and can represent the degree to which it provides flexible control over the autonomic nervous system (Kim et al., 2018b). HRV is influenced by pathological, physiological, psychological, environmental, lifestyle, and genetic factors (Tiwari et al., 2021b), and the endocannabinoid system (Mourtakos et al., 2022).

The Endocannabinoid System (ECS)

The endocannabinoid system (ECS) is an important modulator of the stress response, and ECS dysfunction is implicated in stress related disorders with research showing dysregulation of the ECS in individuals with history of CA and trauma (deRoon-Cassini et al., 2020; Goldstein Ferber et al., 2021; Gowatch et al., 2024; Hillard et al., 2017b; Lutz et al., 2015; Marusak et al., 2024; Patel & Hillard, 2008; Rabinak et al., 2020). The ECS plays an important role in modulating the autonomic nervous system and thereby influences HRV (Mourtakos et al., 2022). The ECS consists of: 1) endocannabinoid receptors; cannabinoid receptor 1 (CB1R) and cannabinoid receptor 2 (CB2R), 2) endocannabinoids, such as *N*-arachidonoylethanolamine (AEA) or anandamide, and 2-arachidonoylglycerol (2-AG), and 3) enzymes that regulate their synthesis and degradation, including fatty acid amide hydrolase (FAAH) and monoacylglycerol lipase (MAGL) (Lu & MacKie, 2016; Lu & Mackie, 2021). Circulating endocannabinoids come from different organs and tissues including the brain, muscle, adipose tissue, and circulating cells (Hillard, 2015, 2018b) but may correlate with central concentrations due to shared regulatory mechanisms. Endocannabinoid-like compounds include the *N*-acylethanolamines (NAEs) such as N-oleoyl ethanolamine (OEA), N-stearoyl ethanolamine (SEA), and N-palmitoyl ethanolamine (PEA). Although these compounds do not have affinity for CB1R or CB2R, they can modulate endocannabinoid activity indirectly via substrate competition at FAAH (Bourke et al., 2022). Endocannabinoid receptors other than CB1R, and CB2R include several G-protein coupled receptors (GPCRs), ion channels, and nuclear receptors that bind cannabinoid, and non-cannabinoid agonists, and include GPR55, GPR119, GPR18 (Biringer, 2021), TRPV1 (Transient Receptor Potential Vanilloid 1) (Starkus et al., 2019), and PPARs (Peroxisome Proliferator-Activated Receptors) (O'Sullivan, 2016).

The ECS maintains homeostasis across multiple organs (deRoon-Cassini et al., 2020; Hillard, 2015), and plays an important role in regulating both the autonomic nervous system and the HPA axis (deRoon-Cassini et al., 2020). Basal ECS tone is thought to inhibit the stress response, and modulation of this tone either permits or curtails an active stress response. Chronic deficiency in endocannabinoid tone is associated with the pathological complications of chronic stress (Henson et al., 2021). The ECS modulates the stress response by inhibition of neurotransmitter release from neurons, influencing the behavioral components of the defense cascade (Hill et al., 2018; Hill, Patel, et al., 2010; Patel & Hillard, 2009).

During the initial phase of acute stress, the concentration of AEA decreases due to FAAH hydrolysis in the amygdala and prefrontal cortex, facilitating HPA axis activation and optimal rapid cortisol response. Subsequently, 2-AG helps to restore the HPA axis to baseline levels by acting as an effector in the negative feedback mechanism initiated by glucocorticoid receptor activation in the hippocampus and prefrontal cortex (Hillard et al., 2017b), (Hill et al., 2009), and contributes to pain perception, memory and synaptic plasticity (Morena et al., 2016). AEA and 2AG switch between the tonic and phasic modes of signaling by which they can regulate neurotransmitter release to affect network activity (Augustin & Lovinger, 2018).

Importantly, there are interesting converging and diverging effects of the HPA axis and the ECS on stress responding. The degree to which stressful stimuli reduce amygdala AEA/CB1R signaling contributes to the magnitude of the HPA response (Hill et al., 2009; Hill, McLaughlin, et al., 2010). CB1R activation can both inhibit and potentiate HPA axis activation by stress (Hillard et al., 2017a). Enzymatic processes involved in metabolism of the endocannabinoids can potentially be modulated due to acute and chronic stress leading to individual variability in stress responses (Lutz et al., 2015). Chronic stress can down-regulate the ECS leading to poor adaptation, excessive stress response (deRoon-Cassini et al., 2020), and heightened anxiety (R. J. McLaughlin et al., 2014). On the contrary, sensitization of the ECS contributes to habituation of stress responses and prevents inadequate adaptation to repeated stress exposure (Patel & Hillard, 2009).

Within the central nervous system, ECS mediate activity-dependent retrograde signaling in various brain regions, including the cerebellum, hippocampus, amygdala, and prefrontal cortex (Hillard, 2015), and CA negatively affects the development of these regions (Teicher & Samson, 2013), (Teicher et al., 2003)[2]. CA not only alters the development of the corticolimbic system, but it also disrupts the normal ontogeny of the ECS, resulting in bidirectional changes in AEA, and 2-AG

tissue concentrations within the amygdala and hippocampus, leading to sustained reduction in ECS function and CB1R densities across all brain regions (Hill et al., 2019). The extent to which stressful stimuli reduce amygdala AEA/CB1R signaling influences the magnitude of the HPA response (Hill et al., 2009). In addition to alterations in the levels of AEA and 2-AG concentrations, stress induced experiences also lead to reduced OEA and PEA levels in hair especially in people with PTSD and history of Caitlin (Wilker et al., 2016).

Link between Heart Rate Variability (HRV), and The Endocannabinoid System (ECS)

Studies directly examining the link between ECS and HRV are limited. Published studies show that both acute and chronic stress causes measurable changes in peripheral endocannabinoid concentrations, and HRV, and there is a significant correlation between change in the concentration of peripheral endocannabinoids and time and frequency domains of HRV (Mourtakos et al., 2022). In a small study (n=16), PEA supplementation significantly improved HRV, suggesting enhanced physiological stress regulation, and resilience to stress (Deb et al., 2025). Centrally mediated endocannabinoid signaling of the periaqueductal gray (PAG), also effects HRV, with ventral PAG stimulation leading to increase in parasympathetic activity, and HRV, and decrease in pain and dorsal PAG stimulation leading to sympathetic activation and decrease in HRV (Dean et al., 2016; Pereira et al., 2010).

Childhood Adversities (CA) Related Chronic Health Conditions, and the Role of Heart Rate Variability (HRV) and the Endocannabinoid System (ECS)

Since the publication of the CDC-Kaiser Permanente Adverse Childhood Experiences Study (Felitti et al., 1998), several studies have looked at specific relationship between CA, and different chronic health conditions (*Adverse Childhood Experiences and Chronic Disease Risk in the Southern Community Cohort Study*, n.d.; Fava et al., 2019b; Hughes et al., 2017b). Studies have found a graded relationship between CA, and health conditions involving multiple organ systems including pulmonary, cardiovascular, renal, reproductive, immune, endocrine, gastrointestinal, neurologic, and reproductive (Anda et al., 2006b; Herzog & Schmahl, 2018; Hughes et al., 2017b; Sachs-Ericsson et al., 2017; Senaratne et al., 2024a). In addition, this dose response relationship is also observed between CA, and poor health status, chronic pain, and mental illnesses including depression, anxiety, post-traumatic stress disorder, suicidality and substance use, psychosis, bipolar disorder, eating disorder, obsessive compulsive disorder, sleep disorders (Felitti et al., 1998; Hakamata et al., 2022; Herzog & Schmahl, 2018; Nelson et al., 2021; Pasteuning et al., 2025). One study found that each additional CA exposure contributed to a 12.9% increase in the odds for multimorbidity, which is the presence of 2 or more chronic health conditions in a single individual (Senaratne et al., 2024a).

Low HRV is associated with a wide range psychiatric conditions, physical inactivity, hypertension, diabetes, cardiovascular disease, and increased risk of death from several causes (Chen et al., 2023a; Dekker et al., 2000; Kubota et al., 2017; Tiwari et al., 2021a). Similarly, the ECS dysfunction resulting from CA (Mazurka et al., 2024), also increases the risk of developing various chronic conditions (Patel & Hillard, 2009). Health conditions such as cancer, obesity and metabolic syndrome, heart failure, cirrhosis, smoking, and hypertension, are associated with an increase in sympathetic and a decrease in parasympathetic nervous activity (Alqahtani et al., 2023). A state of autonomic dysregulation with sympathetic dominance for prolonged periods of time, combined with the ECS dysfunction, puts the organism in a high and enduring arousal; the energy demands on the body become excessive and ultimately cannot be met (Brosschot & Thayer, 2003a; deRoon-Cassini et al., 2020; Hillard, 2015; Hillard et al., 2017a; Thayer et al., 2012b; Thayer & Lane, 2000b). In this section we will review select chronic health conditions resulting from childhood adversities, and the role of HRV, and the ECS.

CA and mental illness and the role of HRV and the ECS

CA pose a transdiagnostic risk factor for different mental health disorders (Haidl et al., 2023), and shows associations with important domains of functioning (health, risky and/or criminal behavior, financial/educational functioning, and social functioning) (Copeland et al., 2018). In one Swedish twin cohort study, the association between CA and negative mental health outcomes persisted after controlling for shared genetic, and environmental

factors (Daníelsdóttir et al., 2024). The same study showed that the incidence of any psychiatric disorder increased from 6.4% among individuals without history of CA to 24.6%, among those reporting 3 or more CA. Every additional CA was associated with 52% greater odd of being diagnosed with a mental illness (Daníelsdóttir et al., 2024). Similar graded association is found between CA, and adolescent mental health conditions including attention deficit, hyperactivity disorder, behavioral problems, depression, substance use disorder, anxiety disorders (Bomysoad & Francis, 2020), post-traumatic stress disorder (Guo et al., 2021; Tabb et al., 2022), and high-risk behaviors like suicidality, and self-harm (Cabanis et al., 2021). As opposed to adulthood only trauma, individuals with history of CA, and comorbid substance use disorder, and post-traumatic stress disorder, present with more severe, and complex clinical profile (Farrugia et al., 2011). CA leads to poor social functioning in severe mental disorders during both active illness and in remission (Hjelseng et al., 2022), and poor overall functional outcomes (Copeland et al., 2018). It is also associated with alexithymia, leading to problems related to the cognitive processing of affective stimulation, and deficits in emotion regulation (Macarenco et al., 2021). CA is a strong predictor of dissociation which represents, alterations in conscious awareness on a continuum ranging from daydreaming to depersonalization, derealization, or amnesia (Thayer & Sternberg, 2006a).

CA have been consistently linked with increased risk of suicide (Angelakis et al., 2019). The Schematic Appraisals Model for Suicide (SAMS) and the Cry of Pain (CoP) Model, suggest that CA gives rise to increasingly worsening perceptions of defeat and entrapment which lead to suicidality as a means of escape (Angelakis et al., 2019; Maria et al., 2012; Pilkington et al., 2021; Rasmussen et al., 2010). The SAMS posits that suicidal behavior arises from a combination of negative cognitive processing, established suicidal schemas, and negative appraisals of situations resulting from negative life events, interpreted through a lens of defeat and entrapment (Maria et al., 2012; Pilkington et al., 2021). The CoP model, developed by Williams and Pollock, is an entrapment model of suicidality, which suggests that suicidal ideation, and behavior are the end-products of a perception of being trapped in a stressful situation from which there is no escape and no rescue (Rasmussen et al., 2010).

Psychological stress can directly affect the autonomic nervous system, hence influencing the HRV (Hamilton & Alloy, 2016; Wang et al., 2025). Low HRV, in mental disorders, may result from neuroinflammation, and changes in brain regions responsible for regulation of autonomic function, and emotional regulation (Wang et al., 2025). It is associated with multiple mental health disorders including depression, anxiety, post-traumatic stress disorder, substance use disorder, and schizophrenia (Ramesh et al., 2023). Potential health-behavior mediators, common in CA, such as smoking, alcohol overuse, sleep disturbance, and obesity, mediate the association between PTSD and HRV-based indices of autonomic nervous system dysregulation (Dennis et al., 2014; Felitti et al., 1998). In one study, HRV moderated the relationship between CA and grief symptoms over time such that among individuals with more severe experiences of CA, those with high HRV had a faster recovery from grief than those with low HRV (Chen et al., 2023a).

There is a bidirectional relationship between HRV and trauma and stressor related disorders, whereby, lower HRV may increase vulnerability to developing PTSD and higher PTSD symptoms may lead to lower HRV (Jeon et al., 2024). Resting state HRV has been identified as a potential moderator between CA and adolescent psychopathology (Beauchaine & Thayer, 2015; Mclaughlin et al., 2014), with possibility of worsening autonomic nervous system functioning, and further decrease in HRV with age in individuals who have been exposed to CA (Sigrist et al., 2021). In addition, cardiovascular activation, with alterations in heart rate and HRV to negative emotions last longer than positive emotions (Brosschot & Thayer, 2003b).

The ECS is also implicated in several mental disorders. (Hill, Patel, et al., 2010; Hillard et al., 2012a; Hillard & Liu, n.d.). Genetic variations in the ECS may play a role in the development of neurological and psychiatric symptoms (Tansey et al., 2025). Heterogeneity in the genes for CB1R and fatty acid amide hydrolase (FAAH), and differences in circulating endocannabinoids are associated with substance use disorder, depression, anxiety, eating disorders, schizophrenia, and attention deficit, hyperactivity disorder (Hillard et al., 2012b). CB1R, modulates synaptic circuits that play a prominent role in psychopathology (Sloan et al., 2019). 2-AG has been implicated in stress and fear processing and may

play an important role in the attenuation of fear generalization commonly observed in trauma-related disorders (Bedse et al., 2020). Studies have also shown that peri-trauma serum 2-AG concentrations are biomarkers of risk for PTSD, and poor functional quality of life (Albertina et al., 2025). Similarly, higher AEA concentration immediately following the traumatic event is associated with a greater likelihood of PTSD diagnosis at follow-up, and individuals homozygous for the enzyme *FAAH* A allele had significantly higher PTSD symptoms at follow-up compared with other genotypes (deRoon-Cassini et al., 2022). High level of circulating AEA is also associated with more severe symptoms of PTSD, especially hyperarousal (Marusak et al., 2024).

CA and chronic pain and the role of HRV and the ECS

CA increases risk of chronic pain (Nicolson et al., 2023), which is defined as pain persisting beyond a period of 3 months (Gureje et al., 2008). Chronic pain is comorbid with multiple psychiatric disorders including post-traumatic stress disorder, major depressive disorder, personality disorders and neurodevelopmental disorders, and worsens outcomes for individuals with mental illness and vice versa (Johnston & Huckins, 2023). Individuals with history of CA, and PTSD are at significant risk of developing pain in adulthood (Marin et al., 2021).

The number and type of CA are associated with pain related variables, and psychosocial functioning in both adults (Craner et al., 2022), and youth (Huffhines & Jackson, 2019). Stress and related emotional distress, fear and anxiety can alter pain perception leading to hypo-or-hyper algesia (Corcoran et al., 2015). Patients with history of childhood sexual trauma, often present with symptoms of pain either directly resulting from the physical trauma or due to psychological distress, and includes genito-pelvic pain, interstitial cystitis, irritable bowel syndrome. interstitial cystitis/painful bladder, and headaches (Tsur et al., 2022). CA, and chronic pain share vulnerabilities, pre-dispositional factors and common symptoms of hypervigilance, avoidance behavior and elevated somatic focus (Macdonald et al., 2018; MacDonald et al., 2021).

Chronic pain syndromes are characterized by deficient endogenous pain modulation, elevated negative affectivity, autonomic dysfunction, and reduced HRV (Forte et al., 2023; Van Den Houte et al., 2018a). Low HRV, has been reported in chronic pelvic pain, interstitial cystitis, bladder pain syndrome, fibromyalgia, primary headache disorder, irritable bowel syndrome, and functional abdominal pain (de França Moreira et al., 2021). HRV indices are also associated with pain intensity, disability, and catastrophizing in individuals with chronic neck pain (Santos-de-Araújo et al., 2019). Higher resting HRV is associated with better endogenous pain modulation, and higher pain tolerance, acting as a biomarker for a well-balanced autonomic nervous system (Van Den Houte et al., 2018b).

The ECS possesses unique properties that underlie its role in analgesia, and experience of pain (Di Marzo & De Petrocellis, 2012; Finn et al., 2021; Hillard, 2018a). Cannabinoid receptors, and ligands are found at every level of pain pathway, and endocannabinoids have been shown to induce analgesia in both acute, and chronic pain state (Burston & Woodhams, 2014). CB1R density is moderate to high in regions involved in pain transmission, and modulation including dorsal root ganglia, spinal cord, thalamus, periaqueductal gray, amygdala, and rostroventromedial medulla (Sagar et al., 2012).

A reduction of the endocannabinoid signaling, which can be induced by CA, has been postulated as one of the predisposing factors in the development of migraine and its painful comorbid conditions, such as fibromyalgia, irritable bowel, and interstitial cystitis (Russo, 2016). Chronic pain conditions are associated with dynamic changes in the ECS (Sagar et al., 2012), and present with hyperalgesia, and central sensitization, possibly resulting from clinical endocannabinoid deficiency (Russo, 2016). Research has shown that peri-trauma 2-AG concentrations are positively with chronic pain 6–9 months later (Trevino et al., 2022).

CA and cardio-metabolic diseases and the role of HRV and the ECS

Cardiometabolic diseases are interconnected health conditions affecting the heart, blood vessels, and the body's metabolic processes. They often occur together, increasing overall health risk, and include obesity, type 2 diabetes, atherosclerotic cardiovascular disease, hypertension, and dyslipidemia (Eroglu et al., 2024; Lindstrom et al., 2022). Shared risk factors

include genetic predispositions, health risk behaviors like physical inactivity, sedentary lifestyle, unhealthy diet, alcohol use, and smoking (Anda et al., 2006a; Felitti et al., 1998; Wooldridge et al., 2023a).

History of CA increases the risk for cardiovascular disease, and its clinical, and metabolic outcomes (Jakubowski et al., 2018; Qiao et al., 2024). CA disrupts many of the regulatory processes of the body, and these mechanisms interact with other cardiometabolic risk factors (Felitti et al., 1998; Wooldridge et al., 2023b), and affect cardiovascular morbidity and mortality (Suglia et al., 2018). Depression, and anxiety, mediate the relationship between CA and heart disease (Cui et al., 2024; Qiao et al., 2024), including arterial stiffness (Bomhof-Roordink et al., 2015). In a cohort of patients with stable coronary artery disease, CA was associated with increased microvolt t-wave alternans, which is a marker of increased arrhythmic risk during mental stress (Shah et al., 2022). Lee et. al, 2023 (Lee et al., 2023), looked at the association between CA, and risk of developing cardiovascular diseases later in life, utilizing network analysis. They found that among men, household incarceration was strongly associated with stroke, and angina and coronary heart disease were clustered with several cardiovascular disease risk factors, and household dysfunction. Among women, the strongest connection was between physical abuse and stroke, followed by sexual abuse and angina/coronary heart disease.

CA also increases the risk of diabetes, and obesity (Chu & Chu, 2021; Gísladóttir et al., 2025; Huang et al., 2015; Huffhines et al., 2016; Schüssler-Fiorenza Rose et al., 2022; Strenth et al., 2022; Zhang et al., 2022; Zhu et al., 2022), which creates a significant burden on the healthcare system (Strenth et al., 2022). It increases risk of other chronic health conditions including myocardial infarction, and stroke (Schüssler-Fiorenza Rose et al., 2022), and causes micro- and macrovascular complications leading to morbidity and mortality in diabetic patients (Gruden et al., 2016). Higher number of CA increases the likelihood of developing depression and anxiety in people with diabetes (Ittoop et al., 2020). Studies have looked at different types of CA, and their effect on diabetes, including neglect, and family dysfunction (Zhang et al., 2022), childhood economic adversity, physical, sexual and verbal abuse, and parental incarceration (Zhu et al., 2022). Bullying, and sexual abuse are independently associated with type 2 diabetes (Gísladóttir et al., 2025; Salas et al., 2019; Schroeder et al., 2021). In addition, one study found that, as opposed to abuse, the influence of neglect was more prominent in later development of diabetes, followed by sexual abuse, and then physical abuse (Huang et al., 2015). Girls are more sensitive to obesity-related effects of CA than boys, and sexual abuse, and cumulative trauma is associated with greater childhood obesity risk (Schroeder et al., 2021). Presence of more than 4 CA predict increased risk of diabetes related complications like myocardial infarction, and stroke, decreased access to healthcare, and reduced possibility of meeting diabetes related goals (Schüssler-Fiorenza Rose et al., 2022).

One study found association between low HRV and progression of coronary artery disease. This association was not explained by common risk factors for atherosclerosis, or by the severity of ischemic heart disease at the time of HRV analysis, pointing to an independent relationship between HRV and the progression of coronary atherosclerosis (Huikuri et al., 1999). Autonomic dysfunction causes tachycardia, structural remodeling, and baroreflex dysfunction causing hypertension, which ultimately leads to heart disease (Ali et al., 2018; Florea & Cohn, 2014).

Diabetes, and obesity are also associated with autonomic dysfunction, low HRV, and altered reactivity of the cardiovascular system associated with cardiovascular disease (Muthukrishnan et al., 2025; Rooney et al., 2024). Diabetes especially of longer duration, and with poor glycemic control, low HRV, and poor sleep quality, increases risk of all-cause mortality, mainly from cardiovascular disease (Faulkner & Smart, 2021; von Schantz et al., 2021). High heart rate and low HRV, are associated with elevated concentrations of serum insulin and decreased insulin sensitivity, independent of glucose level, which may suggest that autonomic dysfunction is both a consequence and a precursor to hyperglycemia (Carnethon et al., 2003). Altered glucose metabolism leads to decreased activity of both sympathetic, and parasympathetic nervous system, leading to cardiac autonomic instability (Benichou et al., 2018). Variables that act synergistically with type 2 diabetes to cause autonomic dysfunction include essential hypertension (Takahashi et al., 2001), and subclinical hypothyroism (Hoshi et al., 2020).

Acute or prolonged autonomic dysregulation, such as in stress-related disorders, affects central autonomic network core centers, thereby altering downstream peripheral ANS function (Agorastos et al., 2023). HRV is an early marker of cardiac autonomic neuropathy (CAN) (The et al., 2023), which is a common and potentially deadly complication from diabetes. Cardiac autonomic neuropathy may result from interaction of hyperglycemia, impaired insulin signaling, glucose variability, and disease duration with modifiable risk factors including obesity, dyslipidemia, and age-related neuronal degeneration (Ang et al., 2020; Silva-E-Oliveira et al., 2017).

The cardiovascular actions of cannabinoids are complex. In addition to the central and autonomic nervous system, endocannabinoids are present in the myocardium and vasculature, and modify heart rate, vascular tone, and blood pressure (Kunos et al., 2000). Under normal conditions in healthy animals, modulation of the ECS has minor consequences and does not result in tonic changes (Pacher et al., n.d.). The ECS has been implicated in cardiac dysfunction, inflammation, and cell death associated with various forms of shock, heart failure, and atherosclerosis, in addition to its role in the development of various cardiovascular risk factors in obesity/metabolic syndrome and diabetes (Rajesh et al., 2012). Endocannabinoid action on CB1R is implicated in diabetic cardiomyopathy, which is associated with enhanced left ventricle CB_1R expression, and AEA levels compared with nondiabetic animals (Rajesh et al., 2012). As opposed to CB1R, activation of CB2R on atherosclerotic plaques, leads to a significant inhibition of disease progression in both humans and mice (Pacher et al., n.d.).

Several animal and human observations suggest that the endocannabinoid system is over-active in the presence of abdominal obesity and/or diabetes. Both central and peripheral endocannabinoid actions, via the activation of CB1 receptors, promote weight gain and associated metabolic changes (Scheen, 2007). Excess food intake and obesity enhance the ECS tone which lead to lipogenesis, visceral fat accumulation, obesity, and insulin resistance, causing type 2 diabetes (Serefko et al., 2025). ECS indirectly contributes to beta cell failure leading to insulin deficiency (Gruden et al., 2016). ECS also influences oxidative stress and inflammation which plays a critical role in development of diabetes and its complications (Horvth et al., 2012).

CA and chronic lung disease and the role of HRV and the ECS

Multiple studies have shown that CA increases the likelihood of chronic lung disease (Cunningham et al., 2014; Exley et al., 2015; Lin et al., 2021; Pape et al., 2021; Remigio-Baker et al., 2015; Westmore et al., 2022). Chronic lung disease includes the conditions of chronic obstructive pulmonary disease (COPD), sleep disordered breathing, and interstitial lung disease (*A Nationwide Framework for Surveillance of Cardiovascular and Chronic Lung Diseases*, 2011). Risk factors for chronic lung disease include genetics, smoking, obesity, history of asthma, chronic respiratory infections, and environmental pollution (Workman & Nabors, 2024). COPD commonly coexists with one or more additional diseases of varying severity, including cardiovascular diseases, diabetes, neurological and psychiatric disorders, musculoskeletal diseases, and lung cancer (Liu & Wu, 2025). Study by Remigio-Baker et all, 2015, showed that every increase in CA, the prevalence of asthma increased by 7%, and COPD by 21% (Remigio-Baker et al., 2015). The same study found correlation between verbal abuse, and asthma, as well as among household dysfunction, childhood maltreatment and likelihood of COPD. Patients with five or more CA had 2.6 times greater prevalence of COPD compared to those reporting none (Anda et al., 2008).

Autonomic dysfunction, and low HRV, are independently associated with quality of life in COPD (Van Gestel et al., 2011), with depression as a modulating factor (Kidwell & Ellenbroek, 2018; Liu & Wu, 2025). As compared with patients without COPD, the incidence of depressive symptoms is higher among patients with COPD and is negatively correlated with the patients' HRV indices. In contrast, HRV indices are positively correlated with the patients' pulmonary function parameters (Liu & Wu, 2025; Yang et al., 2025). The underlying mechanism of this correlation is due to autonomic dysfunction, inflammatory processes, and social behavioral modifications (Alqahtani et al., 2023; Yang et al., 2025). COPD has a negative influence in all HRV parameters, leading to sympathetic dominance, and cardiac autonomic dysfunction (Alqahtani et al., 2023). Sympathetic hyperactivity is also explained by

the pathophysiological changes in COPD, including recurrent hypoxemia, hypercapnia, increased intrathoracic pressure, increased respiratory effort, systemic inflammation, and use of beta-sympathomimetics for treatment (Van Gestel et al., 2011).

Modulation of the ECS has been studied in pulmonary inflammation and seem to play a complex role in chronic lung diseases. Increased concentration of AEA was found in bronco-alveolar lavage fluid of patients with allergic asthma, and AEA concentration correlated with severity of airway exposure activity (Zoerner et al., 2011). Elevated AEA, and not 2AG, in bronchioles contribute to inflammation and increased permeability of the epithelial cells in asthma, leading to decreased epithelial barrier function (Leuti et al., 2020; Shang et al., 2016). On the other hand, AEA, and cannabinoid receptor agonists have been successfully used in experimental airway diseases (Giannini et al., 2008; Leuti et al., 2020; Stengel et al., 2007). In addition, CB1R has been reported to inhibit airway hyperreactivity, CB2R signaling, leads to attenuated allergic response in asthma, and fatty acid amide hydrolase (FAAH), and monoacylglycerol lipase (MAGL) inhibition produces antitussive effects, and decreased lipopolysaccharide induced airway inflammation (Leuti et al., 2020).

CA and autoimmune diseases and the role of HRV and the ECS

Autoimmune diseases occur when the immune system attacks body's healthy cells, causing inflammation and damage to organs, joints, skin, or muscles. History of sexual, emotional, and physical abuse, any household dysfunction and having ≥3 types of CA were all associated with increased risk of immune mediated inflammatory disease (Köhler-Forsberg et al., 2025; O'mahony et al., 2025). CA is associated with an increased prevalence ratio of any studied autoimmune disease, particularly for Sjögrens, polymyalgia rheumatica, rheumatoid arthritis, systemic lupus erythematosus, and thyroid disease, and this association is mediated through depression, anxiety, and PTSD (Köhler-Forsberg et al., 2025), as well as through symptoms of dissociation, and alexithymia (Macarenco et al., 2021). Studies have shown that women show stronger association between CA, and inflammatory markers compared to men (Pitts et al., 2024).

Research has shown inverse relationship between HRV and inflammation, in both healthy individuals and those with cardiovascular risk factors (Alen et al., 2021). Rheumatoid arthritis is a chronic autoimmune disorder characterized by persistent inflammation that negatively impacts cardiovascular health, often leading to cardiac autonomic neuropathy (Goda et al., 2025). Several studies have shown compromised autonomic regulation in rheumatoid arthritis, as evidenced by reduced HRV and increased sympathetic control (Goda et al., 2025; Kumar Yadav et al., n.d.). Similarly, autoimmune dysfunction with decreased HRV, increased sympathetic, and decreased vagal activity, is observed in disease activity, in systemic lupus erythematosus.

The ECS exert its immunosuppressive properties through 4 main pathways: induction of apoptosis, inhibition of cell proliferation, inhibition of cytokines and chemokine production and induction of regulatory T cells (Rieder et al., 2010). The effect of endocannabinoids on immunomodulation depends on the type of cannabinoid, on the type of cells that they are acting on, and on the doses administrated. In optimal concentrations, cannabinoids can induce apoptosis in immune cells, alleviating inflammatory responses, and protecting the host from acute and chronic inflammation. Thus, they can be beneficial when an immune suppression is necessary (Rieder et al., 2010).

Mechanisms of CA Related Chronic Health Conditions

The effects of CA are likely a function of specific characteristics including timing, duration, type and severity of the trauma, and the response of different neurobiological systems to the trauma (M. D. De Bellis & Zisk, 2014). Chronic activation of the stress response systems leads to "wear and tear" on the body, resulting in inflammatory, neuroendocrine, and metabolic dysregulation (Danese & McEwen, 2012). Studies have suggested dysregulation of the autonomic nervous system (Alqahtani et al., 2023), the hypothalamic-pituitary-adrenal axis (Danese & McEwen, 2012), and the innate immune system, with increased levels of proinflammatory markers, including C-reactive protein (CRP), the cytokines, and tumor necrosis factor-a (TNF-a) (Herzog & Schmahl, 2018), as possible biological mediators between CA, and development of chronic health conditions in adulthood. Faster biological aging

due to prolonged and cumulative exposure to toxic stress secondary to CA may also explain the earlier onset of these conditions (Wen, 1998).

Possible mechanism of developing chronic conditions secondary to CA include biopsychosocial factors causing dysfunction of the stress response systems, inflammatory and the neuroendocrine systems, metabolic dysregulation, elevated levels of inflammatory markers, epigenetic changes, alterations in hormonal response to stressors, poor impulse control, inadequate sleep, binge eating, and depression.

Additional mechanisms of developing cardiovascular disease secondary to CA include oxidative stress, mitochondrial dysfunction, renin-angiotensin system dysregulation, and accelerated biological aging. Cardiometabolic health outcomes and adverse experiences are strongly patterned by sex, race/ethnicity, socioeconomic status, and nativity. In addition, using food as a maladaptive coping mechanism, may explain up to 50% of the relationship between CA and obesity.

Factors that increase the risk of chronic lung disease secondary to CA include obesity, diabetes, cardiovascular disease, liver disease, and smoking. In addition, chronic elevation of the sympathetic nervous system leads to downregulation of beta-sympathetic system, decreasing sensitivity of the beta-adrenergic system, and increasing vulnerability to chronic lung diseases like asthma.

Potential mechanisms that drive the comorbidity between pain and various psychiatric conditions include genetic overlap, psychological factors, immune factors, hypothalamic-pituitary-adrenergic system, and the opioid and endocannabinoid signaling systems. Brain activity in related cognitive emotional neural networks like amygdala and prefrontal cortex, are associated with pathophysiology of musculoskeletal pain (Hallman et al., 2014a; Meus et al., 2025), and poor adaptation, and increased sensitivity to pain (Hallman et al., 2014b).

Understanding CA-related Chronic Health Conditions: An Integrative Model

Childhood is a sensitive period for brain development and CA can lead to significant long-term effects (M. A. Bellis et al., 2019; M. D. De Bellis, 2005; M. D. De Bellis & Zisk, 2014), including decreased threshold to develop chronic health conditions later in life (Hammen et al., 2000). According to the Center of Disease Control (CDC), individuals with six or more adverse childhood experiences have an average life expectancy of 60.6 years, compared to 79.1 years for those with no reported trauma. CA increases chances of multimorbidity (England-Mason et al., 2018; Senaratne et al., 2024b), the full physical and psychological impact of which depends on the disease combinations, severity of coexisting conditions, and the age of the patient (Chronic Diseases: What Happens When They Come in Multiples?, n.d.).

Individuals with multimorbidity are more likely to die prematurely, be admitted to hospital, have longer hospital stays, poorer quality of life, and a loss of physical functioning (Bayliss et al., 2004; Fortin et al., 2004). Multimorbidity comes with its own challenges when it comes to management of the comorbid conditions (Townsend et al., n.d.). Management strategies when multiple chronic health conditions are present are different from when a person suffers from one health condition, as disease specific protocols are probably best suited to patients with single conditions who have not yet developed other diseases (Smith & O'Dowd, 2007).

Here we will summarize research findings we have highlighted in this paper. There are complex multifaceted interactions among various factors that lead to development, progression, and long-term trajectory of CA related chronic health conditions. CA causes dysfunction of the stress response systems including the hypothalamic-pituitary-adrenal axis, the autonomic nervous system, and the ECS, leading to chronic activation of proinflammatory and neuroendocrine systems. This leads to dysregulation of cardiovascular, immune, and metabolic systems resulting in chronic health conditions. Chronic health conditions lead to multimorbidity through factors including CA, prolonged inflammation, shared risk factors, and poor lifestyle (Watson et al., 2025). Multiple chronic conditions, lead to later-life adversities, such as physical limitations, loss of functioning, loss of productivity at work, economic burden, and decreased quality of life (Watson et al., 2025). Multimorbidity and resulting late onset adversities further overwhelm the stress response systems, that maintains the vicious cycle of stress and

chronic conditions (England-Mason et al., 2018; Fortin et al., 2004; Senaratne et al., 2024b; Skou et al., 2022). The ECS especially AEA and 2AG, and HRV are important biomarkers for the neurobiological mechanisms underlying CA-related chronic health conditions. They also act as important biomarkers for the stress response functions.

Based on the research findings so far, we propose a comprehensive integrative model (see Figure 1) that characterizes the complex interactions among CA, the stress response systems, and chronic health conditions. Such an integrative model is needed to understand the mechanisms underlying CA related chronic health conditions and their trajectory. That understanding will help develop and implement targeted interventions to prevent, treat, and monitor chronic conditions resulting from CA. We will discuss the clinical and research implications of the integrative model in the next section.

RESEARCH AND CLINICAL IMPLICATIONS:

Research is needed to explore each component of the integrative model which will enhance our knowledge about mechanisms, and processes underlying CA related chronic health conditions including: a) various neurobiological pathways, and psychosocial correlates that influence the development of chronic health conditions due to CA, b) individual interactions among different types of CA, and their link with specific chronic health condition, c) how dysfunction of the stress response system affects neurobiological responses to adversities later in life d) how chronic health conditions potentiate the dysfunction of the various neurobiological stress response systems leading to multimorbidity and late life adversities, among individuals with history of CA, e) Protective factors that mitigate the effects of CA, f) points of interventions during the process of development of chronic health conditions to facilitate primary prevention, and if they develop, timely management, and prevention of complications resulting from these conditions and, g) exploring potential of using HRV, and the ECS as biomarkers for disease pathogenesis, progression, and response to treatment.

Research is needed to solidify our understanding of mechanisms of specific types of CA on the neurobiological systems, including their effect on the different organ systems and development of individual chronic health conditions, as well as factors leading to multimorbidity. In addition, we need to better understand the differences between chronic health conditions that are related to CA and those that are not, including their progression, response to interventions, long term prognosis and their role in causing multimorbidity. Targeted management strategies can be developed if we have more knowledge about risk factors that lead to multimorbidity, protective factors that prevent it.

Knowledge about development of the ECS in the presence of different CA, and link with factors like genetic predispositions, prenatal exposure to toxins, and potential temporal relationship with chronic health conditions can help identify biomarkers, and possibly therapeutic agents specific to individuals with history of CA. This is especially important during adolescence, when many psychiatric conditions like mood and anxiety disorders first manifest.

Identifying potential components of the endocannabinoid signaling system (via serum or plasma measurement of endocannabinoids, imaging studies, or measuring endocannabinoid receptor density) for monitoring of treatment response to potential pharmacologic and nonpharmacologic interventions as well as determining treatment efficacy can play an important role in research studies and management of patients with history of CA and chronic health conditions.

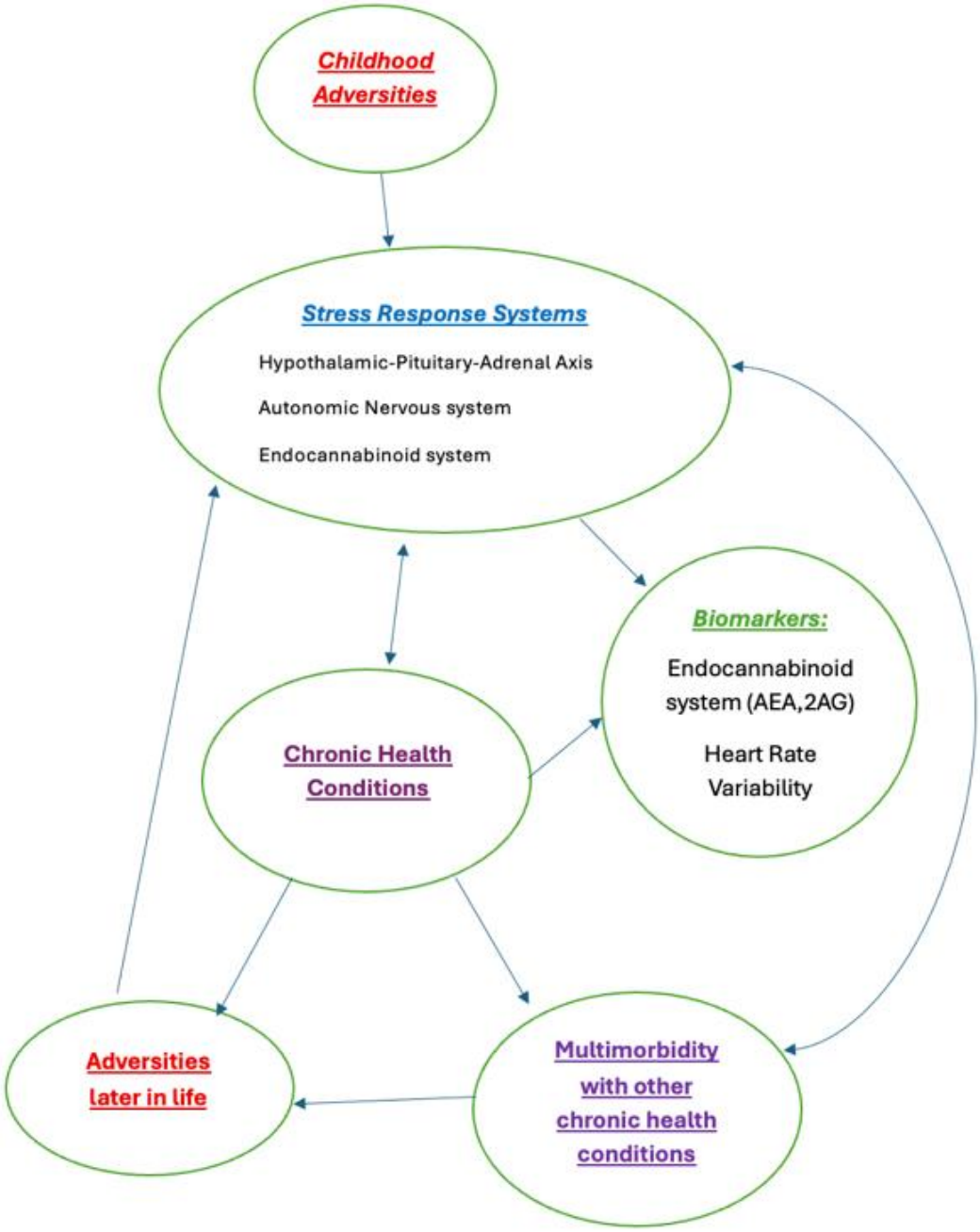
The ECS and HRV have a complex relationship with both having a bidirectional relationship with the autonomic nervous system, and the HPA axis, for which they also act as potential biomarkers. HRV and the ECS should also be explored as biomarkers for CA-related chronic health conditions to monitor disease pathogenesis, progression, treatment response, and prognosis. Research looking at the relationship between HRV and the ECS is limited, and we need more research to understand the link.

CONCLUSION

CA has long lasting deleterious neurobiological effects including dysfunction of stress response systems and the ECS, and development of chronic health conditions.

Figure 1.

Understanding CA-related Chronic Health Conditions: An Integrative Model



Understanding the mechanisms, and trajectory of CA related chronic health conditions can help develop and implement targeted interventions, and develop evidence based integrated trauma informed treatment programs.

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ANCHORS:
A NEUROSCIENCE-INFORMED RELATIONAL MODEL FOR CRISIS INTERVENTION

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ABSTRACT

Crisis intervention has long operated from a protocol-driven, symptom-focused paradigm. Existing models — including the SAFER-R model, Psychological First Aid (PFA), Critical Incident Stress Management (CISM), and Critical Incident Stress Debriefing (CISD) — provide structured frameworks for acute response but share a fundamental limitation: none are grounded in a coherent neurobiological theory of how human beings actually move through and recover from acute crisis. As a result, these models risk misalignment with the very nervous systems they seek to stabilize.

This paper introduces ANCHORS — Assessment, Normalize, Coregulate, Honor, Orient, Rapport, Synchronize — a neuroscience-informed, relationally grounded model for crisis intervention developed collaboratively by a licensed professional counselor and EMDRIA-certified trauma therapist and a registered nurse and Army combat medic whose career moved from military medicine through civilian paramedicine to emergency nursing, with extensive field experience in mental health crisis response across all three contexts. ANCHORS is rooted in Shapiro's Adaptive Information Processing (AIP) model, Porges' Polyvagal Theory, Siegel's Interpersonal Neurobiology, and the structural dissociation framework of Steele, van der Hart, and Nijenhuis.

The ANCHORS model rests on a foundational thesis that reframes the nature of crisis itself: crisis is not pathological — it is relational. Crisis emerges from disrupted connection and is resolved through relational attunement, neurobiological co-regulation, and the restoration of autonomy. From this premise, ANCHORS advances a seven-component intervention sequence that is neurobiologically ordered, person-directed, and designed for simultaneous deployment alongside medical assessment — making it uniquely applicable to both field-level responders and clinical practitioners.

The model has been field-validated through real-world application across six distinct professional contexts spanning nearly three decades of combined practice — combat medicine, civilian paramedicine, emergency nursing, hospital-based sexual assault response, pre-clinical crisis accompaniment, and mass casualty critical incident debriefing — and is proposed as the foundation for a cross-disciplinary training curriculum piloted through IronStar Peer Support & Resiliency. This paper presents the theoretical framework, step-by-step model architecture with AIP mechanism and evidentiary anchors, foundational principles of application, and implications for responder training and wellness.

Crisis is not pathological. It is relational. — Hensler Gordon & Lorenz, 2026

THE PROBLEM WITH CURRENT MODELS

The field of crisis intervention has produced several widely adopted frameworks over the past four decades. Each represents a meaningful contribution to the systematic study and practice of acute psychological support. Each also carries significant limitations that, taken together, reveal a structural gap in how the field conceptualizes crisis, the person experiencing it, and the role of the responder.

What follows is not an indictment of these models. Their developers responded to genuine need with the tools available at the time. It is, rather, an honest accounting of what they do not do — and an argument that the field is now equipped to do better.

Psychological First Aid (PFA)

Psychological First Aid, developed under the auspices of the National Child Traumatic Stress Network and the National Center for PTSD, represents one of the most widely disseminated crisis response frameworks in existence. PFA is deliberately non-clinical, designed for deployment by trained laypersons, first responders, and mental health professionals alike in the immediate aftermath of disaster or traumatic event.

Its strengths are real. PFA is evidence-informed, culturally adaptable, and appropriately modest in its claims — it does not position itself as treatment. Its eight core actions (contact and engagement, safety and comfort, stabilization, information gathering, practical assistance, connection with social supports, information on coping, linkage with collaborative services) reflect genuine understanding of what people need in the immediate aftermath of trauma.

Its limitations, however, are equally significant. PFA is atheoretical — it does not root its interventions in a coherent neurobiological framework. Its action sequence, while logical, does not reflect the actual neurobiological order in which a dysregulated nervous system can receive and integrate intervention. Stabilization, for example, is listed as a discrete step rather than recognized as the prerequisite condition for every other step that follows. Without neurobiological grounding, PFA practitioners may execute the correct actions in an order that the nervous system cannot use.

Perhaps most critically, PFA does not formally address the relational field — the responder's own nervous system state as a variable in the intervention. A dysregulated PFA provider applying technically correct steps is not delivering the same intervention as a regulated one. The model has no mechanism for this distinction.

Safer-R

The SAFER-R model — Stabilize, Acknowledge, Facilitate understanding, Encourage effective coping, Recovery or Referral — developed within the Critical Incident Stress Management framework, is designed as an individual crisis intervention tool for use by trained peer supporters and mental health professionals following critical incident exposure. It is practical, trainable, and structured in a way that field responders can apply under pressure.

SAFER-R is explicitly atheoretical by design. Its developers prioritized field applicability over theoretical rigor, and for a generation of crisis responders, that trade-off produced a usable tool. The limitation is that without theoretical grounding, SAFER-R cannot explain why its steps work — or why they sometimes fail. Practitioners are trained to follow the sequence without a framework for adapting intelligently when a person's presentation does not conform to the model's implicit assumptions.

The model also carries an embedded assumption that the responder is the expert on the person's internal experience. The responder assesses, stabilizes, facilitates, and encourages. The person in crisis is largely a recipient of these actions. The model has no formal mechanism for honoring autonomy, confirming perceptual accuracy, or including the person in directing their own intervention — which, as we will argue, is not merely a courtesy but a neurobiologically active component of recovery.

Critical Incident Stress Debriefing (CISD) and CISM

Critical Incident Stress Debriefing, developed by Mitchell (1983) and later embedded within the broader Critical Incident Stress Management system, represented a landmark contribution to the recognition that first responders require structured psychological support following critical incident exposure. CISM's multi-component system — including defusing, debriefing, individual crisis intervention, and follow-up

— remains the dominant framework for organizational crisis response in emergency services.

The evidence base for CISD has, however, been substantially contested. Multiple systematic reviews and meta-analyses have raised concerns about its efficacy and, in some implementations, its potential for harm. The mechanism of concern is not incidental — it is structural. CISD's group debriefing format opens active processing channels in a group setting, without individual assessment of readiness, tolerance, or dissociative presentation. From an AIP perspective, this risks activating unprocessed traumatic material without the relational scaffolding, window of tolerance assessment, or individual resourcing that safe processing requires.

The mandatory or strongly encouraged nature of CISD participation in some organizational cultures compounds this concern. Mandatory disclosure in a group setting, without individual consent and readiness assessment, replicates the very dynamic that trauma so often involves — an external authority determining what happens to a person's internal experience, on a timeline not of their choosing. The model, in these implementations, inadvertently enacts the relational rupture it seeks to heal.

This is not a failure of intent. It is a failure of neurobiological grounding — the same gap that runs through each of the models reviewed here.

The Shared Gap

Across PFA, SAFER-R, CISM, and CISD, four structural limitations recur:

- Atheoretical foundation. None of the existing models root their intervention sequences in a coherent neurobiological theory of crisis and recovery. Steps are logically sequenced but not neurobiologically ordered. The distinction matters: a nervous system in acute dysregulation cannot process information in a logical sequence — it can only respond to a neurobiological one.
- Protocol primacy over relational attunement. Each model positions the responder as the agent applying a protocol to the person in crisis. The person's moment-to-moment presentation, nervous system state, and expressed preferences are inputs to the protocol rather than directors of the intervention. This fundamentally mislocates expertise and replicates dynamics that compound traumatic injury.
- Absent autonomy framework. None of the existing models formally incorporate the restoration of autonomy as a discrete intervention component with neurobiological significance. Autonomy is at best implied and at worst structurally violated, as in mandatory debriefing formats. ANCHORS treats the honoring of autonomy as a neurobiologically active step — not a value statement.
- Responder nervous system unaddressed. No existing model formally positions the responder's own regulatory state as a clinical variable. ANCHORS holds that a dysregulated responder cannot coregulate. This is not a wellness claim — it is a competency claim, with direct implications for training and organizational culture.

These are not minor gaps. They represent a fundamental misalignment between how crisis intervention has been taught and how human nervous systems actually respond to acute threat, disrupted connection, and the presence of another regulated human being.

ANCHORS was developed to close this gap — not b discarding what existing models have contributed, but by providing the neurobiological spine they lack. The steps that follow are not arbitrary. They reflect the actual sequence in which a dysregulated nervous system can receive, integrate, and begin to recover from acute crisis — with a regulated, relationally attuned responder as the instrument of intervention.

Foundational Thesis

> *Crisis is not pathological. It is relational.*
> *— Hensler Gordon & Lorenz, 2026*

This single statement carries the full weight of what ANCHORS proposes — and the full weight of what it challenges. It is not a reframing for the sake of language. It is a substantive theoretical claim about the nature of crisis, the mechanism of recovery, and the role of the person arriving to help.

To say that crisis is not pathological is to refuse the medical model's colonization of an adaptive human experience. To say that it is relational is to locate both its origin and its resolution in the space between people

— in the nervous system's fundamental dependence on connection for regulation, meaning, and survival.

What follows are the four foundational principles from which ANCHORS is built. They are not aspirational values. They are theoretical claims, each of which has neurobiological grounding, clinical implication, and direct consequence for how the model is applied.

Principle One: Crisis Is a Normal Nervous System Response to Abnormal Circumstance

The DSM framework, while clinically useful for diagnostic and billing purposes, has had an unintended effect on how crisis is understood in the field: it has pathologized adaptive response. When a person in acute crisis presents with hypervigilance, emotional flooding, perceptual distortion, or dissociative symptoms, these are not signs of disorder. They are signs of a nervous system doing exactly what evolution designed it to do in the presence of overwhelming threat.

Porges' Polyvagal Theory provides the clearest neurobiological account of this. The autonomic nervous system responds to perceived threat through a hierarchical sequence: first the social engagement system, then the sympathetic fight-or-flight response, then the dorsal vagal shutdown response (Porges, 2011). Each of these is adaptive. Each is the nervous system's best available response to the conditions it is reading. None of them is pathology.

Levine's somatic experiencing framework reinforces this. Survival responses — the freeze, the flee, the fight — are biological, not characterological (Levine, 1997). They do not indicate weakness, instability, or disorder. They indicate a nervous system that perceived a threat and responded to it. The clinical task in crisis is not to correct the response. It is to provide the conditions under which the nervous system can complete its defensive cycle and return to a state of regulated engagement.

The practical implication for ANCHORS is significant: the responder who enters a crisis encounter expecting to observe and correct pathology has already misframed the intervention. The responder who enters expecting to encounter a nervous system doing its best under impossible conditions is positioned to actually help.

This reframe also carries profound consequence for the person in crisis. Being told, implicitly or explicitly, that their response is disordered adds a layer of shame and self-pathologizing onto an already overwhelmed system. Being met with the understanding that their response makes complete neurobiological sense is itself a nervous system intervention — one that begins to shift the defensive orientation before a single technique has been applied.

Principle Two: Crisis Is Relational in Origin and Resolution

Crisis does not occur in isolation. It emerges in the context of disrupted connection — to self, to others, to community, to meaning to the sense of a livable future. Van der Kolk (2014) has documented extensively that the most significant predictor of traumatic injury is not the nature of the event itself but the degree of relational support available before, during, and after it. Connection is not a comfort. It is a biological necessity.

Siegel's interpersonal neurobiology provides the framework through which this can be understood neurologically. The human brain is a social organ — it develops in relationship, regulates in relationship, and repairs in relationship (Siegel, 2012). The right hemisphere, which processes emotional experience, social cues, and somatic states, communicates directly with the right hemisphere of another person in proximity and attunement. This is not metaphor. It is the mechanism by which one regulated nervous system can stabilize another.

Schore's extensive work on affect regulation extends this further. Right-brain to right-brain communication — the transmission of regulatory information through tone, prosody, facial expression, gesture, and proximity — precedes and underlies any verbal intervention (Schore, 2012). The dysregulated person in crisis is reading the responder's nervous system before they process a single word. If the responder is dysregulated, that information is transmitted first. If the responder is regulated and present, that is transmitted first.

This is why ANCHORS positions the responder's own regulatory state not as a wellness consideration but as a clinical variable. It is not that a dysregulated responder is ineffective because they are having a bad day. It is that a dysregulated responder is transmitting dysregulation through the same right-brain channel

through which coregulation would otherwise flow. The intervention has already begun before the responder speaks — and it is either helping or harming.

The relational nature of crisis resolution carries equally significant implications. Recovery does not happen because the correct protocol was applied in the correct sequence. Recovery happens because a regulated human being was present, attuned, and willing to remain in connection with a person whose nervous system had lost its relational anchor. ANCHORS is, at its core, a framework for how to be that presence — with clinical intentionality and neurobiological precision.

Principle Three: Inclusion in the Intervention Is Neurobiologically Active

Every existing crisis model positions the responder as the agent of the intervention. The person in crisis is assessed, stabilized, processed, educated, and referred. They are the object of the protocol rather than a participant in their own recovery. This is not merely a philosophical concern. It has neurobiological consequences.

Trauma — and acute crisis as its precursor — is fundamentally an experience of helplessness. Van der Kolk (2014) identifies the loss of agency as one of the central mechanisms by which overwhelming experience becomes traumatically encoded. The person could not act effectively. Their response did not change what happened. Their sense of self as an agent in their own life was disrupted. This is the wound.

An intervention that replicates this dynamic — in which the person is again passive while someone else determines what happens to them, on a timeline not of their choosing, according to a protocol not of their understanding — is not neutral. It is a parallel process that reinforces the very helplessness it seeks to address.

When a person is included in their own intervention — when their perception of events is confirmed, when their emotional response is named and sanctioned rather than managed, when they are invited to direct the pace and depth of the encounter, when their choices are honored even when those choices are simply to stop — something neurobiologically distinct occurs. The prefrontal cortex, which governs decision-making, agency, and forward orientation, begins to come back online. The person is no longer purely in subcortical defensive response. They are beginning to think, to choose, to act.

This is not a small thing. The reactivation of prefrontal function in the midst of acute crisis is the beginning of recovery. It is the nervous system's first movement out of pure threat response and toward integration. And it is activated not by technique but by the experience of being included — of mattering enough to be asked, to be heard, to be followed rather than managed.

From an AIP perspective, this inclusion begins the process of accessing adaptive neural networks — the person's existing resources, strengths, and capacities — that trauma has temporarily blocked. The intervention is not installing something new. It is restoring access to what the person already carries.

Nikki Hensler Gordon has observed consistently across clinical practice and field consultation that people who are included in their intervention leave with greater self-efficacy, stronger internal locus of control, and a felt sense of having navigated something rather than having been processed through something. Timothy Lorenz has observed the same pattern across mental health crisis calls in emergency medical response — the calls that resolve are the calls where the person has been brought into the conversation as a participant. These observations are consistent with the neurobiological account. They are also the primary field validation from which ANCHORS was developed.

Principle Four: Responder Self-Regulation Is Clinical Infrastructure

The final foundational principle follows directly from the relational account of crisis and its resolution. If coregulation is the mechanism by which a regulated nervous system stabilizes a dysregulated one, then the responder's own regulatory state is not incidental to the intervention — it is the intervention's primary instrument.

This reframes responder wellness entirely. In most organizational contexts, responder wellness is positioned as a retention concern, a liability management strategy, or a compassionate acknowledgment that the work is hard. These framings are not wrong, but they are incomplete. They miss the clinical dimension: a responder who has not developed robust self-regulatory capacity cannot deliver coregulation. They may deliver the correct verbal

content. They may execute the protocol steps in sequence. But they cannot transmit regulatory information through the right-brain channel that makes the intervention neurobiologically effective.

Porges is direct on this point: coregulation is a biological imperative, not a therapeutic technique (Porges, 2011). It is what mammalian nervous systems do in proximity to regulated others. The responder does not have to try to coregulate. They have to be regulated. The coregulation follows from that state, not from a skill set applied on top of it.

The implication for training is significant and runs directly counter to how most crisis responder training is structured. Current training focuses almost exclusively on external skill — what to say, what to assess, what steps to follow, when to refer. ANCHORS holds that this is insufficient. Before external skill, there must be internal capacity. Before a responder can teach a person in crisis to breathe through their window of tolerance, they must have a window of tolerance themselves. Before they can anchor another nervous system, they must be anchored.

This is not an indictment of first responders. The cultures of emergency medicine, law enforcement, and fire services have systematically trained responders away from their own internal experience — for reasons that made operational sense in the contexts where those cultures developed. The suppression of emotional response in high-acuity environments can look like strength and may support short-term function. What it does not support is the relational capacity that effective crisis intervention requires.

ANCHORS does not ask responders to abandon their operational identity. It asks organizations and training programs to recognize that self-regulation is a clinical competency — one that must be developed, supported, and maintained with the same intentionality as any other professional skill. IronStar Peer Support & Resiliency was founded in part on this recognition: that responder wellness and responder effectiveness are not separate concerns. They are the same concern, viewed from different angles.

IV. Theoretical Framework

ANCHORS does not draw on multiple theoretical frameworks because more theory is better. It draws on multiple frameworks because each one illuminates a different level of the same phenomenon. Adaptive Information Processing describes what happens to experience when the nervous system is overwhelmed. Polyvagal Theory describes the autonomic architecture that determines whether processing is possible at all. Interpersonal Neurobiology describes the relational mechanism by which one nervous system creates the conditions another needs to recover. Structural Dissociation and Somatic Experiencing locate the body as the primary site of crisis experience — and therefore of crisis intervention.

These frameworks are not additive. They are convergent. Each arrives at the same clinical conclusion from a different direction: regulated relational connection is not a component of effective crisis intervention. It is the condition without which no other component functions. Understanding why requires tracing each framework to its point of convergence.

Adaptive Information Processing: The Architecture of Traumatic Memory

Francine Shapiro's Adaptive Information Processing model, developed as the theoretical foundation of EMDR therapy, proposes that the human brain has an inherent information processing system oriented toward integration, resolution, and adaptive functioning (Shapiro, 2018). Under normal conditions, this system processes experience fully — encoding it with appropriate affect, context, and meaning, and linking it to existing adaptive memory networks. The experience becomes part of the person's history without continuing to intrude on their present.

When experience overwhelms the system's capacity for integration — through intensity, duration, isolation, or the absence of relational support — processing is disrupted. The experience is stored in a state-dependent, fragmented form: with the original sensory detail, affect, and body sensation locked in place, disconnected from the adaptive networks that would otherwise contextualize and resolve it. This is the mechanism of traumatic memory. It is not a filing error. It is the system's best available response when full processing is not possible.

The clinical implication is direct: traumatically stored material remains neurologically present tense. It does not feel like a memory. It feels like now — because the

neural networks carrying it have no temporal context, no connection to what the person knows, believes, or has experienced since. Van der Kolk's formulation captures this precisely: the body keeps the score (van der Kolk, 2014). The nervous system does not distinguish between then and now when the processing channels are blocked.

For crisis intervention, AIP establishes three non-negotiable realities. First, acute crisis is a moment of active disruption to the information processing system — the window during which experience is being encoded, and during which the quality of relational support will directly influence whether that encoding is adaptive or maladaptive. Second, what happens in the immediate aftermath of crisis matters neurologically. The intervention is not separate from the encoding process. It is part of it. Third, processing requires specific conditions — sufficient window of tolerance, present-moment orientation, access to adaptive networks, and the absence of ongoing threat. Every component of ANCHORS is oriented toward creating those conditions.

AIP also provides the theoretical basis for understanding why autonomy and inclusion are neurobiologically active rather than merely ethical considerations. Helplessness — the absence of effective agency — is one of the primary conditions under which adaptive processing fails and traumatic encoding occurs (Shapiro, 2018). An intervention that restores the perception of agency, however incrementally, is intervening directly in the encoding process. It is not a courtesy extended to the person in crisis. It is a neurobiological act.

Polyvagal Theory: The Autonomic Prerequisite

Stephen Porges' Polyvagal Theory provides the autonomic architecture within which AIP processing either becomes possible or remains blocked (Porges, 2011). The theory describes a hierarchical organization of the autonomic nervous system, with three distinct neural circuits corresponding to three distinct states of physiological and behavioral organization.

The ventral vagal complex — the evolutionarily newest circuit, uniquely mammalian — supports social engagement: the capacity for connection, communication, co-regulation, and flexible response to the environment. It is the state in which AIP processing can occur, in which a person can receive information, make decisions, and integrate experience. It is also the state that is disrupted first when threat is perceived.

The sympathetic nervous system mobilizes in response to threat that the social engagement system cannot resolve — producing the fight-or-flight activation that is commonly recognized as the acute stress response. Heart rate elevates, attention narrows, the social engagement system goes offline. The person is no longer able to read faces accurately, modulate voice prosody, or receive relational input in the ways that ventral vagal connection requires. They are mobilized for survival, not for integration.

The dorsal vagal complex, the oldest circuit, produces immobilization in response to threat that cannot be fought or fled — the freeze, collapse, or dissociative shutdown that represents the nervous system's last-resort survival strategy. This is the state furthest from processing capacity, and the state most likely to be misread by untrained responders as calm, compliance, or resolution.

Porges introduced the concept of neuroception to describe the nervous system's continuous, subconscious scanning of the environment for cues of safety or danger (Porges, 2011). Neuroception precedes perception — the nervous system has already assessed the safety of the environment before conscious awareness registers. This is why the responder's regulated state matters before a single word is spoken. The person in crisis is neuroceiving the responder's autonomic state through vocal prosody, facial expression, gesture, and proximity. A regulated responder registers as safe. A dysregulated responder registers as an additional threat cue — regardless of what they say.

Polyvagal Theory maps directly onto the ANCHORS sequence. Rapport and Orient are ventral vagal activators — they signal safety and establish relational context. Coregulate is the explicit clinical application of co-regulation as a biological mechanism, not a technique. Honor restores neuroceptive safety by returning agency and confirming perceptual accuracy. Normalize reduces the sympathetic activation associated with shame and self-pathologizing. Synchronize — through somatic resourcing — directly targets autonomic state regulation, moving the nervous system toward the ventral vagal window within which integration becomes possible.

Interpersonal Neurobiology: The Relational Mechanism

Daniel Siegel's interpersonal neurobiology (IPNB) provides the relational mechanism that bridges Polyvagal Theory's autonomic account with AIP's information processing account (Siegel, 2012). IPNB holds that the mind is not solely a product of individual brain activity — it emerges from and is continuously shaped by the relational field. The brain develops in relationship. It regulates in relationship. It repairs in relationship.

Siegel's concept of the window of tolerance describes the optimal zone of arousal within which a person can process experience without becoming overwhelmed or shutting down (Siegel, 1999). Within this window, the nervous system has sufficient activation to engage with experience and sufficient regulation to integrate it. Below it, the person is in hypoarousal — dissociated, numbed, unreachable. Above it, the person is in hyperarousal — flooded, fragmented, unable to integrate. Crisis characteristically blows the window open. Effective intervention works to restore it.

The window of tolerance is not a fixed individual characteristic. It is a relational variable. Siegel's work, extended by Schore's research on affect regulation, demonstrates that the presence of a regulated other expands the window — that co-regulation is not supplemental to individual regulation but constitutive of it (Schore, 2012). This is particularly significant for field crisis intervention, where the responder cannot wait for the person's window to restore itself before beginning. The responder's regulated presence is the first intervention, and it is working on the window before any other step is taken.

Schore's right-brain to right-brain communication model provides the neurological specificity for how this occurs. The right hemisphere — dominant for emotional processing, somatic awareness, social cues, and implicit relational knowing — communicates directly with the right hemisphere of an attuned other through a channel that is nonverbal, rapid, and largely outside conscious awareness (Schore, 2012). Tone of voice, pacing, facial expression, gesture, and proximity are all carriers of regulatory information. This channel is active before language, faster than cognition, and more immediately influential on autonomic state than any verbal intervention.

For ANCHORS, IPNB establishes that the intervention is relational before it is technical. The responder does not apply the model and then relate to the person. The relating is the model's primary mechanism of action. Every component of ANCHORS is a structure for organizing and intentionalizing what the relational field is already doing — for better or worse — from the moment the responder arrives.

Structural Dissociation: The Body Holds the Crisis

The theory of structural dissociation of the personality, developed by Onno van der Hart, Ellert Nijenhuis, and Kathy Steele, provides a framework for understanding how overwhelming experience produces division within the personality system — and why crisis intervention must attend to the body as the primary site of both dysregulation and recovery (Steele, van der Hart, & Nijenhuis, 2005).

Structural dissociation theory proposes that trauma produces a functional division between the part of the personality oriented toward daily life functioning — the apparently normal part (ANP) — and the part that remains fixed in the traumatic experience and its associated survival responses — the emotional part (EP). In acute crisis, this division is active: the person may appear functional on the surface while a significant portion of their nervous system remains locked in threat response. This is the dissociative presentation that untrained responders most commonly misread as calm or recovery.

The theory's contribution to ANCHORS is primarily practical. It establishes that what the responder observes behaviorally is not a reliable index of what is occurring neurologically. The person who has gone quiet may be in dorsal vagal shutdown, not resolution. The person who seems compliant may be in structural dissociation, not engagement. Effective crisis intervention requires continuous assessment of autonomic state — not behavioral state — and the willingness to slow down when apparent calm does not match the context.

Structural dissociation also provides the framework for understanding why stabilization — resourcing in the ANCHORS model — must precede any attempt at processing. The EP, when activated, is not accessible to cognitive reframing, psychoeducation, or verbal intervention. It is in a survival state that predates

language and operates below the threshold of conscious control. What it can respond to is somatic — breath, bilateral stimulation, grounded physical presence, the felt sense of safety transmitted through the relational field. ANCHORS Synchronize step targets this directly.

Somatic Experiencing: The Body as Entry Point

Peter Levine's somatic experiencing framework contributes a critical practical dimension: the body is not merely the site of crisis — it is the entry point for resolution (Levine, 1997). Levine's foundational observation, drawn from ethological study of animals in the wild, is that prey animals routinely move through overwhelming threat and return to regulated baseline — not through cognitive processing but through the completion of biological defensive cycles in the body. Shaking, trembling, orienting, and the gradual restoration of normal breath and movement are the body's natural mechanisms for discharging survival activation and returning to homeostasis.

Human beings have the same biological mechanisms — and a cortex that frequently interrupts them. The social and cultural injunctions against visible emotional and somatic response — particularly in professional and first responder cultures — systematically prevent the completion of defensive cycles, trapping activation in the body and setting the stage for chronic dysregulation and traumatic symptomatology.

For ANCHORS, somatic experiencing establishes that crisis intervention which attends only to cognition and behavior is intervening at the wrong level. The nervous system in acute crisis is not primarily a cognitive system. It is a somatic system. Breath is the most accessible entry point — slow, diaphragmatic breathing directly activates the vagal brake and begins to shift autonomic state toward ventral vagal engagement. Bilateral stimulation — even informal, such as slow rhythmic tapping — engages the same bilateral processing that underlies EMDR's mechanism of action. Grounding techniques that bring attention to physical sensation in the present moment interrupt the temporal collapse that keeps traumatic material present-tense.

Levine's framework also supports the ANCHORS principle of following the person's nervous system rather than applying a protocol. Somatic experiencing is fundamentally a tracking practice — the clinician tracks the client's somatic indicators moment to moment and follows the body's lead toward resolution. This is the somatic equivalent of ANCHORS' person-directed application principle: the responder does not impose a sequence on the person's experience. They track it, follow it, and create the conditions under which the body's own regulatory mechanisms can reassert themselves.

The Convergence Point

Across five theoretical frameworks — AIP, Polyvagal Theory, Interpersonal Neurobiology, Structural Dissociation, and Somatic Experiencing — a single conclusion emerges with consistency: the nervous system in acute crisis cannot self-regulate in isolation, cannot process experience without sufficient window of tolerance, and cannot restore adaptive functioning without the relational conditions that make regulation possible.

Regulated relational connection is not one component of effective crisis intervention. It is the mechanism upon which every other component depends. This is the convergence point, and it is the theoretical foundation on which ANCHORS rests.

The ANCHORS sequence is not a list of steps derived from best practices. It is a neurobiologically ordered progression that moves from the establishment of relational safety — without which nothing else is possible — through the restoration of autonomic regulation, the confirmation of perceptual reality, the normalization of adaptive response, and the installation of somatic and external resources — toward the closing of an open processing channel with continuity and follow-through. Each step creates the neurobiological conditions that make the next step receivable. None can be skipped without consequence. None can be applied effectively without the regulated relational presence that the convergent frameworks identify as prerequisite.

It is also worth noting what these frameworks converge in rejecting: the notion that crisis intervention is something done to a person. AIP identifies agency as protective against traumatic encoding. Polyvagal Theory identifies neuroception of safety — including the safety of being met without coercion — as the prerequisite for ventral vagal engagement. IPNB locates the mechanism of change in the relational field, not in

the application of technique. Structural Dissociation identifies the misreading of apparent compliance as a clinical error. Somatic Experiencing identifies following the person's body as the path to resolution.

Every framework, from every direction, points toward the same practitioner posture: present, regulated, attuned, and following. Not administering. Not processing. Not completing a checklist. Accompanying a nervous system back toward its own capacity for regulation — and trusting that capacity to lead the way.

That is ANCHORS. And the next section builds it, step by step, with the neurobiological precision these frameworks provide.

V. The ANCHORS Model

The ANCHORS model — Assessment, Normalize, Coregulate, Honor, Orient, Rapport, Synchronize — is a neuroscience-informed, relationally grounded crisis intervention framework designed for simultaneous deployment alongside medical assessment in field and clinical settings. It is not a sequential checklist. It is a neurobiologically ordered set of relational interventions, each of which creates the conditions necessary for the next to be received.

The sequence matters. A dysregulated nervous system cannot normalize before it has been oriented. It cannot coregulate before rapport has established relational safety. It cannot integrate resources before autonomy has been restored. The order of ANCHORS reflects the actual neurobiological progression of a nervous system moving from acute dysregulation toward sufficient stability for forward functioning — not a logical ordering imposed from outside, but the sequence the nervous system itself requires.

The model is also designed for simultaneous deployment with clinical and field assessment. In EMS contexts, a responder is gathering vital signs, medical history, and situational information at the same time they are establishing rapport, orienting the person, and beginning coregulation. ANCHORS does not require the responder to stop assessing in order to intervene relationally. It recognizes that the relational intervention and the clinical assessment are the same encounter, happening in the same window of time, through the same regulated presence.

Finally, ANCHORS is person-directed. The responder holds the framework internally. The person in crisis directs the pace, depth, and movement of the intervention through their moment-to-moment nervous system presentation. The responder tracks and follows. The model provides the map. The person's nervous system leads the way.

> *The responder holds the framework. The person in crisis holds the wheel.*

A — Assessment

Assessment in ANCHORS is not a discrete first step that precedes intervention. It is a continuous, parallel process that runs beneath every other component of the model from first contact through follow-up. It is named first in the acronym because it is the clinical orientation the responder carries into the encounter — but it is never finished, never set aside, and never prioritized over the relational field it is operating within.

Assessment in the ANCHORS framework has three concurrent streams:

- Autonomic state assessment. The responder is continuously reading the person's nervous system state — not their behavior, but the autonomic indicators beneath behavior. Vocal prosody, breath rate and depth, skin color and temperature, muscle tone, eye contact, and orienting capacity are all autonomic indicators. Is this person in ventral vagal engagement — present, able to make contact, able to receive information? In sympathetic activation — hypervigilant, agitated, emotionally flooded, scanning for threat? In dorsal vagal shutdown — flat, dissociated, apparently calm in a context that does not warrant calm? The intervention at each subsequent step is calibrated to this reading, not to behavioral presentation alone.
- Safety assessment. Is the person safe in the immediate environment? Is there ongoing threat — physical, relational, or situational — that must be addressed before any psychological intervention is meaningful? ANCHORS does not proceed into coregulation and resourcing while the person remains in an active threat environment. Basic

physical safety is a prerequisite to psychological intervention, not a parallel track.

- Resource assessment. What does this person already have? What strengths, connections, capacities, and prior experiences of navigating difficulty are present and potentially accessible? Assessment in ANCHORS is not only a measurement of deficit and dysregulation. It is a tracking of adaptive capacity — because the intervention will ultimately work by restoring access to what the person already carries, not by installing something new.

In EMS and field contexts, assessment runs concurrently with vitals, medical history, and situational information gathering. The responder who is checking a blood pressure while speaking in a calm, measured tone, making appropriate eye contact, and moving without urgency is assessing and intervening simultaneously. ANCHORS does not ask the field responder to choose between clinical assessment and relational intervention. It asks them to recognize that they are already doing both — and to do both with intentionality.

N — Normalize

Normalize is the first explicitly verbal intervention in the ANCHORS sequence, and it targets a specific and time-sensitive neurobiological process: the secondary layer of activation generated by the person's response to their own response.

In acute crisis, the primary nervous system response — fear, grief, rage, dissociation, physical activation — is already present. What Normalize addresses is what happens next: the person observes their own response and begins to interpret it. In the absence of a normalizing frame, that interpretation is almost universally self-pathologizing. I am losing my mind. I am weak. I cannot handle this. Something is wrong with me. These interpretations are not incidental. They are a second layer of activation — shame, self-judgment, and fear of one's own internal state — layered onto the primary response and compounding its intensity.

From an AIP perspective, this secondary layer is significant because it becomes part of the encoding. The event is stored alongside the self-referential negative cognition it generated. This is one of the primary pathways by which acute crisis becomes chronic traumatic symptomatology — not the event itself, but the meaning the person made of their own response to it.

Normalize intervenes in this process directly. It provides an accurate neurobiological frame for what is happening before the self-pathologizing interpretation has time to consolidate. Practically, normalization sounds like:

> *"What you're feeling right now makes complete sense. Your nervous system is doing exactly what it's supposed to do. This is what humans do when something this big happens."*

Normalize is not reassurance. It is not telling the person that everything will be okay. It is providing an accurate account of their current experience as adaptive, expected, and neurobiologically coherent. The distinction matters clinically — reassurance is often received as minimization, particularly by first responders and others trained to distrust emotional language. Normalization that is grounded in neurobiological fact is received differently. It is information, not comfort, and it lands accordingly.

In first responder populations specifically, normalization carries additional weight. The cultural injunction against visible distress in emergency services is powerful and pervasive. A peer or clinician who names the physiological reality of acute stress response — without flinching, without lowering their voice, without the quality of handling someone fragile — is doing something that many responders have never experienced in a professional context. That naming is itself a relational intervention of significant depth.

C — Coregulate

Coregulation is the neurobiological core of the ANCHORS model and the component that most directly distinguishes it from every existing crisis intervention framework. It is not a technique applied by the responder. It is a biological process that occurs between two nervous systems when one is regulated and one is not — and when the relational conditions for transmission are present.

Porges is precise on this point: coregulation is a biological imperative, not a therapeutic choice (Porges, 2011). Mammalian nervous systems are designed to regulate in proximity to other regulated mammals. This

is not a metaphor for emotional support. It is a description of neurophysiological reality. The vagal brake — the mechanism by which the ventral vagal complex modulates heart rate, breath, and autonomic arousal — is responsive to social input: the sound of a calm voice, the sight of a relaxed face, the proximity of a non-threatening body. These inputs directly influence autonomic state.

Schore's research on right-brain to right-brain communication provides the transmission mechanism. The right hemisphere processes the social environment — facial expression, vocal prosody, gesture, timing, and rhythm — faster than conscious awareness and faster than language (Schore, 2012). Before the responder has spoken a complete sentence, the person in crisis has already received regulatory information through this channel. The content of that information is the responder's autonomic state. A regulated responder transmits safety. A dysregulated responder transmits additional threat.

This is why coregulation cannot be performed. It cannot be approximated by using the correct words while internally flooded. It cannot be simulated through practiced affect while the responder's own nervous system is in sympathetic activation. The person in crisis will neuroceive the discrepancy — not consciously, not as a cognitive assessment, but as a gut-level reading that something is off. That reading registers as an additional threat cue and narrows the window of tolerance rather than expanding it.

In field application, coregulation is expressed through:

- Vocal prosody — a calm, measured tone with sufficient warmth to activate the social engagement system. Not artificially soft or slow, which can read as condescending, but genuinely regulated.
- Pacing — moving without urgency in a non-emergent context. Matching the responder's movement speed to a regulated baseline rather than the urgency of the scene.
- Physical presence — positioning at or below eye level when possible, removing physical barriers, orienting the body toward the person rather than toward equipment or documentation.
- Breath — the responder's own breath rate is a coregulatory signal. Slow, diaphragmatic breathing is both a self-regulation tool for the responder and a somatic transmission to the person they are with.

The training implication is non-negotiable: coregulation cannot be taught to a responder who has not developed their own regulatory capacity. Before a responder can coregulate another nervous system, they must have sufficient access to their own ventral vagal state under pressure. This requires practice, not instruction. It requires the responder to have done their own work — which is precisely why responder wellness is a clinical competency requirement in the ANCHORS framework, not an organizational benefit.

H — Honor

Honor — the explicit recognition and restoration of the person's autonomy — is the component of ANCHORS most absent from existing crisis intervention models, and its absence is not incidental. Protocol-driven models are structurally oriented toward the responder's agency, not the person's. The responder assesses, decides, and acts. The person in crisis receives the intervention. Honoring autonomy requires a fundamental inversion of this orientation, and it requires it at a moment when the impulse to take control — to fix, to stabilize, to move efficiently toward resolution — is at its strongest.

The neurobiological case for Honor is grounded in AIP and Polyvagal Theory simultaneously. From an AIP perspective, helplessness — the loss of effective agency — is one of the primary conditions under which adaptive processing fails and traumatic encoding occurs (Shapiro, 2018). An intervention that restores even a minimal sense of agency interrupts this process directly. From a Polyvagal perspective, coercion — the experience of having no choice — is a neuroceptive threat cue that activates defensive responses and narrows the window of tolerance. Honoring autonomy removes that threat cue and supports the shift toward ventral vagal engagement that the rest of the intervention requires.

Honor in the ANCHORS framework has two distinct dimensions:

- Perceptual honor — confirming that the person's read on their situation is accurate. Yes, what you saw happened. Yes, your perception of events is correct. This matters because acute crisis and shock can produce significant perceptual destabilization — the person may be questioning their own account of reality. Confirming

perceptual accuracy is a direct neurological intervention that reduces the additional activation generated by self-doubt and grounds the person in their own experience.

- Decisional honor — explicitly naming and returning the person's right to make decisions about their own intervention. This is not a passive stance. It is an active, verbal restoration of agency: naming what the person can and cannot control in the current moment, identifying the decisions that are genuinely theirs to make, and making clear that there is no correct answer the responder is steering them toward.

The donor coordination practice described by Nikki Hensler Gordon prior to her clinical training illustrates decisional honor with precision. Calling a family in the immediate aftermath of a loved one's death, she would name explicitly: there is not a tremendous amount that you can control right now, but this decision — yes or no — is yours. There is no right answer. This framing did two things simultaneously: it acknowledged the reality of the family's loss of control without minimizing it, and it identified a genuine point of agency within that loss. That is Honor in field application.

For first responder populations, Honor carries particular clinical significance. First responders are trained to take command of scenes, to direct action, and to make rapid decisions for others under pressure. When a first responder is the person in crisis — following a critical incident, a line-of-duty death, a call that did not go as it should have — the experience of being directed, managed, and processed through a protocol can compound the sense of loss of control that is already part of the traumatic presentation. Honor meets this population where their training lives: it does not ask them to be passive. It restores them to agency within their own recovery.

O — Orient

Orient addresses one of the most clinically significant features of acute crisis: the collapse of temporal context. Traumatically stored material is present-tense — it does not feel like something that happened, but something that is happening. In the acute phase, before any processing has occurred, the person may be partially or fully embedded in the experiential reality of the event — perceiving threat that is no longer present, responding to stimuli that are no longer active, unable to access the here-and-now with sufficient stability to engage in the intervention being offered.

Orient is the intervention that reinstates present-moment context. It is not grounding in the therapeutic technique sense — though grounding techniques may be incorporated within it. It is the broader clinical act of helping the person locate themselves accurately in time, space, relationship, and physical reality. Where are we right now. What time is it. Who is present. What has already happened and what is not happening anymore. These are not rhetorical questions. They are neurological anchors, each one activating present-moment neural networks and providing points of connection to the here-and-now that the traumatic material is attempting to collapse.

Van der Kolk's work on the neuroscience of traumatic memory provides the theoretical basis for this step. The hippocampus — responsible for temporal context, spatial location, and the sequencing of memory — is significantly impaired under acute stress (van der Kolk, 2014). Without hippocampal contextualization, experience is stored without a timestamp and without a location. Orient works to keep the hippocampus engaged during the acute phase, providing the contextual anchors that support adaptive encoding rather than the fragmented, decontextualized encoding that characterizes traumatic memory.

Levine's orienting response concept from somatic experiencing adds a somatic dimension to this step. The orienting response — the natural impulse to look around, to scan the environment, to physically locate oneself in space — is a survival system function that, when completed, signals safety to the nervous system (Levine, 1997). Facilitating a slow, deliberate orienting response — inviting the person to look around the space, to notice what is physically present, to feel the ground beneath their feet — engages the body in the temporal reorientation that Orient targets at the cognitive level.

In field contexts, Orient is often woven into the early moments of contact naturally — naming the location, introducing who is present, providing a brief accurate account of what has occurred and what is currently happening. The clinical intentionality ANCHORS adds is the recognition that this orientation is not administrative context-setting. It is a neurological intervention targeting the hippocampus, the orienting

response, and the present-moment neural networks that make the rest of the intervention receivable.

R — Rapport

Rapport in ANCHORS is not a social nicety that precedes the real intervention. It is the relational foundation without which every other component fails — and it is, from a Polyvagal perspective, the first neuroceptive signal the person in crisis receives about whether the current environment is safe enough to begin moving toward regulation.

Rapport operates through the social engagement system — the ventral vagal complex and its associated cranial nerves that govern facial expression, vocal prosody, head turning, and the capacity to read the social environment (Porges, 2011). When rapport is established, the social engagement system is activated. When it is absent — when the responder is experienced as cold, rushed, clinical, or threatening — the social engagement system remains offline and the person stays in sympathetic or dorsal vagal defensive response. No other step in ANCHORS can function effectively from that state.

Rapport in the ANCHORS framework has a specific clinical meaning that is distinct from likability or conversational warmth. It is the establishment of a felt sense of safe connection — the person's neuroception of the responder as regulated, present, non-threatening, and genuinely oriented toward their wellbeing. This felt sense is transmitted primarily through the right-brain channel Schore describes: tone, pacing, facial expression, and the quality of attention the responder brings. It cannot be performed. It must be present.

In practice, rapport in field and clinical crisis contexts is established through:

- Honest, direct self-identification — who the responder is and why they are present, stated without jargon, without urgency, and without the clinical distance that reads as indifference.
- Genuine orientation toward the person — not toward the paperwork, the equipment, or the protocol. The responder's attention is the primary carrier of relational signal. Where it goes, the person's nervous system notices.
- Pacing that follows the person — not rushing the encounter toward its conclusion, not filling silence with words, not moving faster than the person's nervous system can track. Rapport is established in the responder's willingness to be present at the speed of the person's experience.
- Absence of judgment — the responder's internal orientation toward the person's response as adaptive and appropriate, transmitted through tone and expression, is the relational signal that most directly activates the social engagement system in a population that has learned to scan for judgment as a primary threat.

Rapport is also the container within which every subsequent step is delivered. Normalize without rapport is information delivered in a relational vacuum — technically accurate but neurologically unanchored. Coregulate without rapport is proximity without connection. Honor without rapport is a procedural acknowledgment of autonomy rather than a genuine relational restoration of it. Rapport is not step one in a sequence. It is the relational field within which the sequence becomes possible.

S — Synchronize

Synchronize is the closing movement of the ANCHORS model and the most integrated of its components. It names what the intervention has been working toward from the beginning: the alignment of the person's internal state, external resources, and forward orientation into sufficient coherence to support ongoing regulation and recovery beyond the acute encounter.

Synchronize operates at two levels simultaneously, both of which are essential and neither of which is sufficient alone:

- Somatic synchronization — the use of breath, bilateral stimulation, grounding techniques, and other somatic interventions to directly regulate autonomic state. Box breathing — four counts in, four counts held, four counts out, four counts held — directly activates the vagal brake and shifts autonomic arousal toward ventral vagal engagement. Slow bilateral stimulation — tapping alternating knees, alternating hand squeezes, or bilateral auditory tones — engages the same bilateral processing mechanism that underlies

EMDR's documented efficacy in trauma processing (Shapiro, 2018). These are not relaxation techniques. They are direct interventions on autonomic state, targeting the physiological substrate of dysregulation rather than its cognitive or behavioral expression.

- External synchronization — the identification and mobilization of concrete external resources that address the practical realities of the person's situation. Shelter, safety, law enforcement involvement, connection to family or community support, access to food, housing, or medical care. The neurobiological case for external resourcing is direct: a nervous system that remains in a threat environment — physically unsafe, without shelter, without basic needs met — cannot consolidate the gains of somatic and relational intervention. Maslow's hierarchy is not separate from the AIP model. It is a prerequisite to it. The responder who attends to psychological stabilization while leaving concrete needs unaddressed has closed only half the loop.

The integration of these two levels in a single step reflects the clinical reality of field crisis intervention. In the field, somatic resourcing and external resourcing happen in the same conversation, often in the same breath. The responder is teaching a breathing technique while simultaneously making a call to connect the person with a shelter bed. ANCHORS names this integration explicitly because existing models treat somatic and practical resourcing as separate domains — one clinical, one social work — when in practice they are inseparable components of the same stabilization process.

Synchronize also carries the model's central relational principle into its final expression. The somatic techniques offered are offered as invitations, not instructions. The external resources identified are identified collaboratively, with the person directing which resources feel safe and which do not. Even at the closing movement of the intervention, the person holds the wheel. The responder holds the map.

Sequencing, Simultaneity, and Person-Directed Application

Three principles of ANCHORS application require explicit statement because they are where the model is most likely to be misapplied in training contexts.

First, the sequence is neurobiologically required, not administratively preferred. Each step creates the conditions that make the next step receivable. Rapport activates the social engagement system. Orient reinstates present-moment context. Coregulate expands the window of tolerance. Honor restores agency and removes coercive threat cues. Normalize reduces secondary activation. Synchronize consolidates and closes. Moving out of sequence — normalizing before rapport is established, resourcing before autonomy has been honored, synchronizing before coregulation has created sufficient window — is not simply less effective. It is potentially retraumatizing, because it applies intervention at a level the nervous system is not yet able to receive.

Second, ANCHORS is designed for simultaneous deployment alongside medical assessment and clinical evaluation. The responder is not choosing between taking vitals and establishing rapport. They are doing both at the same time, through the same regulated presence, in the same encounter. The model does not add time to the intervention. It organizes the relational dimension of the intervention that is already happening — whether the responder intends it or not.

Third, and most fundamentally, ANCHORS is person-directed. The responder does not move through the steps on a clock. They move in response to the person's nervous system — tracking autonomic state continuously, following the person's pace, adjusting depth and direction based on moment-to-moment presentation. A person who moves quickly through disorientation into clear present-moment engagement does not need an extended Orient intervention. A person who remains in dorsal vagal shutdown does not receive Normalize as the next step — they receive continued Coregulate and gentle Orient until the window has opened sufficiently to receive verbal intervention. The model is the map. The person's nervous system is the terrain.

This is the clinical discipline ANCHORS requires and the reason responder training must include experiential practice rather than didactic instruction alone. Following a nervous system rather than a protocol is a skill developed through supervised practice, reflective feedback, and the responder's own ongoing self-regulatory development. It cannot be learned from a manual. It can be learned in relationship — which is, appropriately, exactly how the model itself works.

VI. Field Validation

The ANCHORS model was not developed in clinical research setting and then tested in the field. It was developed in reverse — extracted from what actually worked across nearly three decades of high-acuity intervention by two practitioners operating in radically different professional contexts, then formalized into a model with the theoretical scaffolding it deserved. This is not a limitation of the model's evidence base. It is a source of its ecological validity.

Ecological validity — the degree to which an intervention performs under real-world conditions rather than controlled experimental ones — is the chronic weakness of protocol-driven crisis models. They are built for ideal conditions and tested in environments where variables can be managed. Crisis does not occur in ideal conditions. It occurs in living rooms and on roadsides, in hospital waiting areas and on combat airstrips, over the telephone to families who have just lost someone. ANCHORS was built in those environments. Its validation is drawn from them.

What follows is not a formal research study. It is a structured account of cross-contextual field application — the pattern of intervention across four distinct professional environments, by two practitioners, over a combined span of approximately three decades. It is offered as proof of concept and as the foundation for a formal research agenda, which is proposed at the close of this section.

Timothy Lorenz: Military Medicine and Combat

Timothy Lorenz's crisis intervention experience begins in the United States Army, where he served as a combat medic in active deployment environments. From military service he transitioned directly into civilian paramedicine before completing his registered nursing degree — a career trajectory that moved through every tier of prehospital and acute care, accumulating crisis intervention experience in environments of escalating complexity and institutional support. Combat medicine is the most extreme context in which crisis intervention can occur: acute physical trauma is concurrent with acute psychological trauma, the threat environment is ongoing, resources are minimal, and the population — trained soldiers — carries the strongest cultural prohibition against visible distress of any group the ANCHORS model has been applied to.

In this context, the relational components of effective intervention are not supplemental to the medical ones — they are inseparable from them. A soldier who will not disclose the severity of their injury because disclosure feels like weakness is a clinical problem that no medical protocol resolves. A soldier in acute psychological crisis following combat exposure who reads the medic's own dysregulation as evidence that the situation is catastrophic has had their threat response amplified rather than reduced. The medic's regulatory state, their capacity to project calm without minimizing reality, their ability to restore a sense of agency to someone whose entire environment has become uncontrollable — these are not soft skills. They are survival competencies.

Lorenz developed his crisis intervention approach in this environment before he had clinical language for what he was doing. The pattern — establish presence and safety, orient the person to the current moment and what is actually happening now, regulate through voice and physical steadiness, confirm what the person is experiencing, normalize their response, restore what agency is available, and resource with what is concretely at hand — is the ANCHORS sequence. It was not derived from a training manual. It was derived from what worked when the alternative was losing someone.

The military context also provides the strongest available evidence for Principle Four of the ANCHORS foundational thesis: responder self-regulation is clinical infrastructure. In combat medicine, a medic who loses their regulatory anchor does not simply provide a less effective intervention. They become an additional variable in the threat environment. The capacity to remain regulated under conditions of extreme stress — to maintain ventral vagal access when the environment is producing every cue for sympathetic activation — is not a personal characteristic. It is a trained and practiced competency. Lorenz's ability to bring that capacity into civilian paramedicine and nursing is a direct transfer of a military-developed clinical skill, refined across three decades of escalating professional context.

Timothy Lorenz: Emergency Medical Services

Following his military service, Lorenz transitioned into civilian paramedicine — bringing the regulatory capacity and crisis intervention instincts developed in combat medicine into the field EMS environment. His

current practice as a critical care paramedic — functioning at CCP level through his RN licensure — in 911 and interfacility transport contexts brings the ANCHORS model into its most visible field validation environment. EMS mental health crisis calls — the person in acute suicidal crisis, the individual in psychotic break, the person experiencing acute grief or trauma response — are encounters in which the responder has no clinical infrastructure, no office, no intake process, and no guarantee of a follow-up system. The intervention is the encounter. What happens in that conversation is, for many people, the only acute mental health support they will receive.

Lorenz has developed a reputation within his service area for successful resolution of mental health crisis calls — calls that, under a protocol-only approach, would escalate to involuntary transport, law enforcement involvement, or both. The pattern of his approach, consistent across call types and presentations, maps precisely onto the ANCHORS sequence: establishing presence and rapport before gathering information, orienting the person to the current moment and to who Lorenz is and why he is there, coregulating through voice and physical steadiness, explicitly naming and honoring the person's right to participate in decisions about their own care, normalizing their response as neurobiologically coherent rather than pathologically aberrant, and synchronizing through breath and grounding before identifying concrete next steps collaboratively.

The success rate of this approach in a field EMS context is clinically significant for several reasons. First, it demonstrates that the ANCHORS sequence is executable in non-clinical environments without clinical support infrastructure. Second, it demonstrates that the model is effective when applied by a field EMS provider operating within scope of practice — which directly supports the model's proposed application in peer support and first responder wellness contexts. Third, it demonstrates that the relational approach is not slower than the protocol approach. Calls that are met relationally resolve. Calls that are processed through a protocol without relational grounding frequently escalate — consuming more time, more resources, and more personnel than the relational intervention would have required.

Lorenz is consulted by Hensler Gordon in real time on mental health crisis calls — a practitioner pairing that represents the model's cross-disciplinary design made visible. A field EMS provider and an EMDRIA-certified trauma clinician, operating in collaborative consultation, applying a shared framework across the boundary between field medicine and clinical mental health. This is what ANCHORS is built for.

Timothy Lorenz: Hospital Emergency Department and ICU

Lorenz subsequently completed his registered nursing degree and moved into hospital emergency department and intensive care unit settings — extending his crisis intervention experience into a context defined by a different kind of acuity: the family system in collapse alongside the patient. In emergency medicine, the person in the bed is frequently not the only person in crisis. The family in the waiting room, the spouse receiving a sudden diagnosis, the parent watching their child coded — these are the crisis presentations that emergency nursing encounters daily, without clinical mental health support, without a protocol, and without the luxury of time.

The hospital context introduces a specific clinical challenge that the ANCHORS model addresses directly: the simultaneous demands of medical assessment and psychological intervention. Emergency nursing requires continuous clinical monitoring, documentation, procedural execution, and coordination with a multidisciplinary team — all while being present with a family whose world has just collapsed. The model's design for simultaneous deployment is not a theoretical aspiration in this context. It is a practical necessity. The nurse who cannot integrate relational attunement with clinical function is not an effective emergency nurse.

Lorenz's ICU experience extends this further into the domain of prolonged crisis — families navigating days or weeks of acute medical uncertainty, the anticipatory grief of watching a loved one in critical condition, the decision-making around end-of-life care. In this context, the ANCHORS principles of honoring autonomy and including the person in their own process are not applied in a single intervention encounter. They are the relational posture maintained across every interaction over a sustained period. The family that feels managed and processed does not trust the medical team with the most consequential decisions of their lives. The family that feels seen, heard, and genuinely included in the process does.

The pattern Lorenz identified across emergency and critical care nursing is consistent with the AIP framework: the quality of the relational environment in which families navigate acute medical crisis directly influences the degree to which that experience is processed adaptively or stored traumatically. The hospital is not a neutral setting for psychological outcomes. Every interaction within it is either contributing to adaptive processing or to traumatic encoding. ANCHORS, applied within clinical nursing practice, is a framework for ensuring the former.

Nikki Hensler Gordon: Donor Coordination

Prior to her clinical training, Nikki Hensler Gordon served as an eye donation coordinator for the Lions Eye Bank of Wisconsin — a role that placed her in direct contact with bereaved families in the immediate aftermath of a loved one's death, by telephone, without clinical training, without in-person presence, and with a request that most people would consider impossible to make with integrity: asking a family in acute grief to make a decision about their loved one's body.

The constraints of this role are worth naming precisely because they constitute the most demanding possible conditions for relational crisis intervention: no physical presence, no body language, no ability to read somatic cues visually, no established relationship, no clinical credential, and a conversation that had to accomplish rapport, orientation, validation, normalization, and decisional honoring within a brief phone call to someone who had not asked to hear from her.

Hensler Gordon's approach, developed intuitively in the absence of clinical training, followed the ANCHORS sequence with a precision that is only visible in retrospect. She identified herself and the source of her information before asking anything — establishing who she was in relation to the family and grounding them in the current reality of who knew what and why she was calling. She named the weight of what they were navigating without minimizing it or rushing past it. She regulated through voice — the only channel available — projecting steadiness and genuine presence across a phone line to a stranger in crisis. She confirmed their experience explicitly: I cannot imagine what this is like. She normalized the overwhelm of the moment: there is a lot coming at you right now, a lot to be determined.

And then she did something that no donor coordination training manual told her to do, and that no existing crisis model formally names: she explicitly returned their autonomy in the middle of their loss. There is not a tremendous amount you can control right now. But this decision — yes or no — is yours. There is no right answer.

From an AIP perspective, this is a sophisticated clinical intervention. She identified the specific point of agency available to the family within a situation of near-total loss of control, named it explicitly, and handed it back without steering them toward a preferred answer. She was not managing their grief toward a donation outcome. She was meeting their nervous system where it was, providing the relational conditions for a genuine decision rather than a coerced or shock-driven one, and honoring their autonomy as the neurobiologically active intervention it is.

The families who said yes did so from a place of genuine agency. The families who said no were met without judgment — which is itself a relational intervention of clinical significance, because the absence of judgment is one of the primary neuroceptive signals that activates the social engagement system and expands the window within which authentic decision-making is possible.

Hensler Gordon did not have language for what she was doing at the time. She had attunement, self-regulation, and the willingness to follow someone else's nervous system rather than her agenda. Those are, it turns out, the core competencies of the ANCHORS model — and their presence in a pre-clinical context is precisely the point. ANCHORS is not a clinical invention imposed on human interaction. It is a formalization of what attuned, regulated humans naturally do when they are present enough to follow rather than lead.

Nikki Hensler Gordon: Sexual Assault Response

During her graduate clinical internship, Hensler Gordon served as a victim advocate at a hospital-based sexual assault treatment center in Milwaukee, Wisconsin — a city that has ranked among the highest in the nation for human trafficking prevalence, making the served population at this site among the most complex and multiply traumatized that crisis intervention encounters. Her role placed her at the intersection of acute medical response, law enforcement involvement, and profound relational crisis in a population whose

autonomy had been systematically and violently violated.

The internship role was structured around a principle that Hensler Gordon would later recognize as the operational definition of Honor in the ANCHORS framework: survivors were offered every option available to them and were not required to take any of it. Hensler Gordon was present as an accompaniment figure — there if the survivor wanted her, absent if they did not, and present at whatever level of involvement they chose at each stage of the process. Some survivors wanted accompaniment through the entirety of the medical protocol and law enforcement interview. Some wanted none of it. Most fell somewhere between, and that point of contact shifted moment to moment as the survivor's nervous system moved through the encounter.

This structure — accompaniment calibrated entirely to the survivor's expressed and observed preferences, with no default level of presence and no expectation of any particular response — is person-directed application in its most uncompromising form. Hensler Gordon was not there to complete an advocacy protocol. She was there to be a regulated relational presence at whatever proximity the survivor's nervous system could tolerate, for as long as that was wanted, and no longer.

The law enforcement interview accompaniment was the most clinically demanding dimension of this role. Survivors who chose to report were interviewed by law enforcement officers in the acute aftermath of assault — a context in which every neuroceptive threat cue that Polyvagal Theory identifies was potentially active. The survivor's social engagement system had been catastrophically disrupted. Law enforcement, regardless of individual officer skill, carries institutional associations that for many survivors — particularly those with prior system involvement or trafficking history — register as additional threat rather than safety. Hensler Gordon's function in those interviews was to be a regulated, non-coercive, genuinely present anchor in an environment saturated with activation. Her regulatory state was not supplemental to the interview process. It was the relational infrastructure within which the survivor could tolerate the process at all.

What is clinically significant about this experience in the context of ANCHORS is not its sophistication. Hensler Gordon was a graduate intern — a developing clinician without the theoretical framework she would later build. What is significant is that the structure of the role itself — the explicit offer of options, the absence of requirement, the calibration of presence to the survivor's expressed preferences, the accompaniment through institutional processes that carry inherent threat cues — enacted every foundational principle of ANCHORS before those principles had been named. The model did not produce this approach. This approach, and the similar patterns observed across the other field contexts described in this section, produced the model.

The sexual assault response context also provides the most direct possible evidence for the claim that honoring autonomy is neurobiologically active rather than ethically aspirational. Survivors of sexual violence are a population for whom the loss of agency is the wound — not a feature of the wound, the wound itself. An intervention that restores even incremental agency — you do not have to have me here, you do not have to talk to anyone, you do not have to decide anything right now except what you want in this moment — is not offering comfort. It is intervening directly in the mechanism of traumatic injury. Hensler Gordon's experience in this context is the clearest available illustration of why Honor occupies a discrete step in the ANCHORS sequence rather than being absorbed into a general trauma-informed care framework.

Nikki Hensler Gordon: Mass Casualty Critical Incident Debriefing

Following a mass casualty community event in Wisconsin, Hensler Gordon served as a member of a formal Critical Incident Stress Debriefing team for a law enforcement agency whose personnel had responded to the incident. The debriefing was conducted according to the standard CISD protocol — the same model critiqued in Section II of this paper. Hensler Gordon participated as a trained CCISM practitioner, following the protocol with fidelity and in good faith.

What she observed in the aftermath is the clinical observation this section is written to document. In the days and weeks following the formal group debriefing, several deputies approached her individually — some in person, some by phone — to discuss material that had surfaced for them as a result of the incident but had not been addressed in the group format. The presenting concerns were not uniform. Some deputies were activated by their direct involvement in the response.

Others were activated by the inverse — by having been assigned elsewhere that day, by the weight of not having been there, by a particular quality of survivor guilt that the group format had no mechanism to reach.

The pattern is clinically instructive on multiple levels. First, it confirms what the existing critical literature on CISD suggests: that the group format opens processing channels without the capacity to assess or respond to what surfaces individually afterward. The formal debriefing created movement in the nervous system. The individual follow-up contacts were that movement finding the relational container it needed — one that the protocol had not provided.

Second, and equally significant, is what those follow-up contacts looked like in practice. Deputies who initiated them were not seeking additional group processing. They were seeking exactly what ANCHORS describes: a regulated relational presence, an orientation to their specific experience rather than the group narrative, validation of their particular perception of events, normalization of a response that felt aberrant to them precisely because it differed from what they imagined others felt, and the autonomy to determine how much they disclosed and to whom. In each case, Hensler Gordon followed their lead — tracking their nervous system, honoring their pace, and resourcing toward whatever the individual needed rather than delivering a standardized follow-up protocol.

This observation does not constitute a condemnation of CISD or of the practitioners who delivered it. It constitutes a field observation of the gap that ANCHORS is designed to fill: the space between what a group protocol can reach and what a regulated, person-directed, neurobiologically informed relational intervention can reach. The deputies who came forward individually did so because something in them recognized that the formal process had not reached the wound. They sought the relational container that the protocol had not provided. That recognition — and the clinical response it called for — is ANCHORS in its most essential form.

Cross-Contextual Patterns and Proposed Research Framework

Across six professional contexts — combat medicine, hospital emergency and critical care nursing, field EMS, donor coordination, sexual assault response, and mass casualty critical incident debriefing — several patterns emerge with sufficient consistency to constitute cross-contextual field validation of the ANCHORS model:

- Relational attunement precedes and enables every other intervention. In no context did technical or procedural competence alone produce effective crisis resolution. In every context, the quality of the relational field — established through regulated presence, genuine orientation toward the person, and the absence of coercive urgency — determined whether subsequent interventions were receivable.
- Autonomy restoration is the most consistently underutilized and highest-yield intervention across all contexts. In every environment represented here, the explicit naming and returning of the person's agency — what you can decide, what is yours — produced measurable shifts in engagement, cooperation, and forward movement. In no context did it slow the intervention. In most contexts it accelerated resolution.
- Responder regulatory state is the primary variable. Across combat medicine, emergency nursing, EMS, sexual assault response, mass casualty debriefing, and telephone crisis intervention, the responder's own autonomic state was the most consistent predictor of intervention effectiveness. Regulated responders produced regulated relational fields. Dysregulated responders — even technically competent ones — produced escalation or shutdown.
- Protocol-driven models leave a relational gap that person-directed intervention fills. The mass casualty debriefing context demonstrated this most explicitly: the formal group protocol created movement that individual deputies then sought to resolve through relational, person-directed follow-up contact. The protocol opened the channel. ANCHORS-consistent practice closed it.
- The model is executable without clinical infrastructure. Lorenz's EMS application and Hensler Gordon's pre-clinical donor coordination work both demonstrate that the ANCHORS sequence can be applied effectively by practitioners without clinical licensure, in field conditions, without clinical support. This is the

model's most significant implication for training scope and dissemination.

These patterns constitute proof of concept. They are not a randomized controlled trial. They are the foundation on which a formal research agenda should be built — and they are a stronger foundation than most published crisis intervention models can claim, because they are drawn from high-acuity real-world application rather than controlled research environments.

The following research directions are proposed as the next phase of ANCHORS validation:

- Pre/post training data collection with the pilot volunteer department, measuring responder self-regulation capacity, crisis call resolution rates, and responder wellness indicators before and after ANCHORS training.
- De-identified case documentation protocol for EMS mental health crisis calls, tracking presenting situation, ANCHORS component application, call resolution, and follow-up outcome across a defined data collection period.
- Comparative analysis of ANCHORS-trained responders versus standard protocol responders on mental health crisis call outcomes, in partnership with a regional EMS system willing to support a controlled comparison.
- Qualitative study of persons who have received crisis intervention from ANCHORS-trained responders, examining their subjective experience of the encounter, perceived autonomy, and self-reported recovery trajectory.

IronStar Peer Support & Resiliency is positioned as the primary vehicle for training deployment and initial data collection, with the pilot volunteer department representing the first formal implementation site. The small, rural, volunteer context of the pilot department is not a limitation — it is an ecological validity asset. If ANCHORS performs in a resource-limited, volunteer EMS environment, it performs anywhere.

VII. Training Implications

A model is only as useful as its trainability. ANCHORS was designed from the beginning to cross the boundary between clinical and non-clinical responders — to be rigorous enough to satisfy a trauma clinician's theoretical standards and practical enough to be applied by a volunteer EMS provider on a rural 911 call at two in the morning. Achieving both requires a training architecture that is as carefully constructed as the model itself.

What follows is not a training curriculum. It is an account of the principles that must govern any training curriculum built on ANCHORS — the non-negotiables that distinguish ANCHORS training from the protocol delivery that characterizes existing crisis intervention education, and the structural requirements without which the model cannot be faithfully taught.

Principle One: You Cannot Train What You Have Not Done

The foundational training implication of ANCHORS is the one most likely to be resisted by organizations accustomed to didactic crisis training: the model cannot be taught didactically. Information about coregulation does not produce coregulation capacity. A lecture on the window of tolerance does not expand a responder's window. A PowerPoint slide on right-brain to right-brain communication does not develop the right-brain attunement it describes.

ANCHORS training must be experiential before it is didactic. Responders must practice regulating their own nervous systems under simulated pressure before they are asked to coregulate another's. They must have the experience of being met with genuine rapport, orientation, validation, and autonomy restoration before they are asked to provide it. They must feel the difference between being processed through a protocol and being accompanied through a relational intervention — because that felt difference is what they are being asked to offer, and it cannot be conveyed through instruction alone.

This principle has direct implications for training length, format, and facilitator qualifications. A half-day didactic overview of ANCHORS is not ANCHORS training. It is ANCHORS orientation. Full training requires sufficient time for experiential practice, reflective processing, and the beginning of self-regulatory skill development. It requires facilitators who have themselves done the work — who are not teaching from a manual but from an embodied understanding of what regulated relational presence actually requires.

Hensler Gordon's background as an EMDRIA Approved Consultant is directly relevant here. Consultation in the EMDR model is not supervision of technique. It is the process by which a more experienced practitioner accompanies a developing one through the integration of a relational model into their own nervous system and clinical identity. ANCHORS training, at its most effective, follows a similar arc — not instruction and testing, but guided practice, reflection, and the gradual internalization of a relational orientation that eventually operates without conscious effort.

Principle Two: Responder Self-Regulation Is the First Curriculum

Before ANCHORS can be taught as a crisis intervention model, it must be taught as a self-regulatory practice. This is not a philosophical position. It is a practical requirement that follows directly from the model's theoretical foundation.

If coregulation is the neurobiological core of the intervention — if the responder's regulated state is the primary instrument through which the model operates — then a responder who has not developed robust self-regulatory capacity under pressure cannot deliver the model effectively regardless of how well they know the steps. Training that skips this foundation is training responders to perform the external behaviors of ANCHORS without the internal state that makes those behaviors neurobiologically active.

Self-regulation curriculum in ANCHORS training includes:

- Autonomic literacy — the capacity to accurately read one's own nervous system state in real time. Responders must be able to identify when they have moved out of ventral vagal engagement and into sympathetic activation or dorsal shutdown, and to recognize the behavioral and somatic signals that indicate each state. Without this literacy, the responder cannot self-regulate because they cannot accurately assess what state they are regulating from.
- Somatic self-regulation practice — the same tools offered to persons in crisis in the Synchronize step, practiced by responders as their own regulatory toolkit. Box breathing, bilateral stimulation, grounding techniques, and orienting practices are not techniques to be dispensed to others. They are the responder's own infrastructure, developed through consistent personal practice until they are accessible under pressure without deliberate effort.
- Stress inoculation with regulatory practice — exposure to simulated high-acuity scenarios specifically designed to activate sympathetic response, followed by guided return to regulated baseline. The goal is not stress tolerance in the sense of suppression. It is stress recovery — the practiced capacity to move through activation and return to ventral vagal engagement. This is the regulatory skill that combat medicine develops by necessity. ANCHORS training makes it explicit and teachable.
- Reflective practice — structured reflection on one's own nervous system response to crisis scenarios, including the identification of specific triggers, patterns of activation, and the relational contexts that are most likely to challenge regulatory capacity. First responder cultures are not accustomed to this kind of reflective engagement with internal experience. ANCHORS training introduces it not as therapy but as professional development — because knowing one's own regulatory patterns is as essential to effective crisis intervention as knowing the steps of the model.

Organizations that resist the inclusion of self-regulation curriculum in responder training — on the grounds that it is too clinical, too personal, or too time-consuming — should be understood as organizations that are inadvertently training responders to apply ANCHORS incompletely. The self-regulation component is not ancillary. It is the foundation without which the rest of the training is theoretical.

Principle Three: Differentiated Application Across Credential Levels

ANCHORS is designed for application across a spectrum of credential levels — from volunteer peer supporters with no clinical training to licensed mental health clinicians with specialized trauma expertise. This is one of the model's primary practical strengths and one of its primary training challenges: the same model must be taught differently to different audiences without losing its integrity at any level.

The differentiation is not in the steps of the model. The steps remain consistent across credential levels. The

differentiation is in depth of application, theoretical understanding, and the complexity of presentations the practitioner is trained to manage.

- Peer supporter level — volunteer or trained peer, no clinical licensure. ANCHORS training at this level focuses on the relational and somatic components: how to establish regulated presence, how to orient and normalize, how to explicitly honor autonomy, how to offer basic somatic resourcing, and how to identify when a presentation exceeds peer support scope and requires clinical referral. Peer supporters are not trained to assess structural dissociation or to manage complex trauma presentations. They are trained to be a regulated relational anchor in the acute moment and to connect the person with appropriate clinical resources. That is precisely what the ANCHORS model makes possible at this level — and it is more than most peer supporters are currently equipped to do.
- Field responder level — EMT, paramedic, firefighter, law enforcement officer. ANCHORS training at this level adds the simultaneous deployment dimension: how to integrate relational intervention with clinical assessment, how to manage the regulatory demands of high-acuity scenes while maintaining ventral vagal access, and how to apply the model in the specific cultural context of emergency services — including how to approach first responder peers in crisis in ways that meet the cultural realities of those professions. Field responder training also addresses scope of practice explicitly: ANCHORS does not expand the scope of a field responder's license. It organizes the relational dimension of what they are already doing within that scope.
- Clinical level — licensed mental health clinician, social worker, psychologist, or counselor. ANCHORS training at this level engages the full theoretical framework and extends the model's application into clinical follow-up, ongoing therapy, and the integration of ANCHORS principles with existing evidence-based treatment modalities including EMDR, somatic experiencing, and structural dissociation-informed therapy. Clinicians trained at this level are also equipped to train and consult with peer supporters and field responders, creating a sustainable cascade of training capacity within organizations.

This tiered structure is not merely practical. It is theoretically consistent with the model's foundational principle that crisis intervention is relational rather than clinical — that the most important variable is not the practitioner's credential level but their regulatory capacity, relational attunement, and genuine orientation toward the person in crisis. ANCHORS at the peer supporter level and ANCHORS at the clinical level are the same model because they rest on the same relational foundation. The clinical level adds depth and complexity of application. It does not add a different kind of intervention.

Principle Four: First Responder Cultural Competency Is Non-Negotiable

ANCHORS training for first responder populations must be delivered with explicit competency in first responder culture — not as a courtesy, but as a clinical requirement. A training that does not account for the specific values, language, social norms, and relational patterns of emergency services will not be received by the population it is designed to serve, regardless of its theoretical rigor.

First responder culture has several features that are directly relevant to ANCHORS training:

- Identity coherence around operational competence. First responders define themselves professionally and often personally through their capacity to function under pressure. Training that positions self-regulation and emotional awareness as replacements for operational competence will be rejected. Training that positions them as enhancements to operational competence — as what makes the best responders better — will be received.
- Skepticism of clinical language. Terms like window of tolerance, neuroception, and structural dissociation are not part of the professional vocabulary of most first responders. ANCHORS training must translate its theoretical content into language that is functionally accurate and culturally accessible — without sacrificing the neurobiological precision that is the model's foundation. Lorenz's dual background in clinical nursing and field EMS makes him a particularly effective translator of this content for emergency services audiences.

- Peer credibility as the primary access point. First responders are more likely to receive training from someone who has done the job than from someone with clinical credentials alone. The authorship pairing of ANCHORS — a trauma clinician and a combat medic whose career ran through civilian paramedicine into emergency nursing — is not incidental to the training's reception in first responder contexts. It is the primary credibility mechanism. Training delivery should reflect this: wherever possible, ANCHORS training in first responder settings should be co-facilitated by a clinician and a peer with field experience.
- Organizational culture as a variable. Individual responder training is not sufficient if the organizational culture actively pathologizes help-seeking, penalizes visible distress, or treats peer support as a sign of weakness. ANCHORS training includes a leadership component that addresses organizational culture directly — not as a soft skills conversation, but as a clinical infrastructure argument. Organizations whose culture undermines responder self-regulation are organizations that are actively degrading their crisis intervention capacity.

IronStar Peer Support and Resiliency: Training Delivery Vehicle

IronStar Peer Support & Resiliency, co-founded by Nikki Hensler Gordon and Timothy Lorenz, is the organizational vehicle through which ANCHORS training is proposed for initial deployment. IronStar was founded on the recognition that responder wellness and responder effectiveness are not separate concerns — that the relational capacity required for effective crisis intervention is the same capacity that protects responders from cumulative traumatic exposure, and that both must be built and sustained with intentionality.

IronStar's model is peer-led and clinically informed — precisely the pairing that ANCHORS training requires. Peer supporters with field experience provide the cultural credibility and lived understanding that makes the training receivable in emergency services contexts. Clinical consultation and oversight provided by Hensler Gordon ensures that the training maintains its theoretical integrity and that peer facilitators have the support they need to navigate the complexity of what they are teaching.

The first formal ANCHORS training deployment is proposed in partnership with a volunteer fire and EMS department in rural western Wisconsin. This pilot site was selected not despite its resource limitations but because of them. A small, volunteer, rural department represents the most common type of emergency services organization in the United States — and the type most underserved by existing crisis intervention training programs, which are typically developed for and evaluated in large urban career departments with access to clinical support infrastructure.

If ANCHORS performs in a volunteer rural department — where responders have no clinical backup, where mental health resources in the community are scarce, where the same people who run the calls are the same people who show up to the town council meeting — it performs anywhere. The pilot is not a proof of concept for a specific demographic. It is a proof of concept for the model's fundamental claim: that regulated relational presence is the mechanism of effective crisis intervention, and that mechanism is available to any practitioner willing to develop it, regardless of credential level, organizational size, or resource environment.

Pilot Data Collection Framework

The pilot deployment will include a structured data collection framework designed to generate the initial evidence base for ANCHORS as a trainable, field-effective model. Data collection will be conducted in accordance with applicable ethical standards, with appropriate de-identification and participant consent protocols.

- Pre-training assessment — responder self-reported wellness indicators, self-regulation capacity, and confidence in mental health crisis response, administered prior to ANCHORS training.
- Post-training assessment — the same indicators administered immediately following training completion, with follow-up assessment at 30, 60, and 90 days to evaluate retention and integration.
- Call-level documentation — de-identified documentation of mental health crisis calls following training, tracking presenting situation, ANCHORS components applied, call resolution, and responder self-reported regulatory experience during the call.

- Qualitative interviews — structured interviews with trained responders at 90 days post-training, exploring their experience of integrating ANCHORS into field practice, barriers and facilitators to application, and perceived impact on both call outcomes and personal wellness.

This data collection framework is designed to be executable within the resource constraints of a volunteer department — minimal burden on responders, no requirement for clinical data infrastructure, and analysis capacity provided by Hensler Gordon and Lorenz through IronStar. It is the foundation of a research agenda that can grow as the training scales, and it positions ANCHORS for peer-reviewed publication with a genuine empirical base rather than theoretical argument alone.

CONCLUSION

The field of crisis intervention has not lacked for models. It has lacked for a model built on an honest account of what crisis actually is, what recovery actually requires, and what the person arriving to help actually needs to bring.

ANCHORS is that account.

Crisis is not pathological. It is a normal nervous system response to abnormal circumstance, emerging from disrupted connection and resolved through relational attunement, neurobiological co-regulation, and the restoration of autonomy. Every framework drawn on in this paper — Adaptive Information Processing, Polyvagal Theory, Interpersonal Neurobiology, Structural Dissociation, and Somatic Experiencing — arrives at this conclusion independently and from a different direction. Their convergence is not coincidental. It is the nervous system, described accurately, from five angles.

The ANCHORS sequence — Assessment, Normalize, Coregulate, Honor, Orient, Rapport, Synchronize — is the clinical translation of that convergence into a practical, trainable, field-deployable framework. Each step is neurobiologically ordered. Each creates the conditions that make the next receivable. None can be skipped without consequence. And all of them rest on a foundation that no technique can substitute for: a regulated human being, genuinely present, following someone else's nervous system rather than a checklist.

The gap this model fills is real and it is consequential. Every year, first responders arrive at mental health crisis calls equipped with protocols that do not account for the neurobiology of the people they are meeting, do not address their own regulatory state as a clinical variable, and do not formally restore the autonomy that crisis has disrupted. Every year, clinical practitioners apply crisis frameworks that are atheoretical, relational in language but not in mechanism, and structurally oriented toward the practitioner's agenda rather than the person's nervous system. Every year, peer supporters are trained to follow scripts in situations that require attunement.

ANCHORS does not solve all of this at once. It provides a coherent, theoretically grounded, field-validated starting point from which better training, better research, and better outcomes can be built. The pilot deployment through IronStar Peer Support & Resiliency represents the first formal implementation — a small, rural, volunteer department in western Wisconsin that is, in its very ordinariness, a more meaningful test of the model's real-world applicability than any controlled research environment could provide.

The authors bring to this model what no single discipline could contribute alone. Hensler Gordon brings the theoretical depth of EMDR training and consultation, the clinical breadth of trauma-specialized practice, graduate clinical formation in hospital-based sexual assault response with a multiply traumatized population including trafficking survivors, field experience as a CISD debrief team member following a mass casualty event, and the pre-clinical formation of relational crisis intervention learned through donor coordination before she had language for what she was doing. Lorenz brings nearly three decades of regulated relational presence under the most demanding conditions crisis intervention can produce — combat medicine, civilian paramedicine, and emergency nursing, in that order — and the field validation of the ANCHORS sequence across every one of those contexts.

Together, they bring what the field has been missing: a model that was built in the field, grounded in neuroscience, and tested against the hardest possible standard — not whether it works in a research protocol, but whether it works at two in the morning on a rural 911 call, with a person in crisis, and no clinical infrastructure within thirty miles.

It works.

The invitation now is to the field: to examine this model with the rigor it deserves, to test it against the evidence base that is proposed, to train with it, to adapt it for specific populations and contexts, and to build on it. ANCHORS is not a final answer. It is a better starting point — one that takes seriously what crisis actually is, what people in crisis actually need, and what it actually takes to help.

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SIX YEARS LATER: LESSONS LEARNED FROM THE LIVED EXPERIENCES OF YOUNG ADULT SURVIVORS OF THE STONEMAN DOUGLAS HIGH SCHOOL SHOOTING

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ABSTRACT

This study examined the lived experiences and perceptions of young adult survivors exposed to the Marjorie Stoneman Douglas High School Shooting. Qualitative findings indicate participants were aware of disturbing behaviors exhibited by the shooter prior to the incident, school administrators and teachers seemed unprepared on the day of the shooting, and poor communication the day of the incident compounded confusion and fear experienced by survivors. Immediately after the shooting, participants reported that support from their friend group proved to be most helpful in managing feelings of grief and loss, and measures put in place by administrators to increase safety on campus felt intrusive. These results can inform policy and practice for school administrators, teachers, law enforcement as it relates to prevention, mitigation and response to active shooter incidents.

Keywords: adolescents, trauma, friend group, school shootings, risk and protective factors, prevention, mitigation.

INTRODUCTION

School shootings involving multiple fatalities are more prevalent in the United States compared to other developed nations (Lankford, 2016). A simple review of media reports would suggest that the United States is experiencing an epidemic of mass shooting events. USA Today (Della Cava & Stucka, 2021) reports a marked increase in mass shootings during the COVID-19 pandemic, with 317 incidents from 2006 to 2016, and 385 from 2014 to 2020. The Gun Violence Archive, (GVA), frequently cited by media, reports a doubling of mass shootings from 2013 to 2020 (Fox, 2023). However, because GVA incorporates shootings that do not result in death, the numbers are grossly exaggerated when used to evaluate mass homicide prevalence (Fox, 2023).

According to the National Center for Education Statistics (2023), there is a low statistical risk of death from a school shooting. While these incidents are rare, the impact of a single violent death in a school setting presents an unspeakable tragedy. The rarity of such events does not lessen their tragic impact. Furthermore, the pervasive media coverage of public mass shootings amplifies fear among children and adults. Approximately one quarter of U.S. teenagers report being very afraid and another third report being somewhat afraid that they will experience a school shooting event (Lowe & Galea, 2017). This fear raises important questions regarding student safety, preparedness and active shooter response protocols (Huskey & Connell, 2021; Kaminski et al., 2010; Schildkraut, Cowan, & Mosher, 2022). The fear of victimization in school settingsis associated with various negative outcomes, including diminished concentration, avoidance behavior, poor academic performance and reduced self-esteem (Huskey &

Connell, 2021; Barrett et al., 2012; Randa & Wilcox, 2012).

Survivors and witnesses of mass shootings often experience severe psychological distress and trauma that can have long-lasting effects on their mental health (Novotney, 2018). The experience of witnessing or surviving a mass shooting can shatter one's sense of safety and security, leading to symptoms such as flashbacks, nightmares, hypervigilance, avoidance of reminders of the event, and emotional numbing. These symptoms can significantly impair functioning and quality of life for survivors and witnesses. In addition to the direct impact on individuals, mass shootings can also have ripple effects throughout communities, leading to heightened fear, grief, and collective trauma (Lowe & Galea, 2017; Cohn & Teruelle, 2019; Mclaughlin & Kar, 2019).

Adolescent survivors of mass shootings can experience compounded mental health repercussions, especially those directly exposed to the traumatic event or possessing pre-existing risk factors. These traumatic experiences can lead to a range of psychological issues such as post-traumatic stress disorder (PTSD), depression, anxiety, and survivor's guilt among others. Studies have documented a PTSD incidence ranging from 12 to 29 percent among mass shooting survivors (Novotney, 2018; Lynsey, Miron, Orcutt, Kumpula, 2014) a higher number than the average prevalence of PTSD among trauma survivors overall. Addressing these mental health needs is crucial for the well-being and recovery of survivors (Cimolai, Schmitz & Sood, 2021).

The Parkland Shooting

On February 18, 2018, a former student from Parkland high school armed with an AR-15 committed one of the most lethal school shootings in history, killing 14 students and 3 teachers, injuring 17 others, and leaving behind a community of survivors forever changed by this tragic event. In the five years following this event, numerous studies have examined different aspects related to the event including: lessons learned and missed opportunities to provide schools and communities recommendations to prevent future attacks (Schildkraut, J., Cowan, R. G., & Mosher, T. M. 2022); the impact of news/social media coverage (Austin, Guidry, & Meyer, 2020; Aslett, Webb Williams, Casas, Zuidema, & Wilkerson, 2022; Holody & Shaughnessy 2022) and youth civic engagement and social action following the shooting (Gecker, Augsberger, Collins, & Barber, 2021).

Few studies have examined the survivors of school shootings in terms of the student's own perceptions of the incident and the events leading up to it, the teacher and school response, and the impact of these factors on how the experience was processed by survivors. This study sought to examine the lived experiences the day of the event and in the years following. Specifically, the experience that day and impressions of what happened, as well as long term consequences the years following the event. Findings from this study can help to inform policy and practice for school administrators, teachers, law enforcement, and mental health providers as it relates to prevention, mitigation and response to active shooter incidents.

METHODS

Participants

Eligible participants were survivors of the Parkland Shooting. All participants (N=11) were enrolled students present at school on the day of the event, but none were physically harmed or had direct contact with the shooter during the attack. One of the interviewees was a surviving family member of an individual who was killed in the attack. Many of the participants in this study knew of the shooter and were part of an extracurricular organization designed to instill leadership, discipline, and teamwork in high school students and attract them into a military career post-graduation. These survivors were adolescents when the traumatic event occurred and are now college age young adults.

Given that mass shooting survivors are a particularly vulnerable group that is difficult both to identify and access, participants were recruited through a key informant that identified as a survivor of the shooting. These survivors wished to share their experience for research purposes as part of their healing process, while at the same time providing practitioners across disciplines a greater understanding of the impact of the trauma and how it unfolded in their lives since.

Procedures

This study was approved by the IRB at Nova Southeastern University, Protocol Number 2023-266. Upon receiving IRB approval, the research staff contacted the key informant, who in turn contacted potential participants to let them know about the opportunity to participate in a confidential research study related to their experience as a survivor of the Parkland shooting. If interested, potential participants were given a phone number to contact the study staff about participation. Once in contact, the study staff explained the nature of the project and, if interested, the participant provided an email address. The consent form was then reviewed, signed, and returned by the participant via email. The study staff were available to potential participants to answer questions about the study or the consent form.

Once consent was obtained, the participant was sent the study related materials and information related to the in-depth interview to be conducted online using the Zoom platform. The Zoom interviews were expected to take no more than 90 minutes to complete. Given the sensitive nature of the subject matter discussed during the interviews, a licensed psychologist was waiting in a breakout room during each interview. They could be called upon at any time by the interviewer if necessary. One hour was allotted for the interview itself, and an additional 30 minutes were set aside for an optional debrief with the psychologist in the breakout room. Only 1 respondent chose to participate in the debriefing session. Although camera on/video presence during the interview was optional for participants, all chose to be on camera during the interview.

Measures

A semi-structured interview guide was created by the study PI and Coinvestigators. This guide was aimed to elicit a discussion of a respondents' experience during and immediately following the shooting. Specifically, participants were asked describe what happened that day. In addition, participants were asked about specific topics at various time points following the shooting to assess short term (0-2 months), intermediate (2 months to 1 year), and long-term impact (1 year or more). The topics included response from family, friends, the school, and the community; impact on physical and mental health, social life/relationships, and day to day routine/behaviors; coping skills and service use; exposure/use of social media; and feelings/opinions related to gun control policy. The open-ended questions allowed for subsequent probing and discussions related to the lasting impact of the experience.

Data Analysis

Open Ended Interviews

The transcripts generated through Zoom were used as the basis for the data analysis. To ensure the accuracy of the transcripts, the recordings were reviewed alongside the transcripts and corrections were made to the transcripts where necessary. Once reviewed, these transcripts were used for the qualitative analysis.

An interpretative phenomenological approach (Smith, Flowers, Larkin, 2021) was used for analysis of the in-depth interviews. The initial coding process encompassed a close line-by-line reading and coding, naming each line or segment of data to identify patterns in the experiential material, first for single cases and then across multiple cases. The goal was to develop a structure and frame to illustrate the relationships between experiential themes.

To ensure coding accuracy and interrater reliability, coding was simultaneously conducted by multiple members of the research team, with each member independently coding 2-3 transcripts. This generated a total of 248 initial codes. Codes were then reviewed by members of the team and following a second review of the transcripts and codes, memos and notes were revised into recurrent themes. These themes were then organized and compiled into 14 broader categories based on the aforementioned topics discussed during the interview, and each category had subthemes which were paired with participant responses (See Table 1).

RESULTS

This study examined the lived experiences and perceptions of young adult survivors exposed to the Marjorie Stoneman Douglas High School Shooting five years later. From the student's own perceptions of the incident and everything leading up to it, various themes emerged related to prior knowledge/experiences with

the shooter, response by teachers/school and law enfocment the day of the incident, social group response post incident, and school response post incident. These themes are described in detail below.

Prior Knowledge of Shooter/ Experiences with the Shooter

The interviews revealed that during the time leading up to the event, many participants and school officials were aware of odd and disturbing behaviors exhibited by the shooter prior to the incident. In addition, the majority of the participants indicated that they knew of the shooter, prior to the incident and that they either had class with him in the past or shared extra-curricular activities together.

> *We met originally, I think, in seventh grade when I moved I moved about halfway through seventh grade down to Florida, and I think I met him in either in classes or through mutual friends, but I know in middle school* (participant 1).

Almost all of the participants reported and provided examples of odd and disturbing behavior by Cruz's throughout his tenure at Stoneman Douglas.

> *He would take my homework, he was very disruptive in class, like just wouldn't take tests. He would rip it up instead. He would talk to my friend group before the bell would ring, and he would make comments like, you know, I wanna join the military to kill people, and there was instances where he brought like bullet shell casings to class and school, or he would bring like knives. . . . My math teacher definitely was terrified of him. Never really disciplined him* (participant 3).

> *He was different obviously you could tell when someone has autism, or like a little weird, or you know little extra weird I guess not like just a little weird, like a little extra weird, a little special weird, you know* (participant 1)?

. . . the bullets in the backpack. He had knives in his bag at all times, and the fact that he was known as SS (school shooter) (participant 11).

He was a different kind of person. He would lean over to people and sniff them and talked about how much he loved guns and shooting (participant 8).

In addition to these reports, he was also known to damage school property, including student property. According to participant 11:

> *We all had all of our projects lined up along the back sink of the classroom, and like he didn't want us to all get good grades. So he went and stomped on all the projects like destroying all of them. And then he was found with like, I want to say bullets in his backpack, and I remember like writing a handwritten report with my teacher*.

Several respondents also reported disciplinary action taken against Cruz. According to participant 3, he was suspended for throwing a rock through a door; participant 7 noted that he was expelled from school freshman year. In addition, participant 11 reported that Cruz had been removed from campus the first day of school the year the shooting took place.

> *. . . the first day of school, the year of the shooting, he was on campus and he was not supposed to be. He was not a student there, and so my teacher went to security and said, he is not supposed to be here. He is up to no good, and they removed him. He was scoping out the school to know what to do.*

Although all participants reported being surprised that the shooting happened in their school, they were not surprised when they learned who was responsible. According to participant 3:

> *. . . this kid's going to shoot up the school, and nothing really happened. And then the shooting happened. You had all these, you know, things leading up to it and being told and warned about this*

Table 1. Code Categories

Category	Number of Subthemes
Prior Knowledge of Shooter/ Experiences with the Shooter	16
Experience the Day of the Incident	43
Teacher & Law Enforcement Response the Day of Incident	5
Mental Health Impact & Response	28
School Administration Response Post Incident	37
Parent response short term	19
Friend response short term	9
Views on Guns	19
Behavioral changes long term	34
Experience of media response	17
Experience of subsequent school shootings	6
Mental Health Impact long term	15

person, and no actions really were like, taken seriously.

Experience the Day of the Incident/Teacher & Law Enforcement Response

School administrators and teachers seemed unprepared on the day of the shooting, and poor communication on the day of the incident compounded the confusion and fear experienced by survivors on that day. For many participants, the unrelated fire drill that occurred the morning of the shooting made the second real alarm in the afternoon confusing, making them question the drill's validity. According to participant 10, at first students were assured it was a drill, then told later by a school administrator whose husband was on the scene that it was real and not a drill. According to participant 12:

so we're all like confused. We're like, what? What's going on like? Why, why are we doing this? Firearms going off go outside. We just had the drill today.

Similarly, other participants recalled:

. . . . students walked outside but not the typical distance as we would for fire drill, then were told to run back inside to main conference room (participant 11).

Why would there be two drills in the same day? And then we saw people running and we were like oh, that's pretty weird, why are people running back to the school? And then we heard people yelling, shooter there's a shooter! Then the speakers came on and they said, we are in a code red, please get to cover (participant 8).

And then all of a sudden, this one teacher like with pure panic in her eyes. She just goes, everybody run, like everybody, just like Run! And like, it was like, a stampede, like everybody in the parking lot, just like booked it back inside. And I remember just being pulled by like, administrators and like teachers like into a door and everything (participant 7).

Some participants thought the shooting victims lying the hallways were actors put there as part of the drill. Participant 5 stated:

A lot of us were kind of like making jokes because we didn't think it was like, real. My teacher opened [the door] to peek outside the room and said there were fake actors out there, and so that kind of caught us off guard.

Participant 8 reported, *when I saw people run down the hall screaming and crying is the moment it became real*. Similarly, participant 7 described:

I remember hearing people scream like, outside, like, I don't know if it was like, students who like, couldn't get into a room, you know, because, like, the rule is, you can't open the door once it's shut. Like that's, like you can't do that, or whatever. I remember hearing people scream.

Several participants also realized it was a shooting when they started to hear shots.

So we're sitting there and we're going back in. And then he tells us, go to the back of the classroom. Go in the corner, sit down, get by on the tables. And we're like, okay, this is weird. Don't quite know what's happening, and then sometime on I can't tell. I can't remember exactly when, but that's when we started hearing the shots (participant 12).

Upon realizing the imminent danger, participants explained the measures they used to stay safe, including barricading doors w/furniture. Many explained feeling unsafe in the classroom due to numerous windows, blinds that did not close, and the inability to lock the classroom doors. Participant 1 stated:

We tried to cover the windows, and then we tried to barricade the doors just a little bit with some chairs and bookshelves and stuff, and then we were there for probably close to an hour.

Similarly, participant 7 recalled:

We barricaded the door with, like all this furniture, and like filing cabinets and everything and our instructor, just kept saying, like, don't open the door, don't open the door. They'll [the SWAT team] open the door like, they'll bust open the door.

Some students reported texting their parents/family during the shooting. Most wanted to let parents/family members know they were safe, and others were trying to see whether there were news reports that could give them a clue into what was happening. Participant 8 explained how she was warned by her teacher to stop texting:

> *Teachers kept telling at us to be quiet and off our phones while we're trying to like tell our parents where like alive and okay. And it got to the point where she's like, oh, put your phones away. Or I'll put you in the hallway.*

Overall, most respondents expressed fear, confusion, and frustration with administrators and teachers not knowing what was going on and not advising students effectively. For example, participant 1 stated:

> *Teachers did not know what was happening, told kids to get inside. Scary that the teachers didn't know, I expected them to know.*

When they were finally able to come out of hiding, participants shared that when the SWAT team and Army National Guards busted through door, it was scary and triggering. According to participant 7:

> *They all told us to put our hands up, and like, I just remember like, shaking. I was so scared they had these huge guns like, pointed at us like, and then we had to walk out the building with our hands up. It was like we were walking through them like they were both on like the side of us, and we were walking in the middle of them. So they were almost like, kind of shielding you. Yeah, like, they were just like standing there like facing us, like with their guns.*

> *The SWAT team came in. Kicked the door in, and then we hear the police radio saying that the suspect is in a junior ROTC uniform. Then they got him in custody. And they told us just like, go like, get out of here, go home, all the roads were locked down so we just started running home* (participant 8).

Some of the participants also reported seeing wounded students being carried out of the freshman building, and one had a friend who was shot in the leg while running away. She later saw her friend with a tourniquet on her leg. As they were walking out, some also reported seeing students on the ground. According to participant 5:

> *They had this walking out in the line with our hands up. They kept telling us to like, make sure we look up because there was like, other kids that were hurt that were like, in the hallway. And so that was weird. And then I mean you, you kind of had to walk past like, yeah, like I had to walk over one person.*

Respondents described that many who were missing could not be identified right away causing more fear, frustration, and confusion. According to participant 7:

> *I didn't know who had been killed but was getting texts about people who others hadn't heard from.*

Similarly, another shared that at 2 AM the following day, she received a call from her friend that his sister was one of victims (participant 8). Participant 1 reported that he could not find his younger sister during the chaos, so he waited at the scene but then decided to take a bus to the Marriott (command center) to see if they had any information.

> *My sister was actually one of the 17 that passed away. So, we didn't actually find her and we didn't find out until about 2 AM* .

Several participants indicated that they knew of some of the victims.

> *A friend of mine could not find his brother who was killed, and then found out he had been killed* (participant 11).

> *I knew a few people that got hurt in class* (participant 10).

> *I knew two people that died* (participant 5).

> *Unfortunately [my friend], his younger brother, he died* (participant 4).

Participants also reported that when the shooting happened, the media announced that the suspect was in custody and they recognized the name and it clicked that it was Nicholas Cruz.

He would sign ss on things for school shooter, so I honestly at one point forgot his name. We just, all knew him as like, school shooter. So, when the shooting happened, and everyone was saying his name, we are all like, why do we all know this name? And then we were all like, Oh, my goodness! Like, he did it! So, I was pretty familiar that he was going to one day do something crazy. Just didn't think it would be this (participant 11).

Friend/Social Group Response Post Incident

Despite the criticism of school administrators and teachers the day of the event, participants reported great appreciation for their core group of friends. Participants shared that they: *"relied on their friend group to support one another"* (participant 10); "*gathered at each other's homes*" (participant 7); *"friend group got closer and more supportive"* (participant 5). It seems like the group banded together and leaned on one another during this diffcult tme. According to participant 8:

It got to the point that like, my friends would all come to my house. And we would just like hang out like stay on the couch and we would just like all fall asleep, pretty much like. I would be I'd be like laying in bed, like 11 o'clock at night and my friend would just walk in my room and he's like, I'm here to sleep. And I was like, Okay, like, cool like, come sleep . . . . he would fall asleep but he couldn't sleep alone so like, he would always come to my house for like, those first couple of weeks.

Participant 8 went on to explain how her home became a safe space:

So I remember I had this one picture of when I came home. I didn't know any of my friends were here and I have like, five of my friends just knocked out on my bed because they all knew like, my house you can like, that's is a safe place because that's where everybody goes when they're like not feeling okay.

Participant 2 explained how helpful it was to receive support from those who had survived the shooting:

When it first happened the only thing I wanted to do was be surrounded by other people that went through the same thing as me and we could all talk about it together. I really didn't like talking about it with others, like my parents, because they wouldn't understand having not gone through it.

Participant 3 also spoke about the importance of friends, "*we spent every waking moment together, and the way of like me, coping is. We, we definitely got closer because, you know, you're all experiencing the same thing.* Similarly, participant 5 stated that "*we were all gonna be like a lot closer and like supportive and we all would understand. But my friends are super helpful*." The most poignant description of the support experienced by the friend group came from Participant 8 who explained:

They're [friends] texting me because they're like, I can't sleep. So it's like, everyone just kind of texting each other those late hours of the night not knowing what to do with themselves. . . . It's like random parts of the day. And like, I need to be here and then all my other friends would be they come over and be like, I need to be here. . . . It was a pretty big group. There was probably like at least like 10 of us in this friend group, if not more. I've always been kind of that like central friend for everyone like connecting everyone.

School Administration Response Post Incident

Following the shooting, the school was closed for nearly 1 month. The participants described how they were reintroduced to school and the measures put in place to protect the faculty, students and administration. For example, metal detectors were put in, bag searches were conducted, there was increased police presence, and students were required to use clear backpacks. To minimize the amount of students roaming the halls, IDs were required. Although these measures were put in place with the best of intentions, they seemed to make our respondents feel alienated. Participants reported *"feeling like I was in a jail and no longer a school*;" *"clear backpacks were only an illusion of safety;"*(Participant 3, 7, 8,) and participant 12 reported that *"armed guards treated us like criminals."* According to participant 3:

So we'd have more BSO [Broward Sheriff Officers] come in. They would come in on campus, and they would kind of patrol, and they would have their ARs [AR-15 rifle] on them, but it would be in a backpack,

and all these students would have an uproar about it, like oh, this is not what we meant for having security. Like well, you complained about wanting security, and now it's here, and you don't like it.

Participant 3 further explained the difficulty associated with efforts to keep everyone safe; there seemed to be no clear consensus on how to handle it.

We don't want metal detectors like, that's just gonna be a hassle. . . . So then they came with the clear backpacks again. Students and everyone in the community complained about it some more. It was like there was no middle ground. It was like either. This is really ridiculous. This won't solve anything, or this is too much like, it's just traumatizing so it was really hard to find the middle.

Likewise, other participants described that the police and armed guards carried assault rifles; in some cases they had the same gun used by Cruz during the incident. As illustrated by the quotes below, the presence of the armed guards proved to be detrimentral to the survivors.

It was like, a lot of people were like, concerned about their like, privacy with the clear backpacks and stuff like that. So nobody enjoyed that. I think it was like, it was either swat or like, the police, but they would like, walk around with like, AKs [AK-47 rifle]. Which is weird. But I mean it was nice. We knew we were safe, but also at the same time, like we didn't want to see that first hand coming back because it's like a trigger. So it kinda like it caught me off guard. I didn't like it too much, but I mean, at least I was safe (participant 5)*. Then it was the clear backpacks. . . . then it was the searching. I played sports, and every time I came into school I had to go through checkpoints now, and they searched my sports bag, even though, like, I've known those principals 4 years, and, like some of them were my coaches. I couldn't go to my car anymore. Like to get things, like during the day, and it was just so much like, the clear backpacks were crazy like, that was horrible. And then another thing that was so bad after we came back was the armed guards, and then, whenever you asked about why there were armed guards like everywhere, they would just say, well, like, there's a high statistic or whatever, for after school shooting like, it motivates others to do another one, or whatever so like, we just want to be safe. And I'm like, okay, but like, you're there like, these armed guards like, SWAT team, whatever are using like, the same rifle the kid had, we're just staring at it and like, walking by it every day. Can't be good for everyone. There's no way that's good for us* (participant 7).

One of the most articulate criticisms about the post shooting response from the administration came from participant 12 who stated:

I didn't mind being back because I did get to be with my friends. I did mind how the administration treated us. I feel like they treated us like we were the dangerous ones. The fact the bag rules started, and then the whole you couldn't leave your room without an ID. And then the rules just became dumber and dumber, in my opinion. They assigned more cops. I'm not saying you have to have a standing army to protect a school. But when we get treated by hall monitors, I call them hall monitors, or 'rent a cops,' whatever you want to call them, the security, the county and place in the school, and I get treated like a criminal every time I leave my classroom, I have a big issue. Because I'm not that, I'm not Nick Cruz. . . :It was an intrusion on my privacy. Especially how the security talk down to us. It felt like a prison. But they overdid it, and did a TSA's version of we need to make it look like we're doing our jobs, even though we're just treating everyone like prisoners.

DISCUSSION

Overall results show that many participants were aware of disturbing behaviors exhibited by the shooter prior to the incident, school administrators and teachers seemed unprepared the day of the shooting, and poor communication on the day of the incident compounded the confusion and fear experienced by survivors on that day. Further, immediately following the shooting,

participants found comfort in their friend group and the school administration's mitigation responses were not met with positive assessments from survivors.

Prevention & Mitigation

Participants in this study validate the previous findings related to the prevention and response failures of the Stoneman Douglas High School shooting. While hindsight allows for clearer analysis, it's essential to glean lessons learned from the lived experiences and perceptions of the survivors themselves. Ensuring seamless communication and information sharing between school administrators, teachers, counselors, and law enforcement is vital. This includes promptly reporting suspicious behaviors and sharing relevant information about students' mental health and disciplinary history. Participants consistently reported how the disturbing behaviors exhibited by Nicholas Cruz prior to the shooting were well known and reported . Establishing robust threat assessment teams composed of school administrators, mental health professionals, and law enforcement officers could help evaluate and address potential threats posed by students. Regular evaluations and follow-ups on concerning behaviors could also aid in preventing violent incidents.

According to an article in the Sun Sentinel, Dec. 28, 2018, failures by the Broward County Sheriff's Office and school district cost children and faculty their lives at Marjory Stoneman Douglas High School(https://projects.sun-sentinel.com/2018/sfl-parkland-school-shooting-critical-moments/). After the tragic shooting, there were various measures implemented to enhance security and safety at the school. One of these measures was the introduction of clear backpacks and an increased police officer presence on campus.

While these measures were intended to increase security and reassure students and parents, survivors in our study did not appreciate the clear backpack policy and the heightened police presence. They felt that these measures did not adequately address the underlying issues related to gun violence and school safety. Additionally, some students expressed concerns about the loss of privacy and individuality associated with the clear backpack requirement. The increased officer presence also seemed to allow some participants to feel safe, however the automatic weapons they carried were simultanously triggering. Further research is needed to examine the impact of school rules and policies on the mental health of survivors following a school shooting.

Friend Group

Findings from this study illustrate a strong reliance on the "friend group" to assist in coping with this traumatic experience. Survivors in this sample highlighted the importance of their friend group in providing strength and solace during such a traumatic incident. This group offed a sense of emotional stability and understanding, while providing a safe space for them to express their emotions. Having the support from a group of people who experienced the same traumatic event can lead to an unspoken bond. Survivors often find comfort in knowing that their friends went through similar experiences and can relate to their feelings and struggles on a deep level. The importance of the friend group in this study is in line with previous findings related to the reliance on peers and friends for support and connection following a school shooting (Turunen et al., 2014).

In the chaotic aftermath of a school shooting, maintaining a sense of normalcy can be crucial for survivors' mental well-being. Some of the participants recalled making jokes with their friends helped to lighten the mood. Friend groups also operate as a valuable support network where members of the group can lean on each other for strength and encouragement.

CONCLUSION

This study adds to the limited body of literature related to how best to support survivors of school shootings. Effective responses to a critical incident like a school shooting often require seamless collaboration and communication among school administrators, teachers, and law enforcement. This qualitative study's findings highlight the importance of fostering strong relationships and clear lines of communication among these stakeholders. Insights from the study shed light on the role of school administrators and teachers in strategies for prevention and mitigation.

Finally, the study's findings may inform the development or refinement of policies aimed at preventing school shootings and mitigating their impact. This study provides valuable insights from the perspective of the survivors themselves, into the complex interplay of factors involved in such incidents and offers guidance for enhancing preparedness, prevention, and recovery efforts.

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TRAUMA, GRIEVANCE, AND RADICALIZATION: UNDERSTANDING PSYCHOLOGICAL PATHWAYS TO TARGETED VIOLENCE

DENNIS ALEXANDER PRACHT

ABSTRACT

Exposure to traumatic stress causes a wide variety of psychological and social effects. While trauma is often studied in clinical and therapeutic settings, it's possible role in grievance formation and pathways to targeted violence receives less attention. This article looks at how trauma exposure can disrupt identity, shape perceptions of injustice, and lead to social isolation. These factors can interact with ideological narratives and online communities that reinforce grievance-based perspectives. Using research from psychology, criminology, and threat assessment, the article explores how trauma can influence behavioral paths that, in rare cases, lead to extremist mobilization or targeted violence. Understanding these dynamics is important for crisis management professionals, threat assessment teams, and intelligence experts who work to identify and reduce risks before violence occurs. The article concludes with a discussion of trauma-informed approaches for prevention and crisis management.
Keywords: traumatic stress, radicalization, grievance development, targeted violence, threat assessment, crisis management

INTRODUCTION

Traumatic experiences affect individuals across every community, profession, and social environment. Exposure to violence, combat, abuse, sudden loss, or disaster can lead to lasting psychological effects that influence how individuals see and understand the world. Research in psychology and criminology consistently links trauma exposure to depression, anxiety, emotional dysregulation, and social withdrawal. These effects often shape relationships, perceptions of authority, and personal identity.

Most individuals who experience trauma never engage in criminal or violent behavior. Many show resilience and form stronger bonds with family, community, and support networks. However, trauma can also change how people interpret stress, conflict, and perceived injustice. In some cases, these altered perceptions become part of a larger pattern of grievance development.

Understanding how trauma interacts with other risk factors is becoming more important for professionals involved in crisis management, threat assessment, and violence prevention. Targeted violence and extremist radicalization rarely result from a single cause. Instead, they develop through a combination of personal vulnerabilities, environmental pressures, and ideological influences. Trauma can be one element within that broader process.

TRAUMA AND IDENTITY DISRUPTION

Trauma often disrupts a person's sense of stability and personal identity. Events involving violence or life-threatening situations can challenge deeply held beliefs about fairness, safety, and control. People may struggle to reconcile traumatic experiences with their previous understanding of the world.

Psychological research shows that trauma survivors often attempt to rebuild meaning after distressing events. Some people discover that meaning through recovery, service, or renewed dedication to family and community. Others go through long periods of confusion, anger, or mistrust.

During times of identity disruption, people often look for explanations that fit their experiences within broader narratives. Ideological movements and extremist groups sometimes offer simple explanations for complicated personal struggles. These stories often depict individuals as victims of systemic injustice or societal betrayal.

For someone already struggling to interpret traumatic experiences, these narratives can seem convincing.

They provide structure, a sense of identity, and purpose during times when individuals may feel lost or disconnected from previous sources of meaning.

GRIEVANCE FORMATION AND SOCIAL ISOLATION

A common element in many cases of targeted violence is the presence of deeply held grievances. These grievances can arise from personal conflicts, perceived humiliation, ideological commitments, or broader social frustrations. Often, individuals who commit acts of targeted violence see themselves as victims of unfair treatment or systemic oppression.
Trauma can increase these perceptions. People with unresolved trauma might become more sensitive to threats or disrespect. Emotional regulation becomes more difficult, and minor conflicts may feel deeply personal or humiliating.

Over time, these dynamics can put a strain on relationships and weaken support networks. Friends, colleagues, and family members may withdraw or struggle to understand behavioral changes. As relationships break down, individuals may become increasingly isolated.

Social isolation fosters the growth of grievance narratives. Without the moderating voices of trusted peers, people may become more focused on personal perceptions of injustice. Sometimes, these perceptions develop into rigid belief systems that justify violence as retaliation.

TRAUMA WITHIN RADICALIZATION PATHWAYS

Radicalization rarely emerges from a single factor. Research on extremist recruitment consistently identifies a combination of identity crisis, grievance, ideological exposure, and social reinforcement as key elements in the process (Horgan, 2005; McCauley & Moskalenko, 2017).

Trauma can shape these elements in several ways. People who experience traumatic loss, humiliation, or violence may develop a strong urge to regain control or restore their personal dignity. Extremist groups often manipulate these emotional states by presenting involvement in a cause as a way to find purpose and recognition.

Online environments have intensified this trend. Digital communities enable people to connect with others who share similar grievances or frustrations. These spaces often reinforce narratives of injustice and victimization. Within such communities, traumatic experiences can be reinterpreted as signs of larger social conflicts or cultural struggles.

The result can be a gradual change in worldview. Personal suffering is seen as part of a bigger struggle against perceived enemies or oppressive systems. Ideological narratives provide validation and identity, while online communities strengthen dedication to those beliefs.

Trauma alone does not lead to radicalization. Most trauma survivors reject violence and create productive lives. The concern appears when trauma combines with isolation, ideological reinforcement, and increasing grievances.

IMPLICATIONS FOR THREAT ASSESSMENT AND CRISIS MANAGEMENT

Understanding the role trauma may have in the development of grievances is important for professionals involved in violence prevention. Threat assessment teams usually look at observable actions like threats, fixation, or attempts to acquire weapons. These signs are still very important.

Understanding the psychological context behind these behaviors can improve early intervention efforts. Trauma-informed threat assessment considers how past experiences might influence emotional reactions, perceptions of conflict, and escalation tendencies.

Individuals dealing with unresolved trauma may interpret ordinary disputes as deeply personal attacks. Small conflicts can escalate rapidly because they trigger emotional memories connected to past traumatic events. Professionals involved in behavioral threat assessment often encounter situations where an individual's response to a minor conflict seems disproportionate until underlying trauma or unresolved grievances are recognized. When combined with existing grievances, these reactions can accelerate the risk of confrontation or violence.

Crisis management professionals benefit from recognizing these patterns. Interventions that focus on empathy, stabilization, and connection to support services can lessen feelings of isolation and anger. Early engagement can prevent the escalation process from turning grievances into violent intent.

The U.S. Secret Service National Threat Assessment Center has consistently highlighted the importance of multidisciplinary threat assessment teams that include mental health professionals, law enforcement, and community stakeholders. Trauma-informed perspectives strengthen these teams by broadening the understanding of behavioral risk factors.

POLICY AND PREVENTION CONSIDERATIONS

Violence prevention strategies often focus on identifying threats after warning signs appear. A trauma-informed approach promotes earlier engagement with individuals experiencing distress and social isolation. Community mental health services, accessible counseling programs, and peer support networks can decrease the long-term impact of traumatic stress.

Schools, workplaces, and community organizations are increasingly adopting behavioral threat assessment frameworks designed to identify concerning patterns before they escalate. These frameworks promote reporting, evaluation, and intervention while respecting civil liberties.

Integrating trauma awareness into these programs improves their effectiveness. Professionals trained to recognize trauma responses may identify warning signs that otherwise appear unrelated to violence risk.

Addressing trauma does not eliminate the potential for violence, but it lowers one of the factors that can lead to grievance escalation. Prevention strategies that combine behavioral threat assessment with accessible mental health support offer the most comprehensive approach.

CONCLUSION

Trauma exposure is widespread, yet its influence on long-term behavioral trajectories remains complex. Most people who go through traumatic events show resilience and make positive contributions to their communities. However, for a small group, unresolved trauma can lead to identity issues, social withdrawal, and the formation of grievance-based worldviews.
When these factors combine with ideological reinforcement, online echo chambers, and escalating personal conflict, the risk of targeted violence increases. Recognizing these dynamics does not mean trauma causes violence. Instead, it emphasizes the importance of understanding psychological context when assessing behavioral risk.

Crisis management professionals, threat assessment teams, and intelligence practitioners benefit from incorporating trauma awareness into prevention strategies. By understanding how trauma can influence perceptions of injustice and identity, communities can intervene earlier and more effectively.

Preventing targeted violence requires careful attention to the complex forces that shape human behavior. Trauma represents one of those forces. Understanding its role within grievance development and radicalization pathways strengthens efforts to identify risks and protect communities.

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FORGED BY AGONIZING STRUGGLES: A SIXTEENTH-CENTURY THEOLOGICAL FRAMEWORK FOR TRAUMATIC STRESS AND POSTTRAUMATIC GROWTH

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ABSTRACT

Contemporary trauma scholarship has produced robust empirical models for understanding how individuals may grow through life-shattering crises, chief among them the phenomenon of posttraumatic growth (PTG). Yet a largely overlooked paradigm—one predating these models by five centuries—offers researchers, clinicians, clergy, and chaplains a complementary theological lens for understanding the formative dynamics of suffering. Martin Luther's concept of *Anfechtung*, variously rendered as "agonizing struggle," "trial," or "affliction," articulates a vision of human crisis and growth that converges structurally and phenomenologically with modern PTG theory, while contributing distinctively theological dimensions that empirical models alone may not articulate.

This article surveys Luther's descriptions of *Anfechtung* and its functions in the formation of believers and caregivers, drawing parallels with assumptive world disruption, cognitive struggle, and perceived growth as articulated in the PTG literature. Implications are offered for interdisciplinary trauma scholarship, trauma-informed ministry, chaplaincy, crisis intervention, and the training of caregivers who serve survivors of traumatic events. The article contends that Luther's centuries-old paradigm endures not as a relic of Reformation-era thought, but as a living framework with practical relevance for those who study, endure, and minister in the aftermath of agonizing human traumas.

Keywords: trauma, traumatic stress, posttraumatic growth, clergy, pastors, *Anfechtung*, ministerial formation

INTRODUCTION

Contemporary trauma scholarship has produced robust empirical models for understanding how individuals may grow through life-shattering crises—chief among them the phenomenon of posttraumatic growth (PTG; Tedeschi & Calhoun, 1995, 2004; Tedeschi, Shakespeare-Finch, Taku, & Calhoun, 2018). Parallel frameworks in religious coping (Pargament, 1997; Pargament, Koenig, & Perez, 2000) and meaning making (Park, 2010) have illuminated the vital roles that faith and spiritual struggle play in the posttraumatic process. Yet a largely overlooked paradigm—one predating these models by five centuries—offers trauma researchers, clinicians, clergy, and chaplains a complementary theological lens through which to understand the formative dynamics of suffering. Martin Luther's concept of *Anfechtung* (German; Latin parity: *tentatio*), variously rendered in English as "agonizing struggle," "trial," or "affliction," articulates a vision of human crisis and growth that resonates strikingly with modern PTG theory, while contributing distinctively theological dimensions that empirical models alone may not capture. This article surveys Luther's concept with an eye toward its potential contributions to interdisciplinary trauma scholarship and trauma-informed practice.

A note on method is warranted at the outset. The parallels drawn herein between Luther's *Anfechtung* paradigm and contemporary PTG theory are structural and phenomenological rather than genealogical. This article does not claim that Luther was engaged in proto-psychological theorizing, nor that modern trauma researchers have drawn—consciously or otherwise—upon Reformation-era theology. Rather, the premise is that Luther's sustained theological reflection on the formative dynamics of human suffering produced observations about crisis, disruption, and growth that converge remarkably with empirical findings articulated centuries later, and that these convergences merit interdisciplinary attention on their own terms.

With these parameters in view, we turn to the reformer's context. For Luther, the reformation of the Church in the 1500's included the proper theological formation of its pastors—a seemingly timeless ecclesiastical priority which, 500 years on, arguably persists. In Luther's theology, stunningly, Satan played as significant a role in spiritual and pastoral formation as anyone. "For as soon as God's Word takes root and grows in you, the devil will harry you" (Luther, 1999/1539, p. 34:287). Even more, the reformer once remarked that as the devil schools believers through nefarious outbreaks, he shows himself to be "the best teacher of theology" (Luther, cited in Kleinig, 2002, p. 257). Without Satan's attacks upon pastors and teachers of the Church, Luther submits they become nothing but theological theoreticians devoid of having struggled with the Word of God in the crux of life. Indeed, "Living, or rather dying and being damned, make a theologian, not understanding, reading or speculating" (Luther, 2009/1519-1521, p. 163; cf. Luther, 1999/1531, p. 7). Thus, theologians are formed not merely by studying the Word of God prayerfully, but rather by experiencing God's Word in the prayer-stained crucible of daily life.

These cruciform experiences and beleaguering attacks wrought by our own sin within us, the world around us, or the evil one against us comprise in large part Luther's notion of *tentatio* (Latin, *pron.* ten-TAH-tsee-oh; *pl.*, *tentationes*, ten-tah-tsee-OH-nays), or *Anfechtung* (German, *pron.* ahn-FEKH-toong; *pl.*, *Anfechtungen*, ahn-FEKH-toong-en). In Luther's theology, these attacks remain an essential and lifelong factor for Lutheran Christian formation, and particularly for the ongoing growth and maturation of Lutheran clergy. Indeed, besetting struggles form and strengthen the theologian in a way that a prayerful reading of Scripture by itself cannot. Luther argues, "you cannot do theology without *experiencing* cross and suffering and persecution" (Westhelle, 2014, p. 164; *emphasis original*). By means of *tentationes* (or, *Anfechtungen*) in the life of the believer, comprehension becomes apprehension, the student of theology a theologian, and the one who endeavored to forge an understanding of God's Word becomes forged by it on the anvil of vexing life experience.

To be sure, there remains no single English equivalent for the German word "*Anfechtung*." Yet Luther's writings and the literature since surface key themes. To this end, this article explores, first, how Luther and selected scholars and theologians in our contemporary era describe *tentatio* (*Anfechtung*), and second, the key roles or functions of *Anfechtungen* in the formation and maturation of believers—and particularly of Lutheran pastors—with implications for trauma-informed ministry, chaplaincy, crisis intervention, and interdisciplinary dialogue between theology and the trauma sciences.

LUTHER'S DESCRIPTIONS OF *TENTATIO* AND *ANFECHTUNG*

Undeniably, *tentatio* (*Anfechtung*) remained an ever-present aspect of Luther's personal faith (*Glaubensanfechtung*) and pastoral ministry (*Berufsanfechtung*) throughout his adult life and career (Hovland, 1957). These themes permeate his written works. Luther inked his earliest official (i.e., non-epistolary) writings in the prevailing theological language of the day, Latin, to include his pre-Reformation lectures on the Psalms (1513-1515), which invoke *tentatio* frequently. His later work on the seven penitential psalms (1517) comprises Luther's first official publication in German, and accordingly, includes his first recorded scholarly use of *Anfechtung*.

Luther ruminates in one of his first Latin expositions, on Psalm 1(:4), "The wind of temptation [*tentatio*] always casts the proud, the extraordinary, the disagreeable, etc., down from their station…" (Luther, 1999/1513-1515, p. 10:24; cf. Luther, 1885/1512- 1546, p. 3:24). Lest one surmise that temptations or trials befit and

benefit only "the proud," Luther warns all hearers later in these lectures, as he explores Psalm 69, "the greatest trial [*tentatio*] of all is to have no trial [*tentationem*]" (Luther, 1999/1513-1515, p. 10:356; cf. Luther, 1885/1513-1515, p. 3:420). Thus no one avoids *tentationes* in life.

Several years later, the German reformer invokes *Anfechtung* in his official recorded writings for the first time. Luther scribes in his reflection on Psalm 6, "In all trials and affliction [*Anfechtung*], man should first run to God; he should realize and accept the fact that everything is sent by God, whether it comes from the devil or from man" (Luther, 1999/1517, p. 14:140; cf. Luther, 1885/1512-1546, p. 1:159). Luther's understanding that God Himself ultimately prompts all trials informs the reformer's "theology of the cross" paradigm. These arduous struggles recurred as painful touchstones not only for the reformer personally as a disciple of Jesus Christ, but further shaped and infused the theology he promulgated in his public vocations as a pastor, educator, and theologian—and this, no matter the language through which he communicated.

Seven years before his death, having been shaped by myriad struggles over the preceding twenty years, Luther offered in his preface to the Wittenberg edition of his German writings what stands as perhaps his most concise explication of *tentatio*, embedded as one aspect of a tripartite formative paradigm. Luther's three-part framework differs slightly but substantially from the twelfth century four-part mystical tradition of *lectio* (i.e., reading Scripture), *meditatio* (reflecting on its meaning), *oratio* (prayer), *contemplatio* (quiet stillness before God). His model also diverged from that of one of his own influencers, Gabriel Biel, who advocated for an approach of *lectio*, *meditatio*, *oratio* (see Fouts, 2013).

In contrast to these earlier perspectives, the seasoned Luther set forth a pattern of *oratio* (prayer), *meditatio* (deep, abiding, and continual reflection on God's Word), and *tentatio* (or, *Anfechtung*) (Luther, 1999/1539, pp. 283-288; Pless, 2016). Notably, he employs these *Latin* phrases when introducing his *German* writings (cf. MacKenzie, 2012). At the least, this stylistic choice retains the alliterative original language in a way that "*Gebet*, *Lesen*, *Anfechtung*" could not. In any rendering, Luther's unified paradigm conveys that, as one prayerfully communes with God and abides in His Word, the Spirit then leads the believer out into the world, where he or she will face persistent trials and temptations. These difficulties ideally drive the disciple back to the Word of God and prayer for refuge, resulting over time in a closer communion with the Lord than one could experience through prayerful contemplation alone. To be sure, this formative cycle remains dynamic and iterative; *tentationes* (*Anfechtungen*) may even come first, which in turn compel the sufferer to seek God's Word prayerfully (Bayer, 2011, 2017). No matter the sequence, Luther asserts through it all that an individual cannot become a true theologian by retreating from the world nor by contemplating God and His Word more reverently or prayerfully. Vexing trials need be experienced.

Twenty-one years before his Wittenberg edition preface, in the younger Luther's explanation of his famed 95 theses, he voiced his own experiences with *Anfechtungen*:

> [T]hey were so great and so much like hell that no tongue could adequately express them, no pen could describe them, and one who had not himself experienced them could not believe them. … At such a time God seems terribly angry, and with Him the whole creation. At such a time there is no flight, no comfort, within or without, but all things accuse. … All that remains is the stark-naked desire for help and a terrible groaning, but [the soul] does not know where to turn for help. In this instance the person is stretched out with Christ so that all his bones may be counted, and every corner of the soul is filled with the greatest bitterness, dread, trembling, and sorrow in such a manner that all these last forever (Luther, 1999/1518a, p. 31:129).

Reflecting on Luther's writings from the ensuing years, Jeroslav Pelikan introduces the reformer's 1521 "Comfort When Facing Grave Temptations," by further describing *Anfechtung* as "an assault on either the body, mind, or soul, involving fear, conscience, sin, or guilt" (Luther, 1999/1521, p. 181). These attacks may stir within every aspect of oneself, having been stirred up from without; and the worst inward terrors rage against one's soul, leading a sufferer to doubt his or her own eternal salvation.

Further, Luther reflects on the sixth petition of the Lord's Prayer, "Lead us not into *Anfechtung*," that such temptations may include three exemplars: one, an enticement of the flesh, given to "lust, glutting, guzzling, and loafing"; two, an inducement from the world, to take up "envy, hatred, and pride" and the like; and three, direct attacks from the "Master Devil" himself, who tempts the believer to "disregard God's Word" and become assailed by "unbelief, [timidity]…, superstition, witchcraft" and more (Luther, 1999/1528, pp. 51:179-180). The antidote for each, Luther argues, is prayer (*oratio*) and recalling again God's Word of promise (*meditatio*). To the former, Luther commends prayer so that sufferers "may endure bravely under the hand of the Lord and overcome the power and cunning of Satan, be it through dying or living" (Köstlin, 1903; as cited in Luther, 1999/1527, p. 43:116). Prayer in the midst of temptation and trial is not to be undertaken by the sufferer alone, in Luther's ideal view; but rather, *for* sufferers and *with* sufferers by the communal Body of Christ, the Church (cf. 1 Cor. 12:26).

CONTEMPORARY EXPLANATIONS OF *ANFECHTUNG* AND *TENTATIO*

Bainton (1950), one of the first modern scholars to reflect on the meaning of *Anfechtung*, articulates, "It may be a trial sent by God to test man, or an assault by the Devil to destroy man. It is all the doubt, turmoil, pang, tremor, panic, despair, desolation, and desperation which invade the spirit of man" (p. 42). Hovland (1962) expanded this initial understanding of *Anfechtung* as "the terror the individual feels in the moment he is confronted with some 'dark aspect' of God" (Hovland, 1962, p. 48). Hovland perceives that in the throes of trial, the sufferer may perceive God as judge, enemy, tempter, hidden away, or arbitrary. This exponentiates one's angst; for ostensibly, the Comforter is now capricious and pernicious.

Lutheran theologian David Scaer notes that scholars since have variously rendered *Anfechtung* as "temptation," "affliction," "trial," or "tribulation" (Scaer, 1983). Scaer himself (1983) frames *Anfechtung* as an experiential struggle between God and man, often wrought by the evil one, and exceedingly difficult for the believer to reconcile with the gracious gospel of Jesus Christ. *Anfechtung* is not merely "suffering," but more fundamentally, "a grinding sense of being utterly lost" (Kittelson, 1986, p. 56). These reflections echo the compounding implications of Hovland's paradigm, insofar as *Anfechtung* intertwines with one's salvation and spawns radical doubt thereof.

These existential trials must be experienced if they are to be understood—and even then, only dimly discerned, at best. Ji (1989) observes that the "concept of *Anfechtung* (= *tentatio*) is something to be lived rather than something to be taught." The spiritual assaults and conflict embodied by the term encompass the "complex inner struggle and anguish in the human heart, not only the doubt and the troublesome thoughts which originate from our mind, but also the shrewd strategic attacks from the outside." Finally, *Anfechtung* is a "special state of mind" in which much commingles: "the depth of human existence, a sense of estrangement from the creator, a deep sense of despair and isolation" and more (Ji, 1989, pp. 183-184). *Anfechtungen* confound the sufferer, colliding one's beliefs and hopes into one's experiences and observations.

Forde (1997) elucidates Luther's understanding of the spiritual angst, psychic pain, and existential doubt *Anfechtungen* may foist upon a believer:

> For Luther, the sufferings of the spirit, the pangs of conscience, the terrors of temptation...were always more agonizing and serious than the physical pain he also knew well. Even physical death, though heartrending enough for loved ones, was a far lesser matter than the kind of death experienced when the wrath of God assaults the sinner (Forde, 1997, p. 86).

Even though God may use Satan as His divine agent who wreaks *Anfechtungen* upon the believer, Forde observes, "the suffering Luther has in mind first and foremost is the result of *God's* operation on the sinner" (Forde, 1997, p. 86; *emphasis added*). That God is the ultimate actor behind these trials only adds to the sense of helpless terror and anguish a sufferer may feel while walking in the valley of *Anfechtungen*. If God is the one doing it, or at the very least permitting it, to whom is the believer to appeal? The malevolent Comforter descends again. His "attacks upon the spirit" renew themselves "regularly and devastatingly" (Hall, 2003, p. 30). A crisis of faith or vocation may ensue, for the person assaulted and seemingly abandoned by God.

These "agonies of soul" (Hall, 2003, p. 207) may evoke for the individual the Lord Jesus, as Christ experienced unparalleled agony in Gethsemane. Luke writes in his gospel account:

> [Jesus] came out and went, as was his custom, to the Mount of Olives, and the disciples followed him. And when he came to the place, he said to them, "Pray that you may not enter into *temptation* [Greek: *peirasmon*]."
>
> And he withdrew from them about a stone's throw, and knelt down and prayed, saying, "Father, if you are willing, remove this cup from me. Nevertheless, not my will, but yours, be done." And there appeared to him an angel from heaven, strengthening him. And being in an *agony* [Greek: *agonia*] he prayed more earnestly; and his sweat became like great drops of blood falling down to the ground.
>
> And when he rose from prayer, he came to the disciples and found them sleeping for sorrow, and he said to them, "Why are you sleeping? Rise and pray that you may not enter into *temptation*" [Greek: *peirasmon*] (Luke 22:39-46, ESV).

Luke's narrative here reflects the only occurrence of *agonia* in the entire Greek New Testament (v. 44; Kohlenberger et al., 1997, p. 70). Notably, it appears in the very midst of *temptation* (vv. 40, 46). As Jesus faces and prayerfully prepares to overcome the *tentationes* of man unto death, he *agonizes*. Agony compels the Word made flesh to invoke the Word of God (*meditatio*) and drives him back to God the Father in prayer (*oratio*). Here we observe the most profound "Gethsemane of the soul" (Hinlicky, 2014, p. 546)—agony wrought upon God by God, through Satan and man (cf. Lk. 22:3), for the sake of humankind unable to withstand temptation. Thomas Trapp reflects this exegetical understanding of *Anfechtung* in his translator's preface to Oswald Bayer's *Martin Luther's Theology* (2008): "What about '*Anfechtung*'? I determined that one word would not do. I decided 'agonizing struggle' was the best term" (Bayer, 2008, p. xiv); Rittgers (2014) affirms Trapp's definition (p. 469). More recently, George (2017) offers a vivid picture of a sufferer's agonizing struggles, observing that,

> *Anfechtung* derives from the world of fencing: a *Fechter* is a fencer or gladiator. A *Fechtboden* is a fencing room. Thus *Anfechtungen* connotes spiritual attacks, bouts of dread, despair, anxiety, conflicts that overwhelm. Such a churning rages within the soul of every believer and in the great apocalyptic struggle between God and Satan (George, 2017, p. 23).

Agonizing, soul-piercing trials will no doubt thrust repeatedly into humankind's fenced-in earthly life, until Jesus returns in glory. For *Anfechtung* is far "more than just external temptation and deeper than a momentary struggle with an issue" (Bayer, 2008, p. xiv). Rather, it speaks to one's "boundless, contradictory experiences of life" (von Lüpke, 2014, p. 145), and encompasses even death, the "final *Anfechtung*" of all (Strohl, 2014, p. 357).

Accordingly, in Luther's German translation of the New Testament, he rendered the Lord's *agonia* (Lk. 22:44) not as *Anfechtung*, but "*Tode*"—death (Luther, 1929/1522-1546, p. 313)—for Luther perceived the moment of one's death as "the most severe *Anfechtung*" of all (Scaer, 1983, p. 26). For the Christian, graciously, death even with all its agonizing horrors remains but a slim threshold demarcating earthly life from abundant life; the ultimate *Anfechtung* a penultimate experience. This transition, or transformation, glimpses one purpose of *Anfechtungen* (*tentationes*) in the life of believers—one function among many this survey now explores.

FUNCTIONS OF *TENTATIONES* (*ANFECHTUNGEN*) IN LIFE

What are some key roles or functions *Anfechtungen* serves in the formation and maturation of believers, and particularly of those called to serve others in the aftermath of crises? What may be some essential purposes for a person's vexing trials? By faith, what meaning is the believer—the pastor, the counselor, the chaplain, the teacher—to make of his or her *tentationes* (*Anfechtungen*)?

At first glance, one's struggles ostensibly offer a sufferer scant value, given a person's trials and temptations may foment doubt, despair, self-denigration, and more. Luther experienced these and other undesirable responses as *Anfechtungen* surfaced both in his pastoral ministry (*Berufsanfechtung*) and his personal life of faith

(*Glaubensanfechtung*) (Hovland, 1957, 1962). These challenges often coalesced for him into a single experience or reflection. The reformer laments in an October 1516 letter to John Lang, "I hardly have any uninterrupted time to say the Hourly Prayers and celebrate [Mass]. Besides all this there are my own struggles [*tentationes*] with the flesh, the world, and the devil. See what a lazy man I am!" (Luther, 1999/1507-1516, p. 48:28; cf. Luther & de Wette, 1825, p. 41). Luther's personal admission echoes in part the Apostle Paul's confession in his letter to the Romans, "I do not do what I want, but I do the very thing I hate. … Wretched man that I am!" (Rom. 7:15, 24). Truly, one's agonizing struggles may lead to self-loathing or self-condemnation, plunging an individual into a seemingly worse predicament, at first, than had one's trials not come at all.

Yet over time, Luther also grew to acknowledge myriad perceived benefits of trials. Chiefly, *Anfechtungen* deplete the self and thus ready the sufferer to receive by faith God's grace, salvation, and strength. In Luther's 1518 *Heidelberg Disputation*, which would serve as the doctrinal foundation of his theology of the cross, the reformer reflects on a key outcome of cruciform strife: "[T]hrough the cross, works are destroyed and the old Adam, who is especially edified by works, is crucified" (Luther, 1999/1518b, p. 31:53). Said differently, one's suffering and affliction reveals "the futility of *self*-justification and the need of *God's* justification" (Ngien, 1995, p. 52; *emphases added*). Luther perceived that fiery trials which befall an individual may draw the person to his or her own end—extinguishing a prior sense of self-reliance, self-righteousness, or a prospect of self-deliverance. This predicament prepares the anguished sufferer instead to call on God for help, through faith in Jesus Christ. Similarly, and more broadly, God works through humankind's contrary if not cataclysmic observed conditions to beckon sufferers unto "a more abundant life"—a life eternal which ultimately surpasses all visible and vexing things (Hall, 1986, p. 62; cf. Jn. 10:10; 16:33). Unfavourable observed circumstances implicitly invite sojourners to walk not by *sight*, but by *faith* (cf. 2 Cor. 4:8-11; 5:7); that is, experiences of *Anfechtungen* "make 'room' for faith" (Begalke, 1982, p. 11). In the language of PTG theory, this "room" resonates with the cognitive openness that may emerge when an individual's prior assumptive world has been dismantled by crisis—a necessary precondition for constructive posttraumatic rumination and growth (Calhoun & Tedeschi, 2006). Theologically and psychosocially, cruciform trials humble supplicants and render them helpless; this, in turn, primes some participants to believe in and receive help from the God who humbled himself unto death on a cross, out of love for all people.

These dynamics will sound familiar to contemporary trauma researchers. Janoff-Bulman's (1992) "shattered assumptions" framework posits that traumatic events upend one's fundamental beliefs about the self, the world, and the future—a breaking apart that may ultimately catalyze reconstructed, more resilient worldviews. Tedeschi and Calhoun (2004) describe a parallel process in PTG theory: the seismic disruption of one's "assumptive world" initiates a painful cognitive struggle that, for some individuals, gives rise to perceived growth in personal strength, new possibilities, relating to others, appreciation of life, and spiritual change. Luther's *Anfechtung* paradigm heralded similar observations in theological terms. Where PTG theory identifies the shattering of one's assumptive world as a precondition for growth, Luther identifies the shattering of one's self-reliance and self-righteousness as a precursor to experiencing God's formative grace. The structural parallels are remarkable, even as the explanatory frameworks differ. Secondly, and once fundamental faith has been established, *Anfechtungen* provide *continuing* opportunities for believers to *develop and deepen* belief and trust in God and His revealed Word. Beaten back by the brokenness of the world, and beset by one's own fleshly struggles within it, the supplicant returns to God's Word for refuge, renewal, and reaffirmation of one's faith. To wit, in Luther's 1539 preface to his explication of David's Psalm 119, the reformer testifies that *Anfechtung* is the very "*Prüfstein*"—the "touchstone"—by which one comes to know God's Word not abstractly, but rather, to "*experience*" it as "right," "true, " "mighty, " and "comforting, " indeed as "wisdom beyond all wisdom" (Luther, 1999/1539, pp. 34:286-287; *emphasis added*). Luther concludes that Satan's "assaults will teach you to seek and love God's Word" (Luther, 1999/1539, p. 34:287). Firsthand fiery trials deepen one's knowledge of and gratitude for life-giving truth.

Indeed, as searing as nefarious attacks may be, "only *Anfechtung* teaches how to understand the Word" (Bayer, 2011, p. 391). Without agonizing trials, believers may not perceive a daily, temporal need for Jesus, nor even for sustained faith in Him as Lord and Savior. Thus in being bedeviled by the evil one, by the world, and even by one's own flesh, the disciple learns ever more, by faith, to seek refuge and strength in Christ alone.

For truly, if "the Christian life were to be without trial, it would not, in its ultimate dimensions, be a life of faith. … [T]rial keeps faith in motion" (von Loewenich, 1976, p. 135). That is, if observable *temporal* circumstances cohered fully with the hoped-for *eternal* outcomes of God's children, believers would have little compelling need for maturing belief in Jesus Christ. Paul Althaus notes,

> [T]o believe means to live in constant contradiction of empirical reality and to trust one's self to that which is hidden. Faith must endure being contradicted by reason and experience; and it must break through the reality of this world by fixing its sights on the word of promise (Althaus, 1966, p. 33).

Said another way, the incongruity between that which we see over against that which is unseen compels the believer ever more to seek refuge in the latter—and this, not merely at the time of one's conversion, but repeatedly and continually, even and especially as a person matures in life. Indeed, the Apostle Paul, some twenty years after his Damascus conversion cries out in confession, "Who will deliver me from this body of death?" only to reply in a faith-filled proclamation, "Thanks be to God through Jesus Christ!" (Rom. 7:24b-25a). For Paul—already a saved believer—continued despair of self does not end in pity and defeat, but rather, drives him to Christ yet again for renewed hope and sustenance. In His wisdom, "God does not send *tentatio* in order to destroy us, but to force us to exercise our faith. … Without *tentatio* we could not learn what faith really is…" (Kelly, 1993, p. 18). As Luther himself encouraged believers in a noteworthy sermon on the cross and suffering,

> When the suffering and affliction [*Anfechtung*] is at its worst, it bears and presses down so grievously that one thinks he can endure no more and must surely perish. But then if you can think of Christ, the faithful God will come and will help you… (Luther, 1999/1530, p. 51:200; cf. Luther, 1906/1530-1532, p. 32:31).

Moribund circumstances and despair over oneself remind Luther, Paul, and their hearers throughout time that God alone can save—and this, not only at the point of one's salvation, but daily and eternally, by faith.

To be sure, a believer ought not proactively seek out agonizing trials, lest the embrace and passage of said challenges leads one into a false sense of self-reliance and self-justification, yet again. Rather, as James encourages those in Christ, "Count it all joy, my brothers, when you *encounter* [*peripipto*] trials [*peirasmos*, cf. Lk. 22:40, 46, above] of various kinds, for you know that the testing of your faith produces steadfastness. And let steadfastness have its full effect, that you may be perfect and complete, lacking in nothing" (Jam. 1:2-4). Fools who create or chase after trials, or Christians who succumb to grave temptations, may still grow from the ensuing natural consequences of these unsavory choices. However, James here foremost envisions excruciating trials which *happen to* unsuspecting participants by no doing of their own. The wider New Testament witness affirms this. "Encountering" [*peripipto*] trials refer only to the man who "fell into" (i.e., "encountered") robbers, to whom the Good Samaritan later ministered (Lk. 10:30); and to Paul and his companions "striking" (i.e., "encountering") [*peripipto*] a reef and shipwrecking at Malta (Acts 27:41). Vexing conditions fall upon these participants unexpectedly. God, in His wisdom, orchestrates this; for truly, "How many of us would ever explore the dark extremities of our own humanity were we not from time to time thrown into them involuntarily?" (Lewis, 2001, p. 405). That is, God works *actively* through *Anfechtungen* which His children receive *passively*—and this, to further purify, sanctify, and edify those He loves and has already saved by grace through faith.

ANFECHTUNGEN AND MINISTERIAL FORMATION

Anfechtungen serve a vital role in forming and shaping the Lutheran Christian minister in particular. Indeed, while the dynamics explored in the preceding section apply broadly to believers of all vocations, Luther gave particular attention to the ways *Anfechtungen* form and equip those who are called to serve others in times of crisis—a dynamic with evident resonance for chaplains,

crisis counselors, and other helping professionals who minister to the traumatized. First and most fundamentally, *Anfechtung* "executes" those who minister. *Tentationes* "kill" a carer's reliance on one's own perceived giftedness and intellect. Luther reflects in his early exposition of Psalms 1-22 (1519-1521) that in the midst of *Anfechtung*, God's Word takes hold of a minister's soul, strips it of its "garments, possessions, and imaginations," and brings it into "the darkness of faith" (Dubbleman, 2016, p. 230; cf. Forde, 1997, p. 86; Luther, *WA*, 2009, 5:176). A pastor or trauma counselor endeavoring to walk with others in the midst of blinding and besetting circumstances is first led by God through the same. Truly, wrestling through one's own traumas, by faith in Christ, transforms the student of theology into a theologian; the systematician, a shepherd. Noting *Anfechtung* as one of six essential factors which make "a theologian a theologian," Oswald Bayer (2008) notes:

> This agonizing struggle *(Anfechtung)*…brings one into the situation in which everything disappears and I see nothingness and destruction, in which I become an enemy to myself and the entire world becomes my enemy; yes, even God himself causes agony for me, in that he confronts me as the one who breaks his own Word and contradicts what he himself has said (Bayer, 2008, pp. 19-20).

Kleinig (2002) echoes: "'Anfechtung'…is the experience of the impact of God's word on us and its effect in us. … [I]t makes us theologians" (Kleinig, 2002, pp. 263-264). Springer (2017) echoes, it is "experience that makes what one has learned in school vivid and real. … In fact, the quality of one's theology is proportionate to how severe one's *tentationes* have been" (Springer, 2017, p. 29). As a result of personal and ministerial trials, no longer is God's Word and faith in the same a mere academic exercise, but a life-giving necessity; God's grace no longer a systematic generality, but a salvific gift. Recalling Paul's "thorn in the flesh" in regards to which he pleaded with God three times to remove, but to no avail, God through this trial teaches Paul (and us) a life-giving lesson, "namely, that [God's] grace was sufficient" (Springer, 2017, p. 39). Had God through Satan not wrought said *tentatio* upon Paul, the apostle confesses to the Corinthians he would have become "too elated by the surpassing greatness of the revelations" given to him (2 Cor. 12:7). Thorns make theologians; trials, true teachers.

As it was for Paul, so also arguably ministers in Luther's day and today may resist being brought to the end of one's self by means of *Anfechtungen*. For "*Anfechtung* fits into the sixteenth century as little as it does in ours," because then as now, "no one wanted anything to do with *Anfechtung*" (Lexutt, 2013, p. 439). Our sin nature rends at us to be self-sufficient, self-reliant, and satiated. "Struggle and discomfort…do not tend to resonate well with the American psyche. … [T]he habitual response is to try to alleviate the struggle at nearly any cost" (Fouts, 2013, p. 70). Lutheran ministers are not immune to these temptations. In fact, as visible leaders in the Church and faithful proclaimers of the gospel, clergy may encounter Satan's attacks even more fervently than others. Yet if and as pastors serving in the name and stead of Christ Jesus shun *tentatio* (and therefore, implicitly, also the God who ordains it and them), "such people would not be true theologians. Because they would have understood nothing of the cross of Jesus Christ" (Lexutt, 2013, p. 441). Hence, *Anfechtung*-as-ministerial-touchstone.

Just as flinty rock verifies the purity of a precious metal rubbed against it, so also *tentationes* touchstones affirm at some level the richness and genuineness of one's faith and ministerial credentials. Yet to be sure, enduring *Anfechtung* faithfully does not demonstrate above all the "veracity and credibility *of the believing person*," but rather, affirms "*the Word of God itself* to be credible and mighty within such struggle" (Bayer, 2008, p. 35; *emphases added*). The emphasis through all agonizing experiences endured by faith ought not be the person of faith, but rather, the person in whom one's faith is found, Jesus Christ. This understanding frees a pastor from the ostensible need to seek out or sanctify some prolonged *tentatio*, as if the minister were striving to pass a divine test before God and others and thus prove oneself worthy of the ministry. Freed by faith, ensuing and enduring *Anfechtung* glorifies ultimately not the supplicant, but God; not the minister, but the One who calls and equips for ministry.

To this end, enduring *Anfechtungen* forms and shapes not only pastors and teachers for their own sake, but equips them to serve others with greater compassion, insight, and empathy. Indeed, those who have personally experienced the pain of "cross-thorns" (Rittgers, 2012, p. 228) understand cruciform pain and thus can minister more effectively to others who

experience the same (cf. Kitamori, 1965). In Luther's theological paradigm, the wisdom gained by struggling through painful private and public predicaments was intended by God "to inform and enrich the theologian's (and the Christian's) pastoral care of others" (Rittgers, 2014, p. 469). Luther's *tentationes* "taught him to communicate the message of God's grace to others in a way that was faithful, credible, and meaningful" (Rutt, 2010, p. 10). For Luther as an individual, having been strengthened by God through his own sufferings made him well-equipped to *enter into* the sufferings and pains of others (German: *Einfühlung*; lit., "feeling into"); in a word, Luther was able to *empathize* (cf. Vischer, 1993/1873; Lanzoni, 2017; Weigel, 2017; Greiner, 2018).

This dynamic extends well beyond ordained Lutheran clergy. The trauma literature documents that helping professionals across disciplines—including chaplains, mental health clinicians, first responders, and trauma-informed counselors—may experience both the deleterious effects of secondary traumatic stress and, paradoxically, perceived personal growth through their caregiving work (Tedeschi & Blevins, 2017; Arnold, Calhoun, Tedeschi, & Cann, 2005). Tedeschi and Blevins (2017) describe such caregivers as "expert companions" who are most effective when they bring to their work "compassion, humility, and respect for the survivor's narrative" (p. 668). Luther's *Anfechtung* paradigm provides a theological framework for understanding how the helper's own suffering may serve as a crucible for this very kind of compassionate expertise—what Rittgers (2014) calls the movement from personal agony to enriched pastoral care of others.

Applied today, a pastor, trauma counselor, chaplain, or other crisis worker striving through trials and temptations, by faith, may benefit not only the caregiver over time, but also and eventually those whom the caregiver serves. Having been comforted by God in the midst of their own agonizing trials, carers can then comfort others facing the same (cf. 2 Cor. 1:3-4). In the church in particular, these experiences offer pastors and parishioners alike an incarnated glimpse of the cruciform way God communicates and communes with the world—a divine and paradoxical paradigm Luther terms the "theology of the cross." Through it all, as a result of God's cruci-forming work in and through a caregiver's own *Anfechtungen*, the minister—and by extension, any helper who has been forged by personal suffering—may serve others not merely with theoretical competence, but with the experiential credibility that only one's own agonizing trials can confer. Indeed, recent empirical research among Lutheran clergy suggests that this trajectory from experiential knowledge of one's own brokenness to deepened empathy in the care of others is not merely a theoretical construct but an observable posttraumatic pattern (Ray, 2025). Yet the formative dynamics at work in this process—the shattering of self-reliance, the deepening of empathy through suffering, the transformation of theoretical knowledge into experiential wisdom—extend far beyond biblical and confessional boundaries, and merit the attention of all who study or serve in the wake of human traumas.

IMPLICATIONS FOR INTERDISCIPLINARY TRAUMA SCHOLARSHIP AND PRACTICE

Luther's *Anfechtung* paradigm, surveyed above, offers several potential contributions to contemporary trauma scholarship and trauma-informed practice; here we suggest five implications, briefly. First, for trauma researchers, the concept provides a historically-rich biblical and theological parallel to modern PTG theory—one that anticipated by five centuries the recognition that agonizing personal crises may catalyze profound personal transformation. The structural resonances between *Anfechtung* and PTG's core mechanisms (e.g., assumptive world disruption, cognitive struggle, and perceived growth) suggest opportunities for integrative scholarship that bridges theological and empirical frameworks. Second, for pastors, chaplains, and crisis counselors, the *Anfechtung* paradigm offers a robust theological vocabulary for naming and normalizing the existential dimensions of posttraumatic experience—the shattering of self-reliance, the crisis of meaning, the paradox of growth amid ongoing distress—that parishioners, care-receivers, or clients may struggle to articulate in clinical terms alone. Third, for seminary educators and continuing education professionals who train future clergy, chaplains, and caregivers, Luther's *oratio-meditatio-tentatio* framework provides a theologically-grounded model for preparing ministers to enter into the sufferings of others with experiential credibility and empathic presence, rather than merely theoretical competence. Fourth, Luther's paradigm offers a theological reframing of what empirical

instruments such as the RCOPE (Pargament et al., 2000) may flag as "negative religious coping." His perspective suggests that perceiving God to be "hidden" or even adversarial in the throes of suffering may constitute not a breakdown in faith but a normative and potentially formative dimension of faith under duress. Fifth, Luther's *oratio-meditatio-tentatio* cycle provides a theologically-structured parallel to the movement from intrusive to deliberate rumination identified in PTG theory (Calhoun & Tedeschi, 2006). This insight offers caregivers in spiritually-integrated settings a practical pastoral rhythm for guiding trauma survivors from raw disorientation toward constructive, meaning-oriented engagement with the resources of faith.

Recent empirical research among Lutheran clergy has begun to test and corroborate Luther's paradigm. As noted above, the present author's qualitative exploration of personal traumas, coping, and perceived PTG among 24 Lutheran pastors—recruited from a larger quantitative sample of 502 clergy in the United States—surfaced a posttraumatic trajectory that cohered substantially with the *Anfechtung* dynamics presented herein (Ray, 2025). Taken together, the foregoing theological survey and these recent empirical findings suggest that Luther's centuries-old paradigm merits continued interdisciplinary attention and exploration. His insights endure not as a relic of Reformation-era thought, but as a living framework with practical relevance for those who study, endure, and minister in the aftermath of agonizing human traumas.

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UNDERSTANDING TRAUMA THROUGH A THEOLOGICAL LENS

REV. JAMES HARRISON

Research provides extensive insight into the psychological, biological, neurobiological, and physiological dimensions of trauma. Yet there is far less written about the theology of trauma. Trauma not only shapes how we interpret events, ourselves, and others, but it also influences how we see God and experience Him. **Harrison's Theological Trauma Model** builds upon established trauma theory while giving needed attention to the rupture of the spiritual connection we were created to have.

The Book of Genesis, which means 'origins' or 'beginnings,' provides a vivid account of how life began for Adam and Eve. Eden was indeed a paradise before the fall. When Adam and Eve fell from the divine connection they shared with one another, creation, and the Creator, that fall was neither temporary nor isolated, it altered God's creation and the human experience indefinitely. Genesis 3 serves as the biblical foundation for this model. This passage not only depicts the precursor to original sin, but it also reveals trauma's direct exposure, its residual impact, the transformation of perception, and the responses demonstrated by Adam, Eve, and God.

The faith-based community must understand the reality of trauma, the impact of trauma, and the behaviors trauma produces. The Genesis 3 account offers a clear picture of the relationship Adam once had with God, one without fragmentation, as Adam was created in God's image and likeness and given authority to rule, multiply, and have dominion (Gen. 1:26). This is significant because it shows that trauma does not discriminate; regardless of gender, background, socioeconomic status, or belief system, trauma affects all humans simply because we are human. The Greek word for trauma means 'wound' or 'pierce,' originally referring only to physical injury. Over time, it expanded to include psychological wounding. After God created man, Moses recorded that humanity became a 'living soul' (Gen. 2:7). Trauma wounds not only the body and the mind, it can also disrupt spiritual growth, formation, and development. Research shows that many people of faith rely on theological beliefs to cope with life's challenges, yet for others, trauma can create an influx of fear, doubt, and hopelessness in the very beliefs that once grounded them.

Genesis 3:1-22 shows trauma forming when Adam and Eve exposed themselves to an awareness they were never meant to carry. Trauma heightens awareness after **an initial exposure**, and Scripture affirms this when it records that 'the eyes of both were opened,' and they realized they were naked, vulnerable, or unsafe (Genesis 3:7). This does not suggest that trauma survivors cause or choose the events that change their lives. Instead, this model highlights the immediate and lasting effects of a traumatic experience. The moment Adam and Eve encountered this unprecedented exposure reflects the first element of what the DSM-5 identifies as trauma's initial criterion for Posttraumatic Stress Disorder, direct exposure. Direct exposure is any event that overwhelms the body's normal neurobiological functioning. Neurobiological refers to the effect exposure has on the brain and the limbic system, which is linked to the central nervous system. These systems encode the cellular messages that activate the stress response system, hormonal functioning, and digestive functioning. **The impact** deposited fear. When the nervous system is activated, it prompts the body to immediately assess for safety. Because fear was now present, Adam and Eve entered a form of self-preservation by sewing fig leaves together for covering. This is trauma survival, the body and brain's first defensive measure. The next phase is **perception**. Genesis 3:8 reveals that Adam and Eve 'heard the sound of the Lord walking in the garden,' and they hid among the trees. Up until this moment, they communed with God and recognized His voice. Once trauma set in, their perception of God altered significantly. His sound no longer represented peace and acceptance, but fear, judgment, and condemnation. Perception of danger, whether actual or perceived, is one of the criteria for PTSD. Perception is subjective, and this is a hallmark of trauma. When God called to Adam, 'Where are you?' Adam replied, 'I heard

you approaching, and I hid,' which reflects shame, avoidance, and negative alterations in cognition. God's question, 'Who told you that you were naked?' further demonstrates how profoundly trauma reshapes perception. The final phase is **response**. Trauma not only alters perception, it influences language and behavior. Adam shifted blame to God for giving him 'the woman,' no longer referring to Eve as his wife, but as someone he had emotionally distanced himself from. Trauma affects how one feels about oneself, others, and one's spiritual connection with God. Blame is a trauma response rooted in the nervous system's attempt to regain a sense of safety. Eve, with no other human to shift responsibility to, internalized the trauma within her own body as the 'mother of all living' (Genesis 3:20). Theological trauma demonstrates how maladaptive responses arise when the body's equilibrium is disrupted, and it acknowledges God's role in aiding those with trauma-impaired perception and response, as seen when He clothed them in Genesis 3:21. Exposure, impact, perception, and response all align with established trauma theory and serve as the foundation of Harrison's Theological Trauma Model. One key aspect of this model is to introduce God's acknowledgment of humanity's new trauma identities. When He shared that Adam would eat by the sweat of your brow, that Eve would experience unprecedented child-birth pain, and the serpent would crawl upon its belly for its remaining days, not to mention a new growth called thorns and thistles. These were indicators of creation's new identities and realities caused by this chaotic and life-rupturing phenomenon called trauma.

Harrison's Theological Trauma Model is not presented as a scholarly or peer-reviewed work, but as a theological framework that interprets trauma's physical, physiological, and neurodevelopmental aspects through a biblical lens. Trauma does not discriminate; it can affect anyone regardless of age, gender, ethnicity, occupation, or belief. Trauma may arise from a single event or repeated exposures. Theological trauma is a synergized construct that integrates trauma theory, which explains how trauma disrupts identity, perception, and connection, with practical theology, which examines how God is viewed and how He intervenes in humanity's lived experience.

James Harrison, M.A., HS-BCP, is the author of **Harrison's Theological Trauma Model™,** a Four-part theological framework that examines and articulates the origins of trauma in the human experience.

STRESS INOCULATION TRAINING
AN INTRODUCTORY COURSE OF STUDY FOR EDUCATORS

JOHN W. ROBERTS, EdD

ABSTRACT

Today's society is fast paced and overwhelming with work, school, family life, cost of living and politics. I have heard, "I'm so stressed out." People may not be able to define stress and understand its dynamics. They do, however, know that stress is affecting them. The only way to be "Stress – Free" is if you are dead, in a coma, or lying to yourself. This course is about becoming "Stress Hardy." Most people think that stress is always bad. It can be regarded as good (Eustress) or bad stress (Distress) resulting from a "Threat Response" that can prepare you for action and provide an opportunity for change. The Sympathetic Nervous System (SNS) gets us ready to deal with Hans Selye's Stages of Stress including Alarm or "Fight or Flight" (first stage). If we use stress inoculation strategies it prepares us to Resist or Repair (second stage). Unresolved distress will cause Burnout or Exhaustion (third stage).

Self -Assessment with valid and reliable variables provides a baseline awareness and personal profile regarding pressures and satisfaction; coping responses; our inner world and thoughts; and symptoms of stress. They may include major life stressful events resulting from repressed trauma. Stress Inoculation Strategies that are my favorite include Meditation and Mindfulness; Letting Go of people, places and situations that are out of our control. This is the ethos of the 12 Steps. It is not easy when your" Psychological Critic" creates cognitive dissonance or distortions causing us to "Awfulize"; "Catastrophize"; and become a "Negaholic". We lose control and become helpless and hopeless to resist or repair distress and avoid exhaustion or burnout. There is a need for our "Inner Pharmacy" of alternative, integrative and complementary non-pharmacological Stress Inoculation Strategies. Many can be accessed in the bibliography. The Appendix will have a model course description with instructional goals including an outline for a 12-week session (30 - hour course) in Stress Inoculation Training which can be modified according to your needs and time frame.

INTRODUCTION

Stress Inoculation Training (SIT) is designed to provide knowledge and strategies for behavior changes with the goal of becoming "Stress Hardy." "The journey of a thousand miles starts with the first step." This is a quote from the *Tao te Ching* (64) from the Chinese Book of the Way. It provides a model for the art of living written by Lao Tsu. He was the teacher of Confucius in the 5th century B.C. It suggests that life is a process and an on – going journey with no time frame. There will be successes and setbacks. The process must be worked on every day to live a healthful lifestyle. Attia with Gifford (2023) discuss the importance of "Health Span" to achieve longevity throughout the decades. Johnson (1992) refers to "Psychological First Aid." It provides us with metaphorical antibodies to fight off the effects of stress. My personal and professional philosophy is that we cannot be stress – free unless we are dead, in a coma, or lying to ourselves. We can, however become "Stress – Hardy."

Knowledge + Behavior Change = Stress Hardiness

According to Benson and Stuart (1992) we develop knowledge about stress by taking a course, going to workshops, seminars and on – going reading of self – help books and articles. This will build resiliency and inoculate us against the effects of debilitating distress. Knowledge, however, is not enough. To achieve this goal, we must change and practice behaviors with stress inoculation strategies. Basic skills in an introductory course should include: Meditation, Mindfulness, Visualization and Guided Imagery; Building Self – Esteem, Decision Making and Communication Strategies i.e. Active and Reflective Listening; as well as

identifying Negaholic Behavior; Physical, Mental and Spiritual well – being through Prayer; Support Groups, the basis of which is the 12 Step Approach; Volunteerism, Gratitude, Empathy; Anger Management; and Time Management. These strategies will be discussed, and more detail can be found in the bibliography of references.

Stress Free versus Stress Hardy

The 4 C's of becoming "Stress Hardy" according to Benson and Stuart (1992) are:

- **Control** which is taking charge and "Letting Go" of persons, places, situations and symptoms while empowering ourselves to improve self – esteem and make better decisions
- **Commitment** to making a conscious effort to include stress inoculation skills as part of our daily lifestyle
- **Challenge** ourselves to set short, intermediate, and long term realistic and achievable goals
- **Closeness** is reaching out for support with a confident or group
- **Compassion** which I have added as a 5th C is from Buddhist philosophy which means doing no harm to others as well as self

Good Stress (Eustress) versus Bad Stress (Distress)

Stress is caused by people, places, and everyday situations including daily alarms from acute and chronic long term on - going stress. According to McGonigal (2020) "Stress is not always bad. A threatening situation can be transformed into an opportunity for success." The Chinese character for crisis is also an opportunity. It can alert and prepare you for danger by harnessing and motivating us to deal with challenges. Distress as a "Threat Response" can prepare us for self – defense or action. Employing Stress Inoculation Strategies activates the Parasympathetic Nervous System (PNS). It helps to deal with stress as a "Challenge Response." Bonura (2017) writes that "You need to treat distress as a friend. It can teach you to cultivate resilience with rest, recovery, and relaxation." This refers to managing distress effectively with events that are out of our control. We can learn to listen to it and facilitate self – awareness and understanding by becoming partners with stress.

Stages of Stress

Hans Selye (1956) the eminent Harvard physiologist, is credited with seminal research into the stages of stress referred to as the General Adaption Syndrome (GAS) including:

- Stage 1 the Alarm or "Fight or Flight" which activates the Sympathetic Nervous System (SNS) helping to alert and get the body ready for the event, i.e., interviewing for a job, giving a speech, theater or musical presentation, a sports event or any major life event

The Sympathetic Nervous System is activated to meet the demands of the stressors. Physiologically, the Hypothalamus that controls the endocrine activity signals the Pituitary (Master Gland) the important communication center. It signals the Adrenal Glands to produce adrenaline and epinephrine. This prepares us for Fight or Flight and in some cases Freeze. Normal symptoms include increased heart rate; dilation of the pupils of the eyes for focus; the bronchioles expand to increase respiration; digestion slows; and blood flow increases to the muscles; dry mouth occurs; and forgetfulness or brain fog impairs the thinking process.

- Stage 2 the "Resistance or Repair" where the Parasympathetic NS adjusts the body back to normal function counteracting the Sympathetic NS when Stress Inoculation Strategies are employed

- Stage 3 is "Exhaustion or Burnout" exaggerates the alarm reaction and continues for a long period of time diminishing the body's ability to adjust and recover

Burnout is not a medical diagnosis in the DSM – V Manual. It is, however, linked to long – term chronic health problems.

Assessment of Stress Exhaustion Symptoms

It is important to be knowledgeable and recognize stress symptoms. Benson and Stuart (1992) provide a checklist of variables including physical, mental,

spiritual and relationship symptoms. Cotter's Stress is Gone Master Class (2023) has a stress score card that can be checked daily, weekly and/or monthly for frequency. It is scored low, mid, high in intensity. It provides an on – going picture of what symptoms you are affected by.

Stress Mapping, the Ultimate Stress Management Self – Assessment

This is a comprehensive personal assessment developed by Orioli (1991), the President of Essi Systems. It provides a profile to help uncover your stress levels in many aspects of your life. Controlling stress comes from learning to recognize situations and variables that can lead to developing changes. The 21 scales provide a series of questions on a semantic differential scale (Great, Moderate, Little, None). Scores are tallied and placed on a personal stress map and include:

Your Work Environment/Pressures and Satisfaction

Scale 1. Work Changes
Scale 2. Work Pressures
Scale 3. Work Satisfaction
Scale 4. Personal Changes
Scale 5. Personal Pressures
Scale 6. Personal Satisfactions

Coping Responses/Assets and Liabilities

Scale 7. Self – Care
Scale 8. Direct Action
Scale 9. Support Seeking
Scale 10. Situation Mastery
Scale 11. Adaptability
Scale 12. Time Management

Inner World/ Thoughts and Feelings

Scale 13. Self – Esteem
Scale 14. Positive Outlook
Scale 15. Personal Power
Scale 16. Connection
Scale 17. Expression
Scale 18. Compassion

Signals of Distress

Scale 19. Physical Symptoms
Scale 20. Behavioral Symptoms
Scale 21. Emotional Symptoms

Your personal stress scores are added up and can indicate if you are in Optimal, Balance, Strain, or Burnout. The goal is to be in Optimal or Balance. Strain or Burnout indicates that there is a need to make behavioral changes by employing stress inoculation strategies. I recommend taking this survey 2 – 3 x's/year.

The Holmes – Rahe Scale a Social Readjustment Rating Scale of Distressing Major Life Events

These are a few of the 43 variables in rank order from most distressing i.e., death of a spouse (100 pts.); divorce (73 pts.); personal injury or illness (53 pts); foreclosure of mortgage (31 pts.); trouble with boss (23 pts.). Some of the least distressing events are changes in social activities (18 pts); including sleeping (16 pts.); and eating (15 pts.). Refer to Holmes – Rahe (1967) for a complete scale for adults and children to check the scoring scale. The greater the score, the higher the probability of becoming sick due to being in chronic strain or burnout. I have found that these variables can be helpful in discovering traumatic events that may be in repressed memory.

Meditation

Diaphragmatic Breathing is what I like to call Breathing 101. As stated by the Chinese Proverb, "He who half breathes, half lives." It is the most efficient form of breathing and is used as the foundation for meditation, mindfulness, Yoga; and can be useful when exercising, playing sports or athletics; when giving a speech, performing in a concert or theater; taking a test, having a job interview; driving a car in traffic; handling pain; even when having negative thoughts or a panic attack.

- Begin by breathing gently through the nose, and on the inhale consciously push your belly up so that it rises
- On the exhale, purse your lips and focus on the out breath, exhale and allow your belly to be drawn in
- Visualize and notice the out breath

- Note: it can be done anywhere, anytime to activate the Parasympathetic NS

The Relaxation Response

Herbert Benson (1976) a cardiologist at Harvard Medical School and Beth Isreal Hospital adapted *The Relaxation Response*, a Western form of meditation based on Transcendental Meditation and an Eastern form of meditation referenced in *The Teachings of the Buddha* 5,000 years ago. In *The Wellness Book*, Benson and Stuart (1992) suggested two basic components involved in eliciting The Relaxation Response including:

- A mental focus, i.e., watching your breath or repeating a word, phrase, prayer, sound or visualizing an image
- A passive attitude toward distracting thoughts, not worrying about how well you are doing

Basic Steps for Eliciting the Relaxation Response

- Sit or lie in a comfortable position
- Eyes can be open or closed
- Breathe in slowly through your nose letting your belly rise
- Exhale, pursing your lips and drawing in your belly
- Use a focus word, Mantra, phrase, image or prayer to exhale

Examples can be peace, calm, be calm and calmness will come, let go, relax, oh well, let it be, I'm OK.
Note: It is important to assume a passive attitude. Do not worry how well you are doing or if you have distracting thoughts, let them go; and continue for 10 – 20- minutes, one or two times a day. It may be best to begin with five minutes a day and gradually increase the time. It is important to remember that thoughts are normal, just say, "Oh Well" and gently go back to your word, phrase, prayer or image.

Beyond the Relaxation Response

In *Beyond the Relaxation Response*, Benson with Proctor (1985) provide the theoretical framework for why it works which is the "Faith Factor.**"** It should be used in conjunction with modern scientific medicine. They write that "The state of your mind is the most important single factor in your physical health noting that the 'Placebo Effect' forms the basis of the mind – body interaction." In *Your Maximum Mind,* Benson (1987) notes that the brain has an innate capacity to change and be transformed. "Belief and Expectation" result from having confidence in your doctor, healer or the treatment. The brain establishes connections he refers to as "Remembered Wellness." It involves having a spiritual guide to develop new neural behavioral pathways. It transforms the experiences into positive thoughts.

Mindfulness Meditation

Mindfulness Meditation dates back 5,000 years. Kornfield with Fronsdal (1996) writes in The *Path to Mindfulness from the Teachings of the Buddha* that "Mindfulness is defined as observation of the breath in the body." Watt (2012) referred to it as the capacity for moment – by – moment focused awareness. It is being present during activities, i.e., eating, drinking tea or coffee; walking, movement (Yoga), sports or exercise; brushing your teeth; taking a shower, etc. Kabat -Zinn (1996) refers to it as the art of conscious living, acceptance of the present moment and reacting without judgement, thus creating harmony with life. Kabat - Zinn teaches mindfulness sitting, standing, walking; loving kindness, letting go; mindful images for self – esteem, harmony and communication. He even does parenting and grandparenting mindfulness meditation.

Meditation as Medication

In *Meditation as Medication*, Khalas (2001) a physician and Yogi with Struth note that "We are all linked between the body, mind and spirit. Psychoneuroimmunology (PIN) activates the endorphins or feel - good hormone system." Breath exercises that Khalas recommends from his book are: Complete Breathing; Retained Breath; Breath Walk; Rhythmic Breathing; and 4 x 4 Breathing. Positive

thoughts heighten the immunity causing the Parasympathetic Nervous System to shift into healing, rest and repair. You can refer to Roberts (2025) for an in-depth discussion on Meditation as Medication.

Guided Imagery

Guided Imagery (GI) incorporates a path of mental awareness. It activates a state of creativity as well as relaxation; explores your conscious mind and is a process of self – exploration opening the mind by letting you go with the flow. It controls awareness for overcoming pain and helps achieve relaxation. Schwartz (1995) provides GI scripts, *Fifty Visualizations that Promote Relaxation, Problem Solving, and Well – Being*. I personally use a sample breathing exercise called the "Body Scan." Employing Diaphragmatic Breathing you focus on individual body parts. Start from your toes and feet, go to your legs, torso, arms, shoulders, lower back, continuing to your head, neck and spine for pain and relaxation. Body scanning is guided meditation using scripts incorporating controlled mental awareness. It is a process of self – exploration that clears and opens the mind by letting you surrender with the flow of the narrative. It helps cope with levels of distress, anger, injury or illness.

Communication Styles

"Listen before you answer, and do not interrupt in the middle." Ecclesiasticus 18:13

Types of Communication:

Aggressive has a win – lose outcome
Passive has a lose – win outcome
Passive – Aggressive everyone loses
Assertive is the goal and has a win – win outcome
Communication and negotiation are the hallmarks of the Assertive style. It involves expressing your feelings openly and directly, encouraging the other person to do the same. It is OK to disagree but not to attack the other person. **Active Listening** is "Mindfully Listening" with empathy putting yourself in the other persons shoes. Benson and Stuart (1992) in *The Wellness Book* provide strategies including: Attention to Body Language; the 4 Step Approach; Diaphragmatic Breathing; Reflection before choosing to respond. "I" Statements are a classic conflict resolution strategy formula:

I feel _____ (state the problem)
When you _____ (what is the behavior)
Because _____ (what is your explanation)
And I need _____(what is it that you need from the other person)

Remember: "You have two ears and one mouth to listen the more and speak the less." Chinese Proverb.
I would recommend John Gray's (1992) *Men are from Mars and Women are from Venus*. It is about helping understand gender communication. According to Grey, Ph.D., "Men expect women to think, communicate, and react the way they do. Women expect men to feel and behave the same way as them." It is about exploring gender differences in communication which leads to conflict. Grey goes into strategies to improve communication so there is a win – win outcome.

Anger Management

"Anger is never without a reason, but seldom with good reason" Ben Franklin 1754
Williams and Williams (1993) define anger as a "slow acting poison." It involves components of hostility including:

- **Cynicism** which is a mistrusting attitude regarding the motives of others
- **Ange**r is an emotion that can be either good or bad associated with causing irritation and rage
- **Aggression** is a behavior that can be physical or verbal

Anger, however, is often associated with misunderstood emotions. Hamlet said, "Nothing is either good or bad, but thinking that makes it so." According to Tavis (1985) anger must be directed at the target of your anger. It must remove your sense of loss of control and change the behavior of the perpetrator with no retaliation. My Master's Thesis at the University

of Maryland, Roberts (1972) was about spectator aggression in Division 1 basketball. My result at the time supported the Berkowitz Catharsis or Ventilation Theory which was a dominant theory at that time. I refer you to Williams and Williams (1993) for 17 strategies for controlling hostility.

Self – Esteem

Poor Self – Esteem is a result of "Put Downs" we received from significant people in our lives. Benson and Stuart (1992) refer to these as "Awfulizers"; Kabat Zinn (1996) discusses "Catastrophizing"; Carter – Scott (1989) writes about "Negaholism" or focusing on negative thinking; Amen (2015) focuses on "Automatic Negative Thoughts" (ANT's); The Dalai Lama with Cutler (1998) discuss "Mental Afflictions"; McKay and Fanning's (1987) ethos is your "Psychological Critic." They provide a comprehensive list of strategies to identify and improve self – esteem.

Cognitive distortions are created by the accumulation of many put downs whereby unrealistic beliefs, judgements, inaccurate and pejorative language make us feel useless and dominate our thinking. To understand the concepts, refer to Conditions of Self – Esteem in Benson and Stuart (1992) including: Power/Control; Uniqueness/Specialness; Challenges; and Closeness. I would add Compassion for others as well as for self. Reinecke (2010) notes in *Keep Calm and Carry On* that anxiety and worry affect our self – esteem but can play a positive role being essential to survival. Negaholism*, according to Carter – Scott* (1989) unconsciously limits our abilities; sabotages our wishes, desires and dreams; places self – imposed limitations on our happiness; involves wrestling with your internal battlefield. Negaholics learn to be powerless. They lose control of their lives; feel helpless and hopeless. Brett Cotter's (2023*) Stress is Gone* works on Transforming Negative Thoughts (TNT) as a strategy to help with anxiety, trauma and self – esteem.

The Power of Positive Thinking

Norman Vincent Peale's (2003) work focuses on positive living, thinking, and optimism; Belief in a Higher Power; the link between Mind - Body – Spirit combining Faith with mainstream science. His formula is Science of Faith + Medical Science = Healing. He writes that "If you think defeat, you are bound to feel defeated, and I can do all things through Christ who strengthens me." His common denominator is always positive thinking and changing negative to positive behaviors. His ethos is using spirituality to live a happy and healthful lifestyle.

Larry Dorsey (1993) a mainstream allopathic medical doctor writes about the *Healing Power of Words*. He discusses the concept of "Cure versus Healing." He notes that cancer can remain, but it does not have to take a toll on the individual's mental health. They may not fear depression, despair or death, but have gratitude to God no matter what happens.

Gratitude

"I used to complain when I had no shoes, until I met a man with no feet." Walter J. Roberts

According to Perreault (2019) "Gratitude is noticing the good things in life and being thankful for them." We tend to take for granted the good things we have in life, i.e., food, clothing, a place to live in a safe environment. It is important to develop an "Attitude of Gratitude" for what we have. Journaling each day about three things you are grateful for is a good strategy to start with.

Forgiveness

According to Arnold (2003) forgiveness does not necessarily mean forgiving or condoning wrong. The Dalai Lama with Cutler (1998) notes that happiness is based on developing goodness, gentleness, compassion, kindness and commonality. It is achieved through training the mind and transforming our attitudes, values and beliefs; being empathetic and compassionate; focusing on gratitude for all things; developing health and wellness and a level of calmness. It also involves finding meaning in pain and suffering to strengthen our faith.

Volunteering

Sherman (1997) writes that "Volunteering is a real buffer from stress. It causes the brain to release Endorphins or feel – good hormones." We develop a "Helpers High" which is like our "Inner Pharmacy" improving our self – esteem. It provides greater

satisfaction in life; is a predictor of longevity; and is helpful in getting away from our focus on our own problems.

I am a volunteer coordinator of Ampsurf, an organization that teaches Veterans to surf. I am also an ambassador for the NYU Langone Hospital Radiation Oncology unit for Cyberknife their internationally recognized Prostate Cancer treatment. I also write a weekly Health and Wellness column SIT WITH John Roberts in The Wave, a local Rockaway Beach paper for the last 6 years with a print and digital readership of 16,000.

Support Groups

According to Krista (1986) support for emotional problems can be gotten from a partner, friend, family member or someone outside your immediate family. Sherman (1997) notes that it could be a church, prayer or bible study group; a hobby group that focuses on books, quilting, sports, exercise, etc. He points out that the support groups help you to see that you are not alone. They provide connectiveness, comfort and clarity against stress, worry, anxiety, and isolation. Support groups led by professionals can focus on alcohol or drug use or abuse; marriage or divorce; grief or bereavement; and sports etc. Donnlley, Eburne and Kittleson (2001) note that support groups help a person to realize that there are many people who experience similar problems. Trained group facilitators help individuals enhance skills needed to promote mental health; encourage listening non – judgmentally; and create a safe environment through a communal caring framework.

Alcoholics Anonymous (AA) was founded by Bill W. and Dr. Bob S in 1935. *Twelve Steps and Twelve Traditions* (1981) *was first published in 1953*. It dealt with fellowship, recovery and social functioning. The focus was spiritual, not religious principles. It provided a framework for living in general and had its eighty – third printing in April 2018. Some of the highlights in brief are:

Step 1 Admitting we are powerless over _____
Step 2 Believing a greater power can restore us _____
Step 3 Turn ourselves over to God as we understand Him
Step 4 Make a moral inventory of ourselves
Step 5 Admit the nature of our wrongs
Step 6 Be ready to have God remove all character defects
Step 7 Humbly ask to remove our shortcomings
Step 8 Be willing to make amends to all we have harmed
Step 9 Make amends whenever possible
Step 10 Admit when we are wrong
Step 11 Pray to God as we understand Him for power to carry out his will
Step 12 Carry out this message and practice these principles in all our affairs

I believe that Step 12, which is spiritual awakening, is when there is transformation, healing and happiness. It is achieved by constant recitation of the Serenity Prayer, "God grant me the serenity to accept things we cannot change. Courage to change the things we can. And wisdom to know the difference." This is "Letting Go" which I believe is the most important but most difficult step to put into practice. These steps are helpful in many aspects of our lives helping us to live a Healthful Lifestyle and Stress Hardiness.

My wife and I attended Al – Anon Family Group meetings as parents of a substance user and abuser.

Time Management

Understanding and organizing problems with time management according to Morgenstern (2000) starts with starting a plan and taking control each day. It is about handling opportunities and distractions as well as changing perception of time. She suggests a Three - Level Process which includes 1) Technical Errors that have no "Home" or time slot blocked out in your schedule; setting aside the wrong time and knowing when and where your energy and concentration is most efficient; miscalculating how long the task realistically takes. 2) Unrealistic Workloads that need to be streamlined or deleted such as life and health problems that limit your ability. 3) Psychological Obstacles include unclear goals, fear of failure, fear of success and need for perfection.

Time management is the ultimate in self – improvement. It is important to understand that no one ever gets to complete everything on a to – do list. It is

to develop a "Big Picture" goal for self, family, work, relationships, finances, etc. What is important is how changes can be made including what makes you happy. Time Mapping is a visual representation of daily, weekly, and monthly activities which need to be accomplished. You can use a desk calendar, computer or electric planning Apps to categorize tasks i.e., phone calls, bills, emails as well as breaking tasks into appropriate sizes and manageable parts; you can create an hour or daytime slot for the most important things to do; letting go of being perfect; stepping back and taking time out for distractions and energy fluctuations and for things you cannot control.

CONCLUSION

During my 30 + years as a health and wellness educator, I designed and taught Stress Inoculation Training (SIT) courses including: a nine - week elective course for high school students supporting the NYS Health Education Standards; a full semester 3 credit college course to health science and physical education students; a Professional Development 30 hour, 3 credit in – service course for teachers to become turnkey teachers for grades K – 12 students; a 2 and ½ hour workshop and seminar for school administrators, social workers, school psychologists and Crisis Response Support Teams for job stress. In retirement, I write a weekly column, SIT WITH John Roberts for The Wave a local Rockaway Beach paper. I have over 320 articles related to health and wellness, Crisis Response Training and Stress Inoculation Training. They can be digitally accessed at www.rockawave.com.

The goal and ethos of all my work is living a Healthful Lifestyle to become "Stress Hardy." Mind – Body – Spirit and Healing is an advanced stress inoculation training course for people who want to continue with their personal wellness journey which emphasizes mental health, trauma, and healing. The Appendix has a model unit plan for educators or anyone that can be used as an outline for a potential course, seminar or workshop. It includes an outline for a 12-week session (30-hour course) which can be modified according to your needs and time frame.

The Mission of the American Academy of Experts in Traumatic Stress is to **Increase Awareness** of the effects of traumatic events and crisis situations on human functioning; **Look Beyond Physical Needs and Safety** needs to address emergent psychological needs; **Establish Standards** to improve the quality of support and intervention and establish meaningful standards among professionals across disciplines; **Training and Education** provide information and updated and ongoing training and resources. My Stress Inoculation Training and weekly articles support the Academy's stated mission.

APPENDIX

Course Description Stress Inoculation Training

This course of study is designed to identify and recognize stress in one's life; and learn stress inoculation strategies and skills to assist with developing personal stress management plans. The goal is to teach participants that:

Knowledge + Behavior = Stress Hardiness

Instructional Goals

The purpose of Stress Inoculation Training is for participants to be able to:

- Identify and recognize how stress affects life positively and negatively
- Learn skills and strategies to develop personal stress management plans
- Increase resiliency and better manage acute and chronic stress
- Learn to live a "Healthful Lifestyle and become "Stress Hardy"
- Recognize the relationship between destructive behaviors, acute and chronic distress, as well as healthy emotional development and resiliency
- Promote positive healthy behaviors through knowledge and risk reduction behaviors
- Evaluate personal baseline factors contributing to physical, mental, emotional, social and relationship stress through Self – Stress Mapping Scales; Holmes – Rahe Major Life Social Reorganization Scales; and Stress Exhaustion Symptoms Checklists
- Understand the influence of societal pressures contributing to strain and burnout

- Access community resources and services to assist throughout life and health span

The following is for a 12-session course outline in Stress Inoculation Training. It can be adapted and modified for individual circumstances.

Session 1: Personal profile baseline score using Stress Map Self – Scoring Questionnaire Grid; the Holmes – Rahe Social Readjustments Scale for adults and children; and Stress Exhaustion Symptoms Checklists

Session 2: Understanding the dynamics and Stages of Stress, Hans Selye's General Adaption Syndrome (GAS), including Alarm or Fight or Flight or Freeze; Resistance or Repair; and Exhaustion or Burnout

Session 3: Introduction to Meditation and Diaphragmatic Breathing; The Relaxation Response; Mindfulness Meditation, and Guided Imagery, employing meditation logs and daily meditation practice

Session 4: Anger Management including the Hostility Questionnaire and Hostility Logs strategies

Session 5: Self – Esteem Checklist and Questionnaire; Affirmations and Visualizations; Negaholism and Irrational Beliefs including strategies to build self – esteem

Session 6: Decision Making Process model with Universal Values Respect, Responsibility and Reasoned Decision Making to reduce distress and improve self – esteem and resiliency

Session 7: Communication styles emphasizing Assertiveness using Active Listening and "I Messages"

Session 8: Time Management and strategies to improve work and home effectiveness

Session 9: Emotional Health employing *The Twelve Steps and Twelve Traditions of AA* to serve as a model to cope with addictions, anger, anxiety, depression, phobias, and obsessive – compulsive disorders

Session 10: Introduction to Hatha Yoga and basic asana positions to align the spine and improve physical, mental, and spiritual well – being and pain relief

Session 11: Book reviews and presentations from the recommended bibliography

Session 12: Final Reflective Exercise on the personal experience supporting the goal of Knowledge + Behavior Change = "Stress Hardiness"

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THE R.I.S.E. FRAMEWORK: A TRAUMA-INFORMED CLINICAL MODEL FOR RECOGNIZING TRAUMA, INITIATING SAFE CARE, SUPPORTING HEALING, AND EMPOWERING RECOVERY IN HEALTHCARE SETTINGS

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ABSTRACT

Trauma is a widespread public health concern that significantly affects physical, psychological, and emotional well-being. Survivors of sexual violence, childhood abuse, domestic violence, and other traumatic experiences frequently seek care within healthcare systems. Despite this reality, many healthcare professionals report limited training in trauma-informed care and uncertainty about how to respond when trauma disclosures occur.

When healthcare providers lack the knowledge or confidence to address trauma effectively, clinical interactions may unintentionally contribute to patient distress, mistrust, or disengagement from care. Creating healthcare environments that recognize and respond to trauma is therefore essential to improving both patient experiences and clinical outcomes.

This paper introduces the R.I.S.E. Trauma-Informed Care Framework, a practical model designed to guide healthcare professionals in responding to patients who may be experiencing the effects of traumatic stress. Developed through decades of clinical experience in emergency nursing, sexual assault response, and trauma-informed education, the framework provides a structured approach based on four principles: Recognize Trauma, Initiate Safe Care, Support Healing, and Empower Recovery.

The R.I.S.E. framework offers healthcare professionals practical strategies for identifying trauma-related responses, creating psychological safety, responding compassionately to disclosures, and restoring patient autonomy during healthcare encounters. Integrating trauma-informed frameworks such as R.I.S.E. into healthcare education and clinical practice has the potential to strengthen provider confidence, reduce the risk of retraumatization, and promote compassionate, survivor-centered care.

Keywords: trauma-informed care, traumatic stress, healthcare training, sexual assault survivors, patient-centered care

INTRODUCTION

Trauma is far more common than many healthcare professionals realize. Survivors of sexual violence, childhood abuse, domestic violence, and other traumatic experiences frequently enter healthcare systems seeking treatment for both physical and psychological effects of trauma. For many survivors, healthcare encounters represent moments of profound vulnerability. Yet despite the frequency with which trauma intersects with medical care many healthcare professionals receive little formal education on trauma-informed care or on how to respond when patients

disclose traumatic experiences.

For survivors, interactions with healthcare providers can either reinforce safety and trust or unintentionally recreate feelings of fear, powerlessness, and loss of control. Clinical procedures, physical examinations, and certain forms of communication may trigger traumatic memories when providers are not aware of trauma-informed principles.

Healthcare professionals often report uncertainty about what to say or how to respond when patients disclose experiences of sexual violence or other forms of trauma. In some cases, providers may focus solely on physical treatment while overlooking the psychological impact of trauma. These responses are rarely intentional; rather, they often reflect gaps in training and the absence of clear guidance for responding to trauma disclosures.

These challenges highlight the need for practical frameworks that help healthcare professionals recognize trauma and respond in ways that promote safety, dignity, and healing.

The R.I.S.E. Trauma-Informed Care Framework was developed through more than two decades of frontline nursing experience in emergency care, including work as a sexual assault nurse and trauma-informed educator supporting healthcare teams. The framework provides a clear structure for healthcare professionals to respond to trauma in ways that support patient safety, compassion, and recovery.

PREVALENCE OF TRAUMA IN HEALTHCARE

Research consistently demonstrates the widespread impact of trauma across populations. Studies on Adverse Childhood Experiences (ACEs) have shown strong associations between early trauma exposure and long-term physical and mental health outcomes (Felitti et al., 1998). Survivors of trauma frequently present in healthcare settings seeking treatment for a variety of medical conditions, including those related to chronic stress, injury, and psychological distress.

Sexual violence alone affects millions of individuals worldwide, and many survivors interact with healthcare systems at various points throughout their lives. Despite the prevalence of trauma, healthcare providers often receive limited education on trauma-informed approaches to patient care.

Without training in trauma-informed practices, healthcare providers may feel uncertain about how to respond when trauma disclosures occur. This uncertainty can result in missed opportunities to provide meaningful support or, in some cases, interactions that unintentionally contribute to retraumatization. Trauma-informed care seeks to address these challenges by promoting safety, compassion, and patient-centered communication.

DEVELOPMENT OF THE R.I.S.E. FRAMEWORK

The R.I.S.E. Framework emerged through years of clinical practice working with survivors of trauma in healthcare settings, particularly within emergency care environments where patients often present during moments of acute vulnerability. During these interactions, patterns became apparent in how survivors experienced healthcare encounters and how providers responded to trauma disclosures.

Many healthcare professionals expressed a desire to provide compassionate care but lacked clear guidance on how to respond in trauma-sensitive ways. While providers often demonstrated empathy, the absence of a structured approach sometimes resulted in inconsistent responses across healthcare settings.

The R.I.S.E. framework was developed by the author to translate trauma-informed principles into practical steps that healthcare professionals can apply in everyday patient interactions. Drawing on principles of trauma-informed care, patient-centered communication, and survivor advocacy, the framework organizes trauma-responsive practices into four accessible components: Recognize Trauma, Initiate Safe Care, Support Healing, and Empower Recovery.

THE R.I.S.E. TRAUMA-INFORMED CARE FRAMEWORK

The R.I.S.E. Framework provides healthcare professionals with a structured trauma-informed approach for responding to patients who may have experienced trauma in clinical settings.

The R.I.S.E. Trauma-Informed Framework consists of:

R – Recognize Trauma
I – Initiate Safe Care
S – Support Healing
E – Empower Recovery.

RECOGNIZE TRAUMA

Recognizing trauma involves acknowledging that trauma may be present even when it has not been disclosed. Survivors may carry psychological and emotional wounds that influence how they respond to medical care.

Healthcare professionals can recognize trauma by observing signs such as heightened anxiety, withdrawal, difficulty maintaining eye contact, or distress during examinations. Recognizing trauma requires providers to approach patient interactions with sensitivity and awareness of the potential impact of past experiences.

INITIATE SAFE CARE

Initiating safe care involves creating an environment that promotes both physical and psychological safety. Clear communication, respectful interactions, and transparency about procedures help establish trust between patients and providers.

Healthcare professionals can enhance safety by explaining each step of examinations, asking permission before touching patients, and allowing patients to pause procedures when needed. Providing choices whenever possible helps restore a sense of control for individuals who may have experienced situations where control was taken from them.

SUPPORT HEALING

Supporting healing requires compassionate listening, validation, and emotional presence. When survivors disclose traumatic experiences, healthcare providers play an important role in shaping how the survivor experiences the interaction.

Acknowledging the difficulty of sharing traumatic experiences and responding without judgment can provide meaningful support. Connecting patients with appropriate resources, including counseling services and advocacy programs, further supports the healing process.

EMPOWER RECOVERY

Empowering recovery focuses on restoring patient autonomy and dignity. Trauma often involves experiences of powerlessness, and healthcare encounters should aim to return control to the survivor. Healthcare professionals can empower patients by involving them in decisions about their care, providing clear information about treatment options, and respecting patient choices throughout the healthcare encounter.

CLINICAL APPLICATION

The R.I.S.E. Framework can be applied across a variety of healthcare environments, including emergency departments, primary care clinics, obstetrics and gynecology practices, dental offices, and mental health settings.

For example, a patient presenting with anxiety during a medical examination may initially appear hesitant or withdrawn. By recognizing the possibility of trauma, the healthcare provider can approach the patient with greater sensitivity, explain each step of the examination, and ask for permission before proceeding. If the patient later discloses a history of sexual violence, the provider's response guided by the R.I.S.E. framework can validate the patient's experience, provide reassurance, and connect the patient with supportive resources.

Such interactions help create safer healthcare experiences and strengthen trust between survivors and healthcare systems.

POTENTIAL FOR BROADER ADOPTION

The R.I.S.E. Framework offers a practical structure that can be integrated into healthcare education, clinical protocols, and professional development programs. Because the framework emphasizes communication, safety, and patient autonomy, it can be applied across multiple healthcare specialties.

Integrating trauma-informed frameworks into healthcare training may help improve provider confidence, reduce the risk of retraumatization, and promote compassionate, patient-centered care across healthcare systems.

IMPLICATIONS FOR HEALTHCARE TRAINING

Despite the prevalence of trauma among patients, many healthcare professionals receive minimal training in trauma-informed care. Incorporating frameworks such as R.I.S.E. into healthcare education programs can help bridge this gap.

Training that focuses on trauma awareness, communication strategies, and patient empowerment may help healthcare providers feel more confident when responding to trauma disclosures. Institutions that incorporate trauma-informed principles into staff training and patient care protocols may also contribute to safer healthcare environments for survivors.

LIMITATIONS AND FUTURE RESEARCH

While the R.I.S.E. Framework offers a practical approach for trauma-informed care, this model is based primarily on clinical experience and trauma-informed education rather than formal empirical testing. Further research may help evaluate the framework's effectiveness across diverse healthcare settings.

Future studies may explore how trauma-informed frameworks influence provider confidence, patient satisfaction, and survivor-centered outcomes. Continued research will be important as healthcare systems seek to strengthen trauma-informed practices.

CONCLUSION

Trauma is a pervasive issue that intersects with healthcare in many ways. Survivors frequently seek medical care while carrying the psychological effects of traumatic experiences, yet many healthcare professionals lack training in trauma-informed responses.

The R.I.S.E. Trauma-Informed Care Framework offers healthcare professionals a structured approach for recognizing trauma, initiating safe care, supporting healing, and empowering recovery. By providing practical guidance for trauma-informed interactions, the framework may help improve patient experiences and strengthen compassionate care within healthcare systems.

As awareness of traumatic stress continues to grow within healthcare, practical frameworks such as R.I.S.E. may play an important role in helping healthcare professionals translate trauma-informed principles into survivor-centered care. Future research and clinical evaluation may further explore the impact of R.I.S.E. framework on provider training, patient, experiences, and the development of trauma-responsive healthcare environments.

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CULTURAL COMPETENCE IN COUNSELING SPECIAL OPERATIONS FORCES: IDENTITY FUSION, HELP-SEEKING BARRIERS, AND CLINICAL IMPLICATIONS

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ABSTRACT

Special Operations Forces (SOF) personnel represent a distinct military subculture characterized by elite selection, chronic high operational tempo, identity fusion with mission, and heightened secrecy requirements. Despite elevated exposure to operational stress and reintegration challenges, SOF operators demonstrate significant resistance to traditional behavioral health services. This paper examines the cultural dynamics that shape help-seeking behaviors among SOF populations and proposes a culturally competent clinical framework integrating identity theory, stigma research, performance psychology, and trauma-informed care. Implications for embedded clinical models, confidentiality practices, and family-system interventions are discussed. Recommendations for future empirical research are provided.

KEYWORDS: Special Operations Forces, cultural competence, identity fusion, stigma, embedded clinicians, military psychology

INTRODUCTION

Military populations have received significant attention in behavioral health research; however, Special Operations Forces (SOF) remain underrepresented in scholarly literature despite operating within uniquely demanding cultural and operational environments. SOF operators—including units such as Naval Special Warfare, Army Special Forces, and other elite elements—undergo rigorous selection processes that foster identity fusion with mission, team cohesion, and performance-based self-concept.

Traditional military counseling frameworks often emphasize trauma exposure, posttraumatic stress symptoms, and reintegration stressors. While these constructs are relevant, they insufficiently capture the existential and identity-based disruptions that frequently emerge in SOF populations. The purpose of this article is to examine SOF cultural characteristics, identify barriers to mental health engagement, and propose a culturally competent clinical model for working with this population.

SOF as a Distinct Military Subculture

Elite Identity Formation

SOF identity is forged through:

- Extreme selection and attrition
- Continuous performance evaluation
- Mission-first ethos
- Chronic exposure to high-risk operations
- Compartmentalization of classified experiences

Identity fusion theory suggests that when personal identity becomes inseparable from group identity, threats to the group or role may produce profound psychological destabilization. For SOF operators, transition out of operational roles may produce identity

disruption rather than solely occupational adjustment stress.

Chronic Operational Tempo and Nervous System Adaptation

Unlike conventional deployment cycles, SOF units often maintain sustained operational tempo. This chronic activation may produce:

- Persistent hypervigilance
- Sleep dysregulation
- Emotional constriction
- Difficulty recalibrating to low-threat environments

Importantly, these adaptations may be functional in combat contexts but maladaptive in domestic settings. Clinicians must differentiate pathology from contextually adaptive performance states.

Barriers to Help-Seeking

Structural Barriers

- Security clearance concerns
- Documentation fears
- Command notification anxieties
- Career progression risks

Cultural Barriers

- Perception of weakness
- Hyper-competence norms
- Distrust of civilian clinicians
- Preference for internal problem-solving

Research on military stigma consistently demonstrates that perceived career impact is a stronger predictor of service avoidance than symptom severity. In elite populations, stigma may be amplified by identity fusion and performance expectations.

CLINICAL IMPLICATIONS

1. Cultural Competence Beyond Military Generalization

Clinicians must acquire familiarity with:

- SOF terminology
- Operational structure
- Selection culture
- Reintegration challenges
- Clearance processes

Failure to demonstrate baseline cultural understanding may produce early therapeutic rupture.

2. Performance-Based Framing

Traditional pathology-centered language may alienate SOF clients. Reframing treatment as:

- Performance optimization
- Recovery cycle recalibration
- Cognitive resilience training
- Autonomic regulation may increase engagement.

3. Identity Reconstruction Work

Transition periods often require:

- Narrative restructuring
- Meaning-making frameworks
- Role diversification
- Value realignment

Acceptance and Commitment Therapy (ACT) and narrative approaches may be particularly suited for identity transitions.

4. Family Systems Interventions

Family members frequently experience:

- Emotional distancing
- Secondary stress
- Reintegration conflict
- Communication disruption

Psychoeducation regarding nervous system recalibration and operational carryover behaviors is essential.

5. Embedded Clinician Models

Embedded behavioral health models may reduce stigma and increase accessibility; however, they introduce ethical complexities including:

- Dual-role ambiguity
- Confidentiality perceptions
- Organizational pressure
- Documentation vulnerability

Clear informed consent and explicit boundary communication are critical.

ETHICAL CONSIDERATIONS

Working with SOF personnel requires careful navigation of:

- Mandated reporting
- Documentation storage
- Security-related disclosures
- Moral injury content involving classified missions

Clinicians must clarify confidentiality limits early and explicitly.

FUTURE RESEARCH DIRECTIONS

Empirical research is urgently needed in the following areas:

1. Help-seeking predictors among SOF populations
2. Identity fusion and reintegration distress
3. Effectiveness of embedded clinician models
4. Clearance fear and utilization rates
5. Performance-framed interventions vs traditional psychotherapy models

Mixed-method designs incorporating qualitative interviews may be particularly useful given cultural nuance.

CONCLUSION

SOF operators represent a highly specialized military subculture requiring culturally informed behavioral health care. Standard military counseling models may fail to address identity fusion, chronic operational tempo, and elite performance norms. Clinicians who integrate cultural competence, performance-based framing, identity reconstruction, and family systems approaches may enhance engagement and outcomes. Further empirical investigation is warranted to develop evidence-based, population-specific interventions.

TRAUMA-INFORMED, PREVENTION-FOCUSED STRATEGIES FOR WORKPLACE VIOLENCE

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EXECUTIVE SUMMARY

Workplace violence is not random — it leaves a trail of warning signs that organizations can detect and disrupt. With more than 57,000 nonfatal incidents reported between 2021 and 2022, and healthcare and social assistance accounting for three quarters of cases, the urgency is undeniable. Women represent over 70 percent of victims, underscoring the disproportionate impact on female-dominated sectors.

The regulatory landscape is shifting rapidly. California's SB 553 now requires written prevention plans, hazard assessments, incident reporting, and employee training, while the Joint Commission's standards demand leadership oversight, data collection, and post-incident strategies. These mandates highlight accountability and continuous improvement as non-negotiable.

The financial stakes are equally high: workplace violence cost hospitals more than $18 billion in 2023. Beyond economics, trauma-informed practices offer a path to resilience by recognizing how stress and past experiences shape behavior, fostering empathy and accountability without excusing harm.

This report delivers a comprehensive framework for leaders to recognize early warning signs, comply with evolving regulations, embed trauma-informed practices, and strengthen organizational resilience. The imperative is clear: proactive prevention transforms workplaces into environments defined by safety, trust, and productivity.

ABSTRACT

Workplace violence has emerged as a systemic organizational challenge, affecting employee safety, culture, and operational stability. Although incidents may appear sudden, research demonstrates that they are often preceded by identifiable behavioral cues, escalating patterns, or environmental risk factors.
This paper synthesizes current data on workplace violence trends, regulatory requirements, and trauma-informed response strategies. Drawing from federal guidance, state legislation, organizational standards, and trauma-informed frameworks, it presents a structured model for recognizing, responding to, and recovering from workplace violence. The objective is to provide organizations with a prevention-focused approach that enhances safety, supports employee well-being, and strengthens resilience.

KEYWORDS: Workplace Violence; Trauma-Informed Practice; Violence Prevention; Behavioral Threat Assessment; Crisis Response; Organizational Safety; Employee Well-Being; De-escalation Strategies; Leadership in Safety; Risk Mitigation

INTRODUCTION

Workplace violence is fundamentally a traumatic-stress event — one that disrupts not only physical safety but also, psychological functioning, organizational trust, and long-term stability. While incidents may appear

suddenly, research consistently shows that most acts of workplace violence are preceded by identifiable behavioral cues, escalating patterns, or environmental stressors. These precursors reflect not only risk but also the underlying traumatic mechanisms that shape human behavior under strain.

Understanding workplace violence through a traumatic-stress lens reframes the issue from a narrow security concern to a multidimensional psychological, organizational, and leadership challenge. Traumatic exposure affects employees, supervisors, and entire systems, influencing decision-making, communication, and recovery trajectories long after the incident itself. This perspective aligns with the mission of the American Academy of Experts in Traumatic Stress, which emphasizes early recognition, structured intervention, and trauma-informed recovery across disciplines.

This manuscript integrates current workplace violence trends, regulatory frameworks, and trauma-informed principles into a cohesive model for prevention, response, and organizational healing. By foregrounding traumatic-stress dynamics — including acute stress reactions, secondary traumatic stress, and organizational trauma — the framework equips leaders, supervisors, and safety professionals to recognize early warning signs, intervene effectively, and support long-term resilience. The goal is to help organizations move beyond compliance and crisis response toward proactive, trauma-informed prevention that strengthens safety, trust, and well-being.

LITERATURE REVIEW

Prevalence and Trends in Workplace Violence

Between 2021 and 2022, more than 57,000 nonfatal workplace violence incidents required employees to miss work, accept job restrictions, or transfer roles. Women accounted for over 70 percent of these cases, reflecting the disproportionate burden borne by female-dominated sectors such as healthcare and social assistance. Healthcare and social assistance alone represented three quarters of all reported incidents during this period. These patterns highlight the vulnerability of professions characterized by frequent public interaction, patient care, or engagement with emotionally distressed individuals.

Regulatory Frameworks

Federal guidance from OSHA and NIOSH emphasizes hazard identification, reporting systems, training, and environmental controls. State legislation is evolving, with California's Senate Bill 553 requiring written prevention plans, hazard assessments, incident records, and employee training by December 31, 2026. In healthcare, additional reporting requirements compel hospitals to submit workplace violence incidents through secure online systems, enabling transparency and trend analysis. These measures illustrate a growing emphasis on accountability and initiative-taking risk management.

Early Warning Signs of Workplace Violence

Violent incidents are rarely spontaneous; they are often preceded by observable behavioral cues. Indicators range from overt hostility and verbal threats to subtler signs such as emotional instability, withdrawal, declining performance, or fixation on weapons. Recognizing these behaviors as potential precursors reframes them as critical opportunities for prevention and support.

Trauma-Informed Prevention Framework

A trauma-informed approach recognizes that behavior is often shaped by stress, prior trauma, and environmental conditions. In the context of workplace violence, this lens deepens organizational capacity to identify early warning signs, understand escalation pathways, and intervene before harm occurs.

Recognition

Recognition includes identifying behavioral, environmental, and organizational indicators, as well as the traumatic-stress mechanisms that may underlie them. Acute stress responses, chronic dysregulation, and unresolved trauma histories can influence how individuals perceive threat, manage conflict, and respond to workplace pressures. Recognizing these patterns allows organizations to interpret concerning behavior as a signal requiring support, boundaries, or structured intervention.

Response

Response involves clear reporting pathways, trained supervisors, and de-escalation strategies grounded in psychological safety. Trauma-informed response emphasizes empathy without excusing harmful actions. It acknowledges that stress and trauma shape reactions, while maintaining accountability and prioritizing safety. Effective response includes immediate stabilization, communication protocols, and access to support resources for both affected employees and leaders.

Recovery

Recovery is essential to restoring organizational functioning after a violent or threatening incident. Trauma-informed recovery includes restoring psychological safety, rebuilding trust, and addressing secondary traumatic stress among staff and leadership. Transparent communication, opportunities for reflection, and policy review help organizations process the event and strengthen resilience. Recovery also involves recognizing the impact of organizational trauma — the collective disruption that affects morale, cohesion, and performance — and implementing strategies to support long-term healing.

Workplace Violence in Healthcare Settings

Healthcare remains the sector most acutely affected by workplace violence. The Joint Commission's 2022 standards require leadership oversight, policies and procedures, reporting systems, data collection, and post-incident strategies. Despite these measures, the economic toll remains staggering: workplace violence cost hospitals more than $18 billion in 2023, including medical care, infrastructure repairs, productivity losses, prevention programs, security staffing, and training investments. These figures underscore both the human and financial imperatives for proactive prevention and trauma-informed organizational resilience.

Implications for Traumatic Stress Professionals

Professionals working in traumatic stress, crisis management, and organizational safety play a critical role in preventing and responding to workplace violence.

- **Early Recognition and Assessment** — Traumatic stress professionals help organizations identify behavioral, environmental, and organizational indicators that precede violence, supporting accurate interpretation of stress-driven behavior.
- **Trauma-Informed Intervention** — Practitioners guide leaders in implementing de-escalation strategies, communication protocols, and supportive interventions that balance empathy with accountability.
- **Organizational Trauma and Recovery** — Experts help organizations understand and address the collective impact of violence, including secondary traumatic stress and long-term healing processes.
- **Cross-Sector Collaboration** — Because workplace violence intersects mental health, organizational behavior, leadership, and safety, traumatic stress professionals bridge disciplines and support integrated prevention frameworks.
- **Training and Capacity Building** — Practitioners strengthen organizational readiness through training on early warning signs, trauma-informed leadership, crisis communication, and post-incident recovery.

CONCLUSION

Workplace violence is a complex and multifaceted challenge that demands more than isolated interventions; it requires a unified, trauma-informed, prevention-focused framework. The evidence demonstrates that incidents are rarely unpredictable, regulations are evolving, and trauma-informed practices offer pathways to resilience. By integrating early warning sign recognition, regulatory compliance, and organizational culture change, leaders can move beyond reactive measures toward proactive prevention.

Sustainable safety depends on leadership commitment, cross-sector collaboration, and continuous improvement that embeds empathy, accountability, and resilience into daily practice. Organizations that embrace comprehensive prevention not only reduce risk and protect employees, but also cultivate

environments defined by trust, stability, and long-term productivity.

Author Note

This manuscript was prepared to support organizations, leaders, and safety professionals in understanding and addressing workplace violence through a trauma-informed, prevention-focused lens.

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DEATHS DURING POLICE INTERVENTIONS – LEGAL, TRAINING, CULTURAL, PSYCHOLOGICAL - MEDICAL ISSUES, AND ADMINISTRATIVE CONSIDERATIONS

WAYNE MAXWELL

Over the years, there has been, periodically, major increases in media attention and in social discussion on issues related to the use of force by law enforcement officers. The focus is on those situations where excessive use of force is reported. The numbers of such incidents are very apparently increasing as are the number of deaths of people with whom police intervene, especially involving black males. The attention, originating in the United States, and spreading around the world has been high profile, from time to time, over many years especially in the United States, however, it is also witnessed in other countries, including Canada.

In Canada, where in addition to people of color, there are similar issues for aboriginal people, as well. If the percentages of persons of color were higher in Canada, would the problem be greater? If there were people of various ethnic backgrounds, with different physical features: First Nations (Indian, Eskimo, Metis) or from other parts of the world, or speak different languages, or English with an accent, would similar issues and incidents be occurring? Chances are good that they would.

The purpose of this paper is to provide an overview of some of the factors which are relevant to the occurrence of such incidents and suggestions for consideration that may result in making changes which would reduce the use of excessive force and result in better and more positive outcomes with the types of incidents noted above as we move into the future. The factors addressed have been high profile, and much discussed in the media.

There are several influencing considerations related to law enforcement interventions and potential use of force when used by law enforcement personnel which may create serious consequences. Some of these include:

1. Law and legal basis when situations escalate resulting in more resistance the need to use increased controlling approaches and methods,

2. Methods, processes and sequencing for teaching the theory and skills of applied kinesics (body language), verbal and paraverbal skills to attempt defusing and calming, and a range of physical defense and control skills which can be used as situations may escalate,

3. Social and cultural factors, including bias(es), which exist, for all persons in varying degrees. This factor may be the ***most important and significant to minimize or eliminate the occurrence of excessive force situations, including deaths of those being arrested or those who resist during or after arrest.***

4. Medical (physiological) and psychological (psychiatric) conditions or reactions resistant persons may experience and further complicate efforts to calm and defuse an upset person and result in increased methods of control being used. These may include:

   A. Alcohol Intoxication, or the impacts of illicit drug use (addictions).
   B. Intellectual disabilities, attention deficit – hyperactive disorder (ADHD), autism, agoraphobic (claustrophobic) and others,
   C. Psychotic disorders (hallucinations, delusions, etc.), schizophrenia, bipolar, psychotic depression, etc.
   D. Psychopathic / sociopathic disorder or may include combinations of these disorders, such as: narcissism, histrionic, anti-social, etc.

E. Disorders which occur more specifically in law enforcement types of interventions such as: Excited delirium (Also referred to as: Excited Delirium

Syndrome and Agitated Delirium) and "Suicide-by-Cop" (Also referred to as: Victim Precipitated Suicide), a syndrome which may occur when a person is depressed, under the influence of drugs, or other similar circumstances, and who, under these conditions, is thinking about suicide. They at times may, as police intervene, create a situation in which the police may have to use deadly force to control acting-out-person.

5. Strategic approaches into the future have been recently referred to with the term **"defunding"** of law enforcement, specifically, police agencies. Other terms which have been used in the past have been **"diversification"** of law enforcement to include more functions with mental health, social welfare, psychologists, counsellors, addictions specialists, conflict resolution expertise. Programs of this nature have been referred to as **Crisis Intervention Teams**.

All five factors outlined above are critical to consider for improving response to crisis situations. Learning, understanding and applying control methods and techniques is critical to minimal control being used. Without training, awareness, and understanding in all five areas, the risk of ***increased resistance*** to police interventions will be experienced more frequently. All these factors should be included as part of the approaches to ***use of control training in the context of the Resistance – Control Continuum (R – C Continuum).*** All the five factors are interrelated, are linked, and should be presented and taught as such. To totally address related content of this paper would require much more information, depth and space to present thoroughly on this topic than is available for this article. Considering this factor, only information and topics are included which have been of high profile and addressed frequently in the media through this period, of early spring to summer of 2020.

Although it is not a part of the focus of this paper, the recruitment and selection of all law enforcement officers, including: police, corrections, conservation, sheriffs, security, customs, excise, and other government employees who have enforcement responsibilities should include pre-selection screening, which includes appropriate interviews and psychological testing on the topics of prejudice and bias as related to law enforcement work which may affect decision making, ***especially, under pressure related to the use of Control techniques.***

1. LEGAL BASIS – USE OF FORCE

The basis in law for use of force is included in the criminal law of a country. In Canada, the Criminal Code is federal law applicable to all provinces and territories. In the United States, use of force legislation include in both Federal law and State Law, and thus requires training and learning from different levels of government for work in the law enforcement field. References, in this paper, will be made to Canadian Criminal Law as it applies to ***peace officers.*** In various countries and jurisdiction, different authorities are invested in law enforcement officer legislation, for example: conservation officers, corrections officers, sheriffs. The powers of citizens are also addressed in enforcing the law. Training aids for ***use of force training***, and other concepts for training purposes, are relevant to other countries and can and are used internationally to teach the theory of the use of force in various situations with various levels and types of ***resistance*** and the level and types of ***control.***

A model developed to aid in learning the theory of resistance and the control necessary to counter and control resistance, as noted above, is the ***RESISTANCE – CONTROL CONTINUUM.*** It is an excellent training aid to illustrate the relevant concepts outlined in Section 25, Sub-section 1 of the Criminal Code of Canada (CC) which is as follows:

"25 (1) Everyone who is required or authorized by law to do anything in the administration or enforcement of the law

(a) as a private person,
(b) as a peace officer or public officer
(c) in aid of a peace officer or public officer, or
(d) by virtue of his office,is, if he acts of reasonable grounds, justified in doing what is required or authorized to do and ***in using as much force as is necessary for that purpose.***"

The *RESISANCE – CONTROL CONTINUUM* (Siddle, Bruce (2017, 2005) is outlined below. It is a model which provides guidance for the phrase in the last sentence of the quoted Canadian Criminal Code section which addresses use of force. It provides an escalation continuum the phrase of ***"as much force as is necessary"*** using a RESISTANCE CONTINUUM on the left

and a CONTROL CONTINUUM on the right (see table below).

Brief Definitions and Descriptions:

1. PSYCHOLOGICAL RESISTANCE - (Examples: Not speaking, ignoring questions & directions, saying little.)
   OFFICER PRESENCE – On scene. Assessing situation, body language (kinesics) calming.

2. VERBAL NON-COMPLIANCE

   A) EXPRESSIVE – Emotional
      INTERVENTION - Person centered discussion, Attending, Restatement, Paraphrase, etc.

   B) INSTRUMENTAL - *Interpersonal Manipulation / Confidence Games* – Calm, manipulative, high probability of psychopathic disorders.
      INTERVENTION - Setting limitations, Probing, Explanations, Suggest / advise, Reframe, Negotiate, State Warnings (possibly threaten).

   C) HIGH RISK – Not much talk, few or no demands, changes quickly, irrational, high probability of mental illness.
      INTERVENTION – Use skills which work from Expressive & Instrumental, verbal intervention may have little or no influence.)

3. PHYSICAL PASSIVE – Only resistive behaviour. (Will not stand up, walk, holds on to objects to not move away from present location.
   INTERVNETION – Grasp arm, wrist, clothing & guide person, pressure point applications.

4. PHYSICAL – DEFENSIVE – Punches, kicks, knee, elbow strikes, etc.
   INTERVENTION – Blocks, pressure points, and grounding techniques, carotid control neck restraint. (Not choke hold pressure on trachea.)

5. PHYSICAL – ACTIVE AGGRESSION – Spontaneous assaults on Officer.
   INTERVENTION – Intermediate weapons: Batons, sensory irritants, etc.

6. DEADLY FORCE ASSAULT – Firearms, knives, spears, arrows, etc.
   INTERVENTION – Fire arms, strikes, holds which could be lethal.

There have been other names in referring to RESISTANCE – CONTROL CONTINUUM models. "***USE OF FORCE CONTINUUM"*** is another. However, the more neutral word for those not familiar or comfortable with the word FORCE, the word RESISTANCE is preferred. Descriptions of levels of Resistance & Control, are less likely to create more negative impressions than using the word FORCE, especially when in courtroom settings. The name used here is more neutral and equates LEVELS OF RESISTANCE to LEVELS OF CONTROL.

Under the RESISTANCE LEVEL noted above, **VERBAL NON-COMPLIANCE**, three sub-sections which refer to three (3) types of verbal resistance have been added. This has been adapted from two (2) crisis negotiation certification courses in which the author received training during the late 1980's and early '90's, and a university Conflict Resolution Center Certification (210 hours). They were adapted for a course developed later entitled, ***Verbal Conflict Crisis Intervention.*** They are suggested here as a means of understanding **VERBAL NON-COMPLIANCE** in a more comprehensive way. Research has been conducted on applications of the three types of verbal resistance and have shown to be significantly more effective at reducing escalation to physical resistance levels.

I was first introduced to this Continuum Model in November 1991, by an Instructor with the Pressure Point Control Tactics organization (PPCT) and now the Human Factors Research Group located in the Millstadt, IL, USA area. The organization has functioned since the late 1970's with the leadership of Bruce Siddle. The continuum, as outlined by Mr. Siddle (2017), is generally outlined above.

The consequences of using excessive force is covered in section 26 of the Criminal Code and states:

"Anyone who is authorized by law to use force is criminally responsible for any excess thereof according to the nature and quality of the act that constitutes the excess. R.S., c. C-34/ s. 26."

RESISTANCE – CONTROL CONTINUUM – (R – C CONTINUUM)

RESISTANCE	**CONTROL**
Psychological Resistance	Officer Presence
Verbal Non-Compliance	Verbal Direction
Physical - Passive	Physical – Soft Empty Hand
Physical - Defensive	Physical – Hard Empty Hand
Physical – Active Aggression	Physical – Intermediate Weapon
Physical – Deadly Force Assault	Physical – Deadly Force

Other relevant sections of the Criminal Code of Canada which are relevant to consider in addressing ***use of force issues*** include: Arrest without a warrant (494 CC, 29(2) CC and 10 Charter, Use of force to prevent commission of offence (27 CC), Self defense against unprovoked assault (34 CC), Self defense in case of aggression (35 CC), Defense of personal property (38 CC), Defense of house and real property (41 CC), to identify some of the relevant offences.

2. TEACHING METHODS

The second factor which has significant influence in the performance of control techniques is the methods of teaching, the ways in which the theory and applied physical skills are presented and taught to potential and experienced law enforcement officers. This, however, is not restricted to law enforcement officers. Other agencies with other expertise, as identified above, in: mental health, psychologists, counsellors, addictions and conflict resolution specialists, to identify some of the areas of expertise which can contribute to emergency calls for assistance. The reality is that many times an officer is involved in use of force situations, the situations are dynamic, and potential exists for escalation, for more resistance to be encountered, or less resistance, when responding and intervening in an event. The reality is also that the other areas of specialty noted can perform critical intervention strategies and tactics in a "**team approach with police personnel.**"

Changes of levels of ***RESISTANCE*** can occur very fast. This reality can create significant issues for the education and training new officers and re-training for experienced officers, as well as others who are part of CONFLICT – CRISIS REPONSE teams. The principles of adult education should be followed, as well. These methods and issues must be understood by trainers and included in training session practice drills, and scenarios (role plays), with varying levels of resistance along the ***R-C CONTINUUM.***

The skills at the two lowest levels of resistance on the ***R-C CONTINUUM: PSYCHOLOGICAL RESISTANCE*** and ***VERBAL NON-COMPLIANCE*** can be the **most critical stages for successful outcomes** during an intervention, and poor skill application at these levels frequently result in escalation to the higher ***PHYSICAL RESISTANCE*** levels. It may be the reality, in many cases, the first two levels on the ***R - C CONTINUUM MAY NOT BE ADDRESSED THOROUGHLY*** enough during training to permit adequate understanding of theory, and appropriate time for skill development through practice, including, scenario (role play) application practice at these levels of the CONTINUUM for individual practice in small groups of 2's or 3's (role plays/scenarios) and with different training partners acting as victims/persons-in-crisis.

Psychological Resistance – Additional Factors: Kinesics, Paraverbal and Environment

At the ***PSYCHOLOGICAL RESISTANCE LEVEL,*** the key elements of CONTROL include, among other factors: body language (kinesics), the nature of verbal communication and direction (paraverbal communication), and the environment. These are frequently the key ***CONTROL FACTORS*** which may not addressed in training. Also, issues with other languages, not speak or having only limited language abilities in another language can be critical factors. The discomfort, embarrassment, and more seriously, fear or anger in a situation, can have significant effects on de-escalation and calming efforts to control a situation.

BODY LANGUAGE (KINESICS) is usually the first factor that influences and impacts a person in some kind of crisis. It has been addressed in the literature in several topical areas. As a guide, an overview, reference is made to an article: *Violence and Mental Illness* by Rueve and Welton (2008), with adaptations and *Constructive Verbal Conflict Crisis Intervention (CVCCI)* by Maxwell (2013) .

Body Language / Kinesics

- Relaxed muscles of face for a relaxed facial expression.
- Arms relaxed at the sides or other relaxed positions. Not hands on the hips, arms folded on chest or hands in pockets.
- Hands not into a fist position, but open.
- Avoid intimidating direct eye contact while maintaining peripheral vision.
- Stand at a slight angle to a person rather than straight toe-to-toe.
- Distract to more positive, calming activity.

Clothing / Dress

- Casual, non-uniform clothing is best in most circumstances.
- Avoid bright colors which stand out / distract. Neutral colors best.
- If related to authority (uniform) will tend to escalate – apprehension, fear, anger.
- Not too tight or loose.

Proxemics

- Personal space – (18" to 4 feet)
- Social space - Ideal – (4 to 12 feet)
- Public distance – (< 12 feet)
- Relative positioning – at 45 degree diagonal to front right or left facing person in crisis.

Paraverbal

- Calm soothing tone of voice.
- Project friendly attitude of calmness, helpfulness.
- Not talking fast.
- Not talking too loudly (Considering circumstances and location).
- Accent key calming words. *"I'm concerned about you!", "What can I do for you?"*

Verbal

- Use EXPRESSIVE, INSTRUMENTAL, HIGH RISK strategies in next section.
- Ask if thirsty or hungry?
- Ask if need to contact anybody (friend, family member, etc.)
- Ask about concerns, problems, need for assistance of help.
- Ask about quiet time or seclusion.
- Redirecting to other more positive activities or move to other location.
- Relaxation techniques if signs of anxiety, fear, apprehension, etc.

Behaviour And Environment – Impact on Person-In-Crisis?

- Reduce contacts in crowded areas.
- Avoid unpleasant areas
- Seek quiet areas.
- Avoid loud and irritating sounds.
- Limit direct eye contact.

Inside Buildings, Inside Spaces, Room

- Neutral color
- Quiet, no disturbances interruptions to discussion
- Relaxing music can reduce personal and interpersonal tension.

TYPES OF VERBAL RESISTANCE & INTERVENTIONS

In the description of the R-C Continuum at the level of Verbal Resistance, more information is included than is usually covered at this level. As noted above, at this level, there are three types of VERBAL RESISTANCE that an officer may encounter from a RESISTANT PERSON. These include responses which are: EXPRESSIVE (emotional), INSTRUMENAL (manipulative, controlling, psychopathic), or are HIGH RISK (Under the influence of drugs or alcohol), psychotic disorders, mentally challenged (Examples: Communication disorders, Intellectual disabilities, Autism Spectrum Disorder, Attention Deficit Disorder, and others) or speak different languages resulting in persons-in-crisis not understanding verbal directions.

These three types of Verbal Resistance are taught on Crisis Negotiator courses and can include hostage and barricaded types of situations. To increase the efficiency of verbal defusing skills at the first two levels of the R-C Continuum, it is recommended that these types of verbal resistance should be included (see next page):

When recognizing which type of VERBAL RESISTANCE being encountered, and using the appropriate strategy, skills and techniques, subjective observation assessments have indicated an increase in defusing success. Another fact that has been experienced is when accidentally switching the methods of intervention, for example: Using active directive of verbal skills with EXPRESSIVE PERSONS, and the opposite, attending skills with INSTRUMENTAL PERSONS, there is a good chance of an INCREASE IN RESISTANCE.

It has also been noted that if It is difficult to develop appropriate random control group approaches to research in these types of situations, and I am not aware of any research that has addressed these specific applications in actual events.

Three Types of Verbal Resistance

EXPRESSIVE	INSTRUMENTAL	HIGH RISK
DESCRIPTION: - Make emotional statements of anger, fear, outrage, guilt, loss, etc. -Demands, requests, wants seem senseless - Control – Medium - Physical control – low tolerance & escalation possible.	DESCRIPTION: Calm, less threatening than Expressive, specific goal(s) to get something. -Demands – Clear & early in incident. - Control – More than Expressive. - Physical control - Tolerant	Description: - Make someone pay, get even, sexual assault, victim-precipitated homicide. – May have mental illness, under influence alcohol or drug, murder or suicide goals, extremist religious, political ideas, etc.
INTERVENTION SKILLS: - Attending / Mirroring (Supportive verbally & kinesics) - Restatement & Paraphrasing (Summary & conclusions) - Reflect emotions -Effective pauses (Silence)	INTERVENTION SKILLS: -Probing (Questions – Open & Closed) -Explanation -Suggest/Advise -Reframe - Negotiate - Immediacy - Later: Tell, direct, confront, warn, threaten, set limits.	INTERVENTION SKILLS: - Use Expressive & Instrumental skills/techniques which are calming. - Information gathering (intel.) - Distraction - “Buying time” - Supportive, Etc. when possible
ADDITIONAL CONSIDERATIONS -Cause – Linkage – Fetal Alcohol Syndrome Disorder, Learning Disabilities, Cognitive Deficiencies, Attention Deficit Disorder, AD Hyperactive D,	ADDITIONAL FACTORS?? - Glib/superficial - Egocentric/Grandiose - Lack: remorse, guilt, empathy - Deceptive/Manipulates (Con) - Psychopathic: Impulsive, poor behaviour control, likes excitement, no responsibility - Antisocial behaviour history	ADDITIONAL CONSIDERAIONS - Alcohol / drug intoxication -Psychotic (Hallucinations/Delusions) Schizophrenia, Bipolar, Depression -Delirium (Excited of Agitated) and complicated by intoxication (above) -Suicide (Suicide-by-cop)

PHYSICAL SKILLS – DEFENSE and CONTROL

There are many skills taught for the various PHYSICAL Levels of RESISTANCE – LEVELS of CONTROL on the R – C CONTINUUM in the recognized training courses for law enforcement personnel. However, the focus of this paper are the skills and techniques which have been high profile in situations when deaths have occurred during police arrests. To be more specific, the focus is only the skills and techniques taught which involve pressure being applied to the NECK. In the media, they are being referred to as "choke" holds, which is very general and all encompassing term which is inclusive of several very similar techniques which are applied against the NECK in attempting to gain control of a RESISTANT PERSON, usually at the DEFENSIVE or ACTIVE AGRESSION LEVEL of the PHYSICAL RESISTENCE LEVELS. A more appropriate term which is all encompassing of the techniques being addressed in this discussion about arrest techniques in these situations is NECK RESTRAINTS rather than "choke" holds. There are three (3) ways in which a person loses consciousness ("blacks out") based on the technique methods of application when attempting to control of a person being arrested. These include:

1. Pressure directed to the AIRWAY, the trachea, at the FRONT of the neck. These are generally referred to as CHOKES or SUFFOCATION techniques,

2. Pressure directed on one or both sides of the neck to the CAROTID ARTERIES and VEINS which reduces BLOOD (OXYGEN) supply to the brain and CARBON DIOXIDE from the brain). These are referred to as LATERAL NECK RESTRAINTS or LATERAL VASCULAR NECK RESTRAINTS (LVNR).

3. Combinations of Breathing (Air) and Blood Supply to and from the brain.

These technique variations have been adapted to law enforcement from the sports of Judo and Jujitsu which originally were adapted from ancient samurai martial arts means of combat. Adaptation for sports competitions is much different than use for control of out-of-control persons in law enforcement intervention settings. The risks in application increase and the chances of serious injury or death become greater.

In preparing for this paper, several sources have been reviewed. Several books on marital arts written by senior and experienced black belt holders; articles in martial arts sports and enforcement magazines; and systems which have addressed law enforcement defense and control tactics training.

Additionally, I have relied on my own experiences, situations in training and actual incidents, which includes arrests, to consider application of the techniques. My own experiences have included: 41 years as a judoka (3rd degree black belt); seven years as a karateka in Uechi Ryu karate (Okinawan style) (1st degree black belt); training in Human Factors Research Group (HFRG)(formerly: Pressure Point Control Factors (PPCT)), a law enforcement military use of force system as a practitioner, Instructor and Instructor Trainer (24 years). The training and practice also included in more recent years: meditation (pre and post high stress work and recently being referred to as: Strategic Resilience), and practice of Tai Chi. (2 years). Total career field experience in corrections and law enforcement, and as an instructor/administrator covered 37 years.

It is important to stress that the inclusion of neck restraint techniques in law enforcement training which does not have sufficient time for presentation and practice of these skills is frequently an issue. This results in only superficial learning, in comparison to time spent in learning and practicing these skills in the sport of Judo and other martial arts. Repetition in learning Judo strangulation techniques, from many instructors, in frequent practice sessions is an on-going process over time. This is an entirely different, more in depth, over much longer time and in many circumstances and does not compare with basic training programs for law enforcement on this subject. In judo, if a strangulation is used, the judoka is trained that when held in a neck restraint, there is the option to "tap out" or stop the technique being applied. And, if a person becomes unconscious from a neck restraint, the person applying the technique releases the pressure and stops the technique. These are important and critical points. For law enforcement arrests, this is not the reality.

Those who I have met who are enforcement officers who are black belt rank are generally the ones on arrest scenes are "up front" and in close with resistant persons. I have noted this, both "in the field" and in

comments made in casual discussions when relating their experiences over the years.

Some references reviewed for the analysis of NECK RESTRAINTS have included, among others: (Kano, Jigoro, (1986); Osaka, Kotani & Hirose, (1968); Siddle, (2017); Puder, Gil, (1997); Puder, Gil (1993); Endow, Kenn(1970); Stiltner, Edgar & Rouse, William (1980's); Best Judo Book Reviews (2020) http://.bestjudo.com/article/051/hadakajime-air-or-blood-choke; Wikipedia, Rear naked coke (2020) http://en.wikipedia.org/wiki/Rear naked_choke.

In Judo, the neck restraint which is used most in law enforcement is called: ***hadaka jime*** (naked strangulation) or **ushiro jime** (rear strangulation) when applied from the rear. There are small adaptations to both. Judo has some 36 neck restraint techniques and jujitsu has 25. (Wikipedia, http//en.wikipedia.org/wiki/Rear naked choke (2020)).

The technique which appears to be more successful in controlling an upset person and with MUCH LESS CHANCE OF CAUSING HARM is the LATERAL VASCULAR RESTRAINT (Siddle, 2017), which causes a reduction of blood supply to and from the brain (which is not a "choke'). In most situations, the person calms in a short period of time and doesn't become UNCONSCIOUS. If the person BECOMES UNCONSCIOUS, they will return to consciousness quickly. If they are slow in recovering consciousness, the option to apply first aid procedures can be used.

Puder, in 1997, stated in an article on neck restraints: "*….. it is not a chokehold."* and outlined recommended guidelines: The technique is*: "used when a violent subject must be controlled immediately; there is no other level of force appropriate in a given situation; there is not reason to believe the person being controlled will suffer injury, and, the police officer has been completely trained in an approved technique."*

The technique is also referred to as the LATERAL VASCULAR NECK RESTRAINT (LVNR), "CAROTID SLEEPER HOLD", or "SLEEPER HOLD", the later term used in professional wrestling. It has been stressed that when the technique is taught in a context other that in a DOJO in a continuum of other skills and knowledge, as in the SPORT OF JUDO, may not be the same thoroughness in learning found in the sport of JUDO, then the risk in using the technique may increase. It has also been noted that for persons over 40 years, there may be small pieces of cholesterol or scar tissue in the carotid arteries that may dislodge or break off and move through the blood circulatory system, and thus interfere with blood circulation resulting in what could be serious medical conditions. (Stiltner & Rouse, (Mid 1980's)). Also (Ken Endow, 1970), high blood pressure, hypertension and other medical conditions could be factors with more serious life-threatening impacts.

From personal experiences, with the sport of Judo and with law enforcement applications, control can be accomplished most of the time, in the application of pressure phase of the technique. When control is achieved and the person stops resisting, relax the pressure on the carotid artery, but keep the arm in place around the neck. Colleagues using the technique report this result, as well.)

There are a couple of VERY IMPORTANT PROCEDURAL RULES to FOLLOW:

- NEVER USE A KNEE ON THE NECK OF A RESISTING PERSON – In all the training I have received, and the courses presented, the KNEE on the NECK was NEVER A COMPONENT OF THE TECHNIQUE and there was NOT A TECHNIQUE or PART OF A TECHNIQUE TAUGHT. Only the arm was used around the neck.
- WHEN A RESISTING PERSON LOSES CONSCIOUSNESS, RELEASING THE PRESSURE BEING APPLIED on the NECK OF THE RESISTANT PERSON was STRESSED. The person will become CONSCIOUS quite quickly, unless they are being impacted by medical conditions beyond the impact of the restraint, such as: heart and circulatory conditions, intoxication by alcohol or drugs, congestion of lungs or airways or disorders like EXCITED DELIRIUM. (Disorder mentioned in the last section of this paper and address in more detail in later sections).

3. SOCIAL AND CULTURAL FACTORS

It is important, IS CRITICAL, for all involved with enforcement duties; police, sheriffs, corrections, conservation, private security and others, to have a good and thorough understanding of the potential issues which may exist or arise related to our own

Overview, Summary - Neck Restraint

	AIR SUPPLY	**BLOOD SUPPLY**
Targets	Trachea	Carotid artery & veins
Control Process	Breathing /Air to Lungs reduced/cut	Brain blood supply reduced
Application of Pressure	Pressure front throat choke/suffocate	Lateral Vascular Neck Restraint (LVNR). Pressure on side of neck
Regaining consciousness??	Application - Possible damage to trachea, larynx (voice box). Increased chances of suffocation. First aid/medical procedures may be necessary.	Release of pressure, blood flow returns to normal & regaining of consciousness. Scar tissue or cholesterol build up may exist age 40 or above. May result in stroke, blood blockages. First aid/medical may be necessary.

CULTURE or SUBCULTURE. It is also a reality that we don't even recognize, in many circumstances, how our own culture or subculture may influence our thinking and behaviour, our attitudes and values.

To understand these issues, we must understand some key fundamental questions: ***What is culture? What is subculture? What influence may culture and subculture have when doing enforcement work?*** It is also important to note that these factors are rarely included in use of FORCE training for law enforcement basic and refresher training, but have significant influence on how law enforcement officers will ACT and REACT to resistance when intervening in situations which may involve escalating conflict.

Some definitions:

Culture – The "*sum total of the ideas, beliefs, customs, values, knowledge and material artifacts that are handed down from one generation to another …..* and *"….. culture of the mind or manners.",* (Coleman, Andrew, (2001), Maxwell, Wayne, (2019)).

Subculture – "*culture group within a lager cultural group."* (Oxford Dictionary)
Subculture develops and is passed on generation to generation and is maintained in relation to types of work and work groups, sports teams, leaning groups (schools, colleges, universities, etc.), areas of geographical territories (countries, parts of countries), as examples. They develop in relation to how people think of or see themselves. The types of ideas, beliefs, values may include how the individual and the groups think of themselves, their beliefs, customs and values, among others.

Some examples may be: *"We are a pretty smart group. Few can match us!" "They speak with accents and are hard to understand!" "We have to be competent, physically fit to get our jobs, so we are among the best!!". "We are in better shape and can look after ourselves better than most people". "I don't pay attention to what they say!" "We are better than they are!"*

These examples reveal ***ideas, beliefs, customs, values and factors*** that we can acquire that we may begin to accept as being reality in the world in which we live and work. They can and do affect our views of the world, of people and those from other cultures. They can, and in many cases do result in a ***culture unique to our work group*** A culture which may lead to ***BIAS, RACISM, CONFLICT ….. AND WE MAY NOT EVEN BE AWARE OF OR SENSITIVE TO*** the implications of the impacts on our behaviour, what we say, what we think and feel. And we may not even accept this reality if others make us aware of these issues. All this "sets us up" for thoughts and behaviours which may be RACIST, SEXIST (ORIENTATION), POLITICALLY EXTREMEIST.

When I became more aware of, and more sensitive to these issues, and I began to ask myself: Do I have bias? Have racist ideas, beliefs, thoughts or the related feelings of which I may not be aware? I began to realize that indeed I may.? The PROBABILITY IS GREAT THAT WE HAVE BUILT IN BIASIS, WHICH INCLUDES RACISM, OF WHICH WE MAY NOT EVEN BE AWARE. These differences are influences by the cultures in the areas we have lived, studied & learned, worked, socialized, played and passed our spare time.

The subculture which develops around law enforcement work, of any type, is of significance in several other ways, as well. The IDEA of being fit, in better shape than the average person can have negative consequences of using force too frequently and using too much force. The IDEA of being mentally tough and not being impacted by traumatic events in which we may be involved or, with even greater significance, thinking that we are so mentally tough that we will not be impacted by traumatic situations and develop Acute Stress (ASD) or Post Traumatic Stress Disorder (PTSD), or the related disorder, such as: Anxiety Disorder or Depression, as examples.

These circumstances, from the experience over years of working and responding to traumatic situations, have resulted in many with "macho" ideas of a work subculture, have resulted in many first responders, military personnel, and in professions involving the human services like medicine, social work and psychology, for example, being in denial of being impacted by and experiencing related disorders. I have heard many law enforcement personnel make statements like: "***I am not going to see a psychologist /***

psychiatrist. They don't know what I know or won't understand how we react to these situations. I am okay!!"

This can result in further traumatic impacts and the development of the disorders mentioned above. Frequently the impacted officer may talk to a trusted friend with whom they have a trusting relationship and are open with one another and will not share discussions with others, especially managers or supervisors who may take action and interfere with future career moves, training, and promotions.

It is based on this concept that work peers are frequently being training to be PEER SUPPORT and assist others in bridging the gap between mental health professionals and front-line workers. Peers trained to function in a role to be supportive of their front-line co-workers (their peers), provide support and peer counselling and link professionally with appropriately trained Mental Health Professionals who understand the subcultures of first responders who experience critical incident stress. Peer support programs have made significant contributions, with the work of trained peers teamed with MHP's in addressing successfully the development of severe stress / trauma related impacts related to work as first responders. (Maxwell, W., (2019)).

The development of knowledge and the application of knowledge about cultures and subcultures in the basic training programs and refresher training for experienced officers is critical, AS A BEGINNING, for addressing subcultural biases in the types of work noted above. The results, with higher probability result in insight, understanding, and eventually, acceptance of the reality of our subcultures, recognition of the issues and provide the appropriate support for those who have cultural biases.

4. MEDICAL (PHYSIOLOGICAL) & PSYCHOLOGICAL FACTORS

CHRONIC MEDICAL (PHYSIOLOGICAL) DISORDERS are a component of the issues which are factors in police arrests may, and in many cases, be unknown to intervening officers. In some cases, however, officers will be aware of or know quite well the person who is involved with criminal behaviour from previous contacts. This is especially so for alcohol or drug addictions. If officers do not know the person involved, the risk of the unknown increases. Heart disease, high blood pressure, high cholesterol levels and other similar or related medical conditions may be factors that the intervening officer may not be aware. Further, the person who has committed offences or is intoxicated may not be aware of the medical conditions that they may have. The risks are high that these conditions could be a factor in a person's death during police encounters and arrests.

PSYCHOLOGICAL (PSYCHIATRIC) DISORDERS may be issues, as well. Some of the more frequent which may be factors which must be considered may include some of the following: Intellectual disabilities, attention deficit disorder (ADHD), autism as examples.

Traumatic stress disorders including Acute Stress Disorder (ASD), Post Traumatic Stress Disorder (PTSD), and sometimes related disorders such as: anxiety disorders, panic attacks, and related disorders. It can also include the avoidance of circumstances or over reactions when reminders of previous stressful situations are recalled by present events.

Psychotic disorders which usually include: hallucinations (sensory issues such as hearing voices or sounds which don't exist, seeing things which don't exist, as examples), delusions (beliefs which are unfounded, but believed by persons experiencing delusions), in psychotic disorders). These disorders include, as examples: schizophrenia, severe psychotic depression and bipolar disorder.

PSYCHOPATHIC/ OCIOPATHIS DISORDER disorders are witnessed when a person is very narcissistic or self centered thinking they are really "the best" and better than all others, histrionic or making over exaggerating reactions and creating a "great fuss" over what may be very regular behaviour activities for many and may include delinquent or anti-social behaviours which may be criminal behaviour / offences contrary to criminal statutes.

There are several disorders which may be unique to police interventions. Two of these include: EXCITED DELIRIUM and SUICIDE-BY-C0P.

EXCITED DELIRIUM (ED) (Also referred to as: Agitated Delirium or Acute Behaviour Disturbance or Delirium Tremors) have been identified, but where not fully recognized until more recently. Dr James Cairns, Deputy Coroner in Ontario, Canada in a presentation in 2005. The terms are forensic terms which include: psychiatric illness including issues with: medications, illicit drugs, alcohol, with cocaine and other street drugs, and withdrawal from these.

Distinct phases of ED include: Elevated body temperature, agitated delirium, respiratory arrest, death. (Sztajnkrycer & Baez, 2007). Signs and symptoms include: changes in consciousness, confused & disoriented, bizarre behaviour, hallucinations & distortions (visual & auditory), medical problems, cognitive impairment, unusual fear & panic, paranoid thinking, violence & destruction to objects (shiny items, glass, hyperthermia (very hot to the touch), sweating profusely, tearing at clothing (partially or totally naked), yelling & screaming, short attention span, superhuman strength, insensitivity to pain, aggressive, wide open eyes (white eye ball totally surrounds iris), continues to fight during efforts to restrain, and finally tranquility / death. Efforts to control including use of stun guns and tear gas seem to have little effect on controlling resistance.

A situation in which a police officer colleague responded to a complaint of a person acting strange near large harbour bridge could not verbally communicate with and male person who appeared to be intoxicated, was very hot to the touch and very strong, much more so than average arrestees. This resulted in the officer applying a neck restraint. The restraint had little impact. The arrestee continued to fight until he went unconscious and died. The officer was subsequently charged with using excessive force and death of the subject. He went to trial, was found guilty and was sentenced to twelve years. He was paroled when he became eligible after serving an appropriate portion of his sentence.

Another situation occurred in a correctional center when a person recently arrested was going to court to plead to charges against him. He resisted strongly, and a group of correctional officers restrained the person on the ground. He died during the restraint. An inquiry was conducted which resulted in no further legal action against the officers and their supervisor. He fit the described behaviours and signs of ED.

SUICIDE-BY-COP (Also termed: VICTIM PRECIPITATED SUICIDE) (Slatkin, (2009)) is another situation involving officer presence in response to a complaint being received. In these situations, the arrestee had been experiencing depression, possibly addictions and possibly other mental illness, as well. In these situations, the person who is having difficulties appears to behave in out of control or with mentality and behaviours which are a threat to police interveners, even to the point of having a gun or other weapon, and threatening an officer with serious injury or death. These situations progress to the point, where officers experiencing such situations, probably in most cases, shoot and kill the suspect. These are several incidents of which I am aware when this has been the case.

Sadly, in one situation, parents of a young man who was schizophrenic, were experience threatening behaviour from their son. They summoned the police for help. When they responded, they encountered a situation where the young man had accessed a gun owned by his parents and was pointing it at the constables. One of the constables shot and killed the son in the presence of his parents. No subsequent action was taken. There is the possibility that this incident was one of Suicide-by-Cop.

5. STRATEGIC / ADMINISTRATIVE PLANNING

In the context of the situations existing through this period, there have been calls for DEFUNDING of police, and other law enforcement agencies, during demonstrations, reported in the media and other activities. Is DEFUNDING the BEST TERM to use? There have been other approaches to addressing the issues related to POLICE ARRESTS and DEATHS occurring during arrests or apprehensions. DIVERSIFICATION may be another term which would be more meaningful to the RELEVANT issues requiring interventions, including

others from other related disciplines and areas of expertise.

DIVERSIFICATION of police agencies began as early as 1987 in Nashville, TN, when police intervention issues occurred (Wikipedia, *https//en.wikipedia.org/wiki/ Police_crisis_intervention_team*). Reference is also made to many other municipalities which have developed Crisis Intervention Teams (CIT programs). Involvement of mental health provider agencies, individuals and families affected by mental illness, the National Alliance on Mental Illness (NAMI), universities, addictions agencies and others have been involved. It is important to note that the teams established to work through planning processes and implement crisis intervention teams are representative of and unique to the cities and areas which make decisions to proceed with CIT programs.

It has been noted that requests for police interventions in mental health, addictions, family domestic disputes, child neglect and similar mental health and social issues are frequently around 30% of requests for police service interventions. In some areas of police jurisdictions, the percentages can rise into the low 40%'s. These high percentages usually occur in parts of police jurisdictions with severe social, mental and addictions issues, poor housing and human service delivery problems, to identify only some possible issues. This are basic and very significant factors to consider and include when planning to develop CIT types of programs with police agency and other community agency involvement.

In developing Crisis Intervention Teams for police service agencies, some important factors to consider include: is the police subculture such that CIT activities and programs would be supported, and is the interest, time and resources available for support and participation from human services, mental health, addictions and other agencies, as well, and within the community. An absence of any of these factors could inhibit CIT programs in several ways.

These programs exist in many United States and Canadian cities, as noted in the Wikipedia website cited above, and are in place in other countries in the world. In fact, several program activities have occurred with the same objectives in other components of the criminal justice system, both pre-court and post court program activities. Some of these include:

- Victim-Offender Reconciliation programs which have provided police with the option to refer to a program where the Victim(s) of an offence and Offender, with the consent of both, had the opportunity to resolve offence related issues through conflict resolution procedures: facilitation and mediation primarily.
- Community Service Order programs when offenders, as part of a probation order, were given the option to volunteer work in the community to satisfy a court probation order.
- Fine Option Programs where as an option to a fine being imposed, a person could do community volunteer work.

These examples of sentence alternatives have been operated within Community Corrections by Probation and/of Parole Officers. With these Officers involvement in these programs, the option for counselling and referral for more in-depth assistance and treatment were increased. Many probation officers have specialized training in human service areas.

The CIT programs have been designed to assist law enforcement agencies to provide options to mental health and relevant issues when called to respond to such incidents.

CASE STUDIES

Some personal exposures to police interventions into violent situations are included in this section. Some of the incidents have unique applications of use of control techniques and create more depth in considering such incidents.

Case Study 1 - Police Shooting and Wounding Of Out-Of-Control Person

This incident occurred, then was related to me months later by a graduate of a police training program who had gone on to work with a police department.

He described receiving a complaint to which he responded to an old residential area of the community. It was an area with a run-down crowded housing, with

many “flats”, apartments and rooms for area residents. The complaint involved a person who seemed to be significantly under the influence of drugs or/and alcohol. He had a baseball bat and was hollering and yelling in the street. Many people were looking through open windows as they were probably trying to cool themselves in the cool night air.
On arrival on scene, the officer approached the young man who was shouting and yelling at the officer and threatening the officer with the baseball bat. The person was in his late teens or early twenties, did not listen to the officer or respond to the officer. He started taking swipes in the direction of the officer who eventually turned and started to move away from, then run away from the upset young man.

On running away, the officer reported that he started to think about: How far is he going to run? What should he do to stop the person? On quickly thinking these issues through, he decided to draw his gun, turn around and if the young man did not stop, to shoot him.
He turned around, instructed the young man to stop, he didn’t, so shot him in the lower abdomen. The young man was down and survived the shooting. He was later charged and went to court to face relevant charges. He was found guilty and sentenced.

When the officer and I met months later, he recounted this incident to me. I asked why he did not, “Double tap, center mass.” (Shoot twice, center chest). He shared with me that, as he was running from his attacker, a thought he had was that this person is “Somebody’s son!” and he did not want to kill him. I did clarify to him that I was not inferring that he was wrong in shooting him in the low abdomen but wanted to understand why and how he was thinking.

After the perpetrator was found guilty in court, the Constable was standing outside the courtroom, with two uniformed constables with him for his security. The mother of the guilty young man came up to the officer who shot her son and said: “Are you Constable _____?”
And he said: “Yes I am Mam.”
And she replied: “Well, thank you for not killing my son!”

This case study of a police shooting provides a completely unexpected outcome follow up to a police shooting. It assists from very different perspectives than normally encounter by police officers, the potential complexities of analyzing the thinking and reactions in quickly planning responses to deadly resistance threats which may occur. This officer had what appears to be amazing calmness in very systematic thinking under the circumstances and made a sound decision under the circumstances.

Case Study 2 – Police Shooting and Death Of Person During Security Check

This incident occurred and information was received from several sources, as well as the media (CTV News, 2017). The officer graduated from an academy during the early 2000’s and was performing security duties directed to the protection of a senior politician. Information had been received that an e-mail containing criticism of the politician was received and the constable with security duty responsibilities visited the person who had forwarded the e-mail.

On visiting the residence of the person who sent the critical e-mail, the officer made contact with the person but during the conversation the male, in his late 50’s apparently retrieved a long gun and the constable perceived it as a threat when the gun was pointed at the officer. The officer drew his side arm and shot the person he wished to interview three times, resulting in the man’s death. The officer was told a few days later by an RCMP investigator that, he had saved his own life, as the unfired rifle had been loaded.

A hearing was conducted, and there was some criticism of the constable’s, including the unannounced visit to the home of the alleged threatening contacts. This incident has the characteristics of a possible “suicide-by-cop” incident. No further action was taken against the constable.

Case Study 3 – Potential Psychological Impacts of Training Scenarios

This case study involves a young woman police cadet who was in the latter part of her training at a police academy. She came to my office immediately following her intervention during a training scenario, still wearing the emergency response uniform of a police cadet. She

asked to talk with me, to which I immediately agreed to do.

She sat in a chair in my office, raised her legs to a folded knee bent "Taylor position" and started rocking back and forth. She immediately started to cry. I remained unresponsive with a lot of thoughts running through my head as to what was troubling her, what has impacted her?

When she calmed, she indicated that they had just been involved in scenario-based training which involved intervention in a family conflict situation between role players in roles of a husband and a wife in conflict, and there were sounds of children crying in their apartment. The parents were arguing and threatening one another and getting close to physical assaults.

She paused and interjected a comment that she was married and had two little sons. Her husband and her had been arguing and debating. He wanted to separate and divorce, and this had been an on-going issue which she had kept to herself while at the academy. She indicated the scenario had impacted her in such a way that everything she was experiencing in real life was impacting her in the same way as her real-life experience. She stopped crying quickly after describing what she was experiencing and calmed. After appropriate supporting comments and normalizing the reactions, she was experiencing in these circumstances, she indicated that she was doing okay. She felt she was ready and okay to carry on.

Before she left my office, I reassured her that she could work things through and if I could be of any help to get in touch again. The weekend following, I met here again in academy social facilities, and she had her two little sons with her who she introduced to me. No mention was made again about the impacts of the scenarios, and the last I heard was the couple did not separate, but she and her husband returned to living together after she graduated successfully from police training.

Case Study 4 - Drawing Weapon And "Dry" Shooting Drills

It was a beautiful spring Sunday morning, and I took my youngest son who was almost 2 years old, for a drive and during the drive we visited a forested area near the University of New Brunswick. We stopped beside a large pond which had frog's eggs and little pollywogs (small fish-life creatures which grow into frogs) swimming about near the shore of the pond. My son was very interested in these pre-frog little creatures. He was also picking up little rocks from the shore and throwing them into the water. While he was doing this, a police van arrived and parked, as well by the pond, and I got into long conversation with the officer-on-patrol on that Sunday morning while my son continued to show interest in the pond and the surroundings.

About a half hour later, the officer continued his patrol, and my son and I, continued our Sunday morning drive. That Sunday evening, my wife, son and I went out to dinner, and on our way to the restaurant, we learned on radio news that a city police officer had been shot and killed around noon that day. My immediate thoughts, "Who was shot and died??" We very shortly after learned it was the officer I had talked with at length while my son played at the pond in the woods.

I learned that officer Perley Calhoun had died. (1981, NB Peace Officers Memorial; 2006, Murray) while practicing gun techniques with a close friend fellow police officer while on the noon break of that day, Sunday, July 5, 1981. It was later learned that Perley and a member of his shift had taken their noon break, had lunch and were practicing drawing and "dry firing" their weapons when facing one another. After practices, one had reloaded his .38 caliber handgun and the other had not. One had encouraged another quick draw and "dry fire". Perley was shot and managed to say something like, "You got me Bud!" before he died. The impacts on his partner were extreme, significant, and were long lasting.

Case Study 5 – Re-Experiencing Armed Encounters

The outline of these events took place at a defence and control tactics police conference near the St. Louis, MO. Area. It was shared to provide a example of a traumatic event having influence on behaviour years later during another similar event.

A police officer on duty encountered an armed young man in his late teens. The young man pointed his rifle at the officer, and the officer shot the young man and he died on the scene. The subsequent impacts on the

officer were very significant. He had a son himself and apparently frequently thought of the shooting incident, and thought of his own son being shot to better understand how the family of the young man may react to their son's shooting death. This is a very frequent way we seek to understand the impacts of trauma and think about what we would experience if we experienced the same event within our own family. This was apparently what the officer thought about frequently and it had a large impact on the officer over the years as he performed his duties.

Years later, the same officer had another encounter with a young man who was armed with a gun. The same officer ordered the youth to drop his weapon, but the youth shot and killed the police officer. Later the youth who shot the officer during an interview was asked why he shot the officer. The youth replied that: "I didn't think he would shoot me because of the way he was holding his gun". The chances are very good that this is an indicator that the officer just did not want to go through what he had experienced and gone through with his previous experience of shooting a young man in his late teens.

This is an example of how the impacts of a previous traumatic event may influence behaviour in later events such that it is AVOIDANCE behaviour. An effort to reduce the impacts of a traumatic event so that the same impact and upset that occurred previously does not occur again.

Comment - Case Study 5 – Issues Related to Avoidance

There are POINTS OF SIGNIFIGANCE which MUST BE NOTED in follow up to the AVOIDANCE thinking and behaviour addressed above. An approach to the treatment of traumatic stress and related disorders is, in therapeutic treatment, AVOIDANCE. Avoidance of situations or types of events, locations and environments that remind one of past traumatic events and continue to create significant traumatic reactions are commonly referenced in the treatment of traumatic signs and symptoms. A major issue is that FIRST RESPONDERS, HUMAN SERVICES PERSONEL: Doctors, nurses, mental health professionals, who have been impacted negatively by previous events, may be reminded of and re-impacted by exposure to events that have previously traumatized a person. Considering the types of work and work situations, the ABILITY TO AVOID SIMILAR EVENTS and the REMINDERS AND REACTIONS that accompany similar events is NOT ALWAYS AND MAY NOT BE POSSIBLE. This can have significant and serious impact on responders with similar experiences.

SUMMARY

This article is a very brief overview on the topic of deaths which occur during police interventions in response to calls. Also, it is noted, there are many factors, many perspectives, to consider related to the topic which would require much more space than is possible in this article. Even topics in each identified topical area can be a focus of research and the exploration of addition factors. However, it addresses some of the salient issues in brief fashion to expose the several key components and factors to consider in addressing the problems associated with deaths during police arrests which have occurred over the recent period since the late winter spring of 2020.

The recruiting of police officers should involve appropriate psychological testing. Recently I have learned of planning and research being conducted to pre-assess applicants for positions which involve staff who must respond to traumatic events. The tests are designed to assess applicant's levels of stress and trauma they are experiencing when applying for policing positions, possible indicators of psychopathy and of social cultural biases. Work on and applications of findings in these areas could result in reductions of social and cultural /subcultural biases which are expressed in work situations.

When police are involved in such incidents, they are impacted significantly. Some of the literature which is relevant is related to the experiences of military personnel during combat. Lt. Col. David Grossman is the author of the book: *"On Killing: The Psychological Cost of Learning to Kill in War and Society"*. Other relevant literature has been noted in a section on *Relevant Reading* following the *References* below.

It is important to identify another important component to address after deaths during arrests for the police officers involved. The impacts of traumatic events such as deaths during police arrests are significant and have

potentially devastating and long-term impacts on officers, their colleagues, supervisors and managers of their departments and the oversight personnel, as well. Programs to assist officers impacted from such events include:

- Critical Incident Stress Management (CISM) as delivered by programs with training provided by Certified Instructors with the International Critical Incident Stress Foundation (ICISF). The Foundation has training programs for Mental Health Professionals and First Responder Peers, who are trained to work in teams to provide support to officer impacted by the stress and trauma of such events. Several courses of CIS Management are available and training for instructors.

- Strategic Resilience Training which ideally takes place before such incidents occur and involves techniques and approaches of keeping calm before, during and after critical events occur, including police arrests and deaths which may occur during arrest. This involves learning deep breathing relaxation (meditation) which is proving to have powerful impacts for calming involved and impacted officers. ICISF and other agencies are becoming more involved with the delivery of training in this area. Certification for Strategic Resilience for First Responders (CSRFR) is being offered in Canada as well.

- Mental Health Programs and agencies which provide support to first responders and their agencies involving appropriate assessment and treatment and usually in consultation with Peers, as noted above. Therapies from the realm of Power Psychology of Eastern medicine in the form of Thought Field Therapy and Emotional Freedom Therapy are included and gaining popularity because of the positive impacts created in their use. (Feinstein, David, (2018))

- Support for Occupational Stress Injuries (SOSI) a program developed with the RCMP delivered by a person of PEER status, who is outside the administrative "line-of-command", but who has credibility among those impacted by critical events and have difficulty addressing critical event impacts within the organizational system. Initial data is revealing a significant increase in members seeking assistance, a significant statistical fact, in itself.

- Occupational Stress Injury Support System (OSISS) – A Canadian Military program designed specifically for the Military personnel which was developed by Lt. Col. Stephane Grenier. The system is focused on military and first responder impacts and reactions to traumatic events (Wikipedia, Occupational Stress Injury).

ABOUT THE AUTHOR

Wayne Maxwell became involved with work activities involving assisting others as a swimming and life guard instructor through the Canadian YMCA, the Red Cross and the Royal Life Saving Society during the late 1950's. On going to university, he joined the Royal Canadian Navy Reserve as an Office Cadet and was commissioned as a Sub Lieutenant in 1965. He also served as a Sea Cadet officer for a short time during the mid 1960's.

He had an interest in martials sports and began to practice Judo in 1964. He became Sandan (third degree black belt) in Judo in 2002, started Uechi Ryu Karate in 1990 and achieved a Shodan (first degree black belt) in 1994. He is an ongoing practitioner of Tai Chi, a Martial Art activity, as well. He practiced Judo for 41 years before beginning the practice of Tai Chi.

In the application of the Martial Arts sports to law enforcement, he became certified as a Pressure Point Control Tactics (PPCT) (later Human Factors Research Group) Instructor in 1988 and instructor Trainer in 1997. Some areas of certification included: Pressure Point Control Tactics (PPCT), Defensive Tactics, Spontaneous Knife Defense (SKD), Violent Patient Management (VPM), Sexual Harassment and Rape Prevention (SHARP). He taught in this area for 28 years.

He began participating in on-going training with the International Critical Incident Stress Foundation (ICISF) in 1992 and became an instructor for courses taught through ICISF. His specific interests were in the application of this information to first responder groups applications. He is still active as an instructor in this field

after 28 years. These courses are presented to peers, members of first responder agencies and mental health professionals, who work, for the most part, as team participants in providing support and counselling to personnel who have been involved with, witnessed or impacted in secondary ways and are experiencing stress and potential traumatic reactions. These processes have been extremely successful in providing early interventions to first responders subsequent to critical incidents that have created stressful impacts.

He is has certified in the professional counselling/trauma field with: International Critical Incident Stress Foundation (ICISF)(1990), Association of Traumatic Stress Specialists (1998), Canadian Counselling and Psychotherapy Association (2000), American Academy of Experts in Traumatic Stress (AAETS)(2000), Traumatology Institute (2011), Strategic Resilience for First Responders (Langara College & NS Community College - 2019); Conflict Resolution Studies (UPEI- 2007), Hostage and Barricaded Negotiations (Canadian Police College – 1989), and Crisis Negotiations (Correctional Services Canada Staff College – 1999).

University degrees include: Bachelor of Physical Education (University of New Brunswick – 1966), Bachelor of Arts (Psychology) (St Thomas University – 1971), Certificate in Business Administration (UNB – 1979), Master of Education (Counselling Psychology)(UNB – 1981) with Directed Research – "Community Psychology & Crime Prevention" and "The Changing Role of the Probation Officer", and a Master of Public Administration (Dalhousie University – 1990) with Directed Research – "Conflict and Conflict Resolution in Correctional Institution Settings" and "Management and Critique of Training Instruments for the Development of Negotiation Skills from a Critical Social Science Perspective".

He was awarded the "Corrections Exemplary Service Medal & Bar (ESM) for 30 years' service in 2001, and Honorary Diploma from the Nova Scotia Community College in 1994.

In the Physical Education (Kinesiology) field, work has included Physical Education Director for 5 years, work in the criminal justice field for 37 years as an RCMP Auxiliary Constable, Probation Officer, an adult reformatory Superintendent, Director of Training and Development, Director Community Corrections, Program Manager and Deputy Director of a police academy. Since retirement in 2005, activities have involved private practice mostly involving early interventions in follow up to traumatic incidents in an Employee (Family) Assistance Program role for agencies delivering these programs, and volunteer work with a CISM Team providing interventions for fire personnel and a Support and Advocate Committee with the RCMP Veterans Association, and presenting courses, mainly in critical incident stress management (CISM) in community colleges, and for first responder agencies.

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INTEGRATING NEUROPSYCHOLOGY INTO EXISTING CRISIS RESPONSE FRAMEWORKS

EDGAR OMAR ANGELONE

Editor's Note: The following suggestion for integrating neuropsychology into existing crisis response frameworks was submitted by Edgar Omar Angelone, PhD, FACPN as part of his Fellowship application. These suggestions are being shared with the membership.

Dear Members of the Academy and Center,

I appreciate the opportunity to offer recommendations aimed at enhancing the efficacy of your collective efforts in advancing the fields of crisis management and traumatic stress. Based on my clinical, forensic, and academic experience as a board-certified neuropsychologist with specialization in traumatic brain injury, neuroimaging, and electrophysiology, I respectfully submit the following considerations for your review.

First, I believe there is a critical need to more fully integrate neuropsychology into existing crisis response frameworks. Current models often emphasize psychosocial interventions without adequately incorporating neurocognitive assessment. In many crisis presentations, particularly those involving trauma, substance exposure, or medical compromise, underlying neurocognitive dysfunction significantly influences behavior, decision-making capacity, and treatment responsiveness. I recommend the development of standardized, brief neuropsychological screening protocols that can be implemented in acute and post-acute crisis settings by multidisciplinary teams. Such tools would improve diagnostic precision and guide more appropriate interventions.

Second, I encourage the establishment of formal guidelines regarding the appropriate use of neuroimaging and electrophysiological modalities in the assessment of traumatic stress. Techniques such as quantitative EEG, functional MRI, and SPECT are increasingly utilized, yet their application remains inconsistent and, at times, scientifically unsupported. The development of consensus statements defining clinical indications, evidentiary standards, and methodological limitations would help ensure that these tools are used responsibly and effectively, particularly in clinical and forensic contexts.

Third, I recommend the expansion of specialized training initiatives that bridge crisis intervention and neuropsychology. Many frontline providers lack formal training in identifying cognitive impairment, executive dysfunction, and neurobehavioral syndromes that directly impact risk assessment and treatment planning. The creation of tiered continuing education programs focused on neurocognitive aspects of crisis care would enhance the competence of crisis responders and improve patient outcomes.

Fourth, I would emphasize the importance of strengthening culturally and linguistically appropriate assessment practices. In my work with diverse populations, I have observed persistent challenges related to the use of instruments that are not adequately normed or validated across cultural groups. I recommend prioritizing the development of cross-cultural assessment frameworks and supporting research aimed at establishing appropriate normative data. This is essential for ensuring equitable and accurate diagnosis in crisis settings.

Fifth, I suggest that the Academy and Center further address the interface between clinical practice and medico-legal standards. Given the increasing role of traumatic stress evaluations in legal and disability determinations, it is important to promote methodological rigor consistent with established evidentiary standards, including the Daubert

standard and the Frye standard. Emphasizing principles such as base rates, predictive validity, and known error rates will strengthen the scientific credibility of the field and its applications.

Sixth, I recommend the development of longitudinal outcome registries that systematically track neuropsychological, psychiatric, and functional trajectories following exposure to crisis and trauma. Such data would significantly enhance our ability to model prognosis, refine interventions, and inform policy at both clinical and public health levels.

Seventh, I strongly advocate for the inclusion of neuropsychologists as integral members of multidisciplinary crisis management teams at the community level. My experience serving on the crisis management team in Marin County has demonstrated the value of incorporating neurocognitive expertise into real-time crisis response. Formalizing this role more broadly would improve assessment of capacity, risk, and functional impairment in complex cases.

Finally, I encourage continued investment in translational efforts that bridge advances in neuroscience with frontline clinical practice, legal applications, and public policy. Structured dissemination initiatives, including interdisciplinary conferences, consensus panels, and targeted educational materials, would facilitate the responsible application of emerging knowledge in traumatic stress and neuropsychology.

Thank you for your leadership and commitment to advancing the field. I hope these recommendations are helpful in further strengthening the impact and scientific integrity of your work.

Respectfully,
Edgar Omar Angelone, Ph.D., FACPN

FOCUS ON THE MEMBERSHIP

NIKKI HENSLER GORDON, MS, MA, LPC, CCI, CCISM

Nikki Hensler Gordon, MS, MA, LPC, CCI, CCISM, EMDRIA Certified Therapist & Approved Consultant, is a trauma-specialized licensed professional counselor based in Green Bay, Wisconsin. She holds two master's degrees and two post-graduate certificates, and maintains certifications in crisis intervention, critical incident stress management, and EMDR therapy and consultation. She is the founder of Perspectives Consulting LLC (est. 2019), a trauma-focused private practice, and co-founder of IronStar Peer Support & Resiliency, a peer-led first responder wellness organization serving emergency services personnel.

Hensler Gordon teaches Psychology at Carroll University and provides EMDR consultation to clinicians seeking EMDRIA certification, as well as EMDRIA-approved continuing education. Her clinical work is grounded in Adaptive Information Processing, Polyvagal Theory, and structural dissociation-informed practice, with a specialization in trauma recovery,
first responder mental health, and psychoeducational group work.

In collaboration with her husband Timothy Lorenz, RN, CCP, EMT-B, US Army Combat Medic (ret.), she has developed ANCHORS: A Neuroscience-Informed Relational Model for Crisis Intervention — a theoretically grounded, field-validated crisis intervention framework submitted for publication in this edition of JAAETS. IronStar is preparing to pilot the ANCHORS training curriculum with a rural volunteer EMS department in western Wisconsin.

Website: perspectivestherapywi.com
IronStar: ironstarpeersupport.com

BRETT COTTER, AUTHOR / SPEAKER / TRAINER

Brett Cotter is the award-winning author of 3 Keys to Managing PTSD, The Suicide Prevention Family Handbook, and The Stress Is Gone Method. He teaches in Fortune 500 companies, the VA, at conferences, retreat centers and is leading the first state-wide mental health program for military spouses. Brett trains mental health professionals in his suicide prevention protocol and all learners in the Stress Is Gone Method. He serves as a Diplomate with the American Academy of Experts in Traumatic Stress, Trauma Expert for Meditation University, and his breathwork is certified by the American Institute of Stress. Brett's unique blend of Eastern & Western philosophies make him a sought-after speaker, trainer and retreat leader.

www.StressIsGone.com
www.StressIsGone.org

DO YOU HAVE TRAUMA-INFORMED TRAINING IN PLACE WITHIN YOUR SCHOOL?

If so, does it:

- Include live and virtual coaching sessions, designed to discuss your specific needs in a confidential manner
- Offer certification courses that support the implementation of trauma-informed, resilience-focused practices and strategies within schools
- Transform school culture by identifying your strengths, weaknesses, and attitudes that are impacting your results

If not, or if you're not sure, I'd welcome the chance to share how Starr Commonwealth is leading trauma-informed care at the district, school, and professional levels.

Without the resources to react to students experiencing trauma, educators commonly feel overwhelmed and ill-equipped to address the needs of their students.

This is why Starr Commonwealth exists. We've made it our mission to empower professionals to build resilience in children, families, and communities across the world.

Through online education, in-person training and coaching, and direct behavioral health services, educators are bringing out the best in every child, parent, and community.

If you'd benefit from a certified trauma-informed and resilience-focused program to bring into your school, we should talk.

Pat Murphy
Professional Learning Advisor
pat@starrcommonwealth.org

Survivors.org (https://survivors.org/) is a survivor-centered nonprofit organization dedicated to supporting individuals impacted by sexual violence, domestic violence, abuse, and trauma through healing-centered advocacy, education, and community support.

Through virtual healing circles, awareness initiatives, survivor resources, and community outreach, Survivors.org works to create safe and empowering spaces where survivors feel seen, supported, and connected. Programs such as the BIPOC Healing Circle provide opportunities for healing, reflection, and meaningful conversation within a trauma-informed environment.

The organization continues to collaborate with schools, nonprofits, advocates, and community leaders to expand conversations surrounding prevention, mental health, resilience, and survivor empowerment.

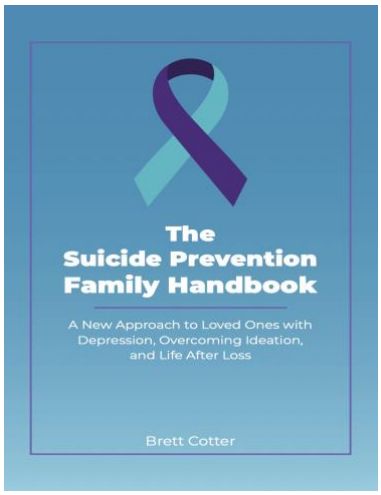
At Survivors.org, the mission is simple but powerful: to remind survivors they are not alone and that healing is possible through community, compassion, and support.

Learn more, connect, or support the mission at:
www.survivors.org (https://survivors.org/)

PUBLICATIONS, WORKSHOPS AND TRAININGS BY ACADEMY MEMBERS

Academy members can have their publications, trainings and workshops announced in the *Journal of the American Academy of Experts in Traumatic Stress*. The Academy can also send emails to all members and Academy associated networks. Any questions regarding announcements, please contact Annmarie Arleo, Senior Membership Relations Specialist, at aarleo@aaets.org.

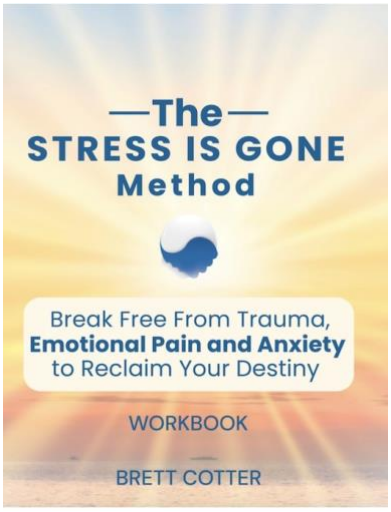
TWO NEW PUBLICATIONS BY ACADEMY MEMBER BRETT COTTER



THE SUICIDE PREVENTION FAMILY HANDBOOK

The Suicide Prevention Family Handbook is a compassionate and practical resource for those supporting loved ones through depression, anyone struggling with suicidal ideation, and those who feel overwhelmed with grief from losing a loved one. It offers actionable strategies and tools that complement traditional treatments, empowering families to foster connection and resilience. In Chapter 1, readers learn how to best support loved ones suffering from depression. In Chapter 2, individuals with depression will find a clear process to help overcome their own suicidal thoughts. In Chapter 3, exercises to help people feel emotionally and spiritually reconnected with their lost loved ones are included. This book is a vital asset for mental health professionals and holistic health practitioners. Readers are equipped with the words, body language, and strategies to save lives.

CLICK HERE FOR MORE INFORMATION ABOUT



THE STRESS BE GONE METHOD

The Stress Is Gone Method is a self-care system that empowers people with tools to overcome stress, emotional pain, anxiety, negative thinking, and trauma. This interactive workbook provides you with more than just stress-relief techniques; it guides you to release the repressed fear that creates additional emotional pain and helps you embody the new beliefs necessary to produce the life of your dreams. You'll discover your true power as you effectively respond to stress from:

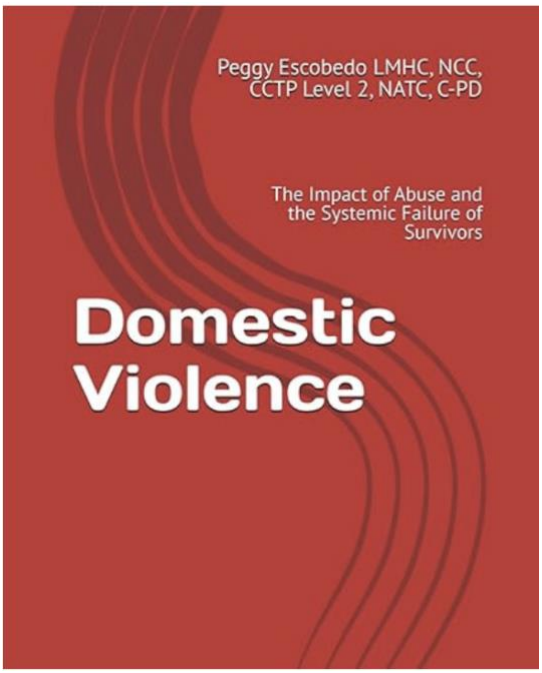
- Traumatic Events
- Overwhelming Family Situations
- Work, Finances, or School Stress
- Abusive or Narcissistic Relationships
- Personal or Family Health Crises
- Generational or Ancestral Trauma
- Loss of a Loved One

This book allows stress to enlighten us as triggers become teachers and self-love fills the hole that trauma left in our soul.

CLICK HERE FOR MORE INFORMATION

NEW PUBLICATION BY ACADEMY MEMBER PEGGY ESCOBEDO

DOMESTIC VIOLENCE: THE IMPACT OF ABUSE AND THE SYSTEMIC FAILURE OF SURVIVORS

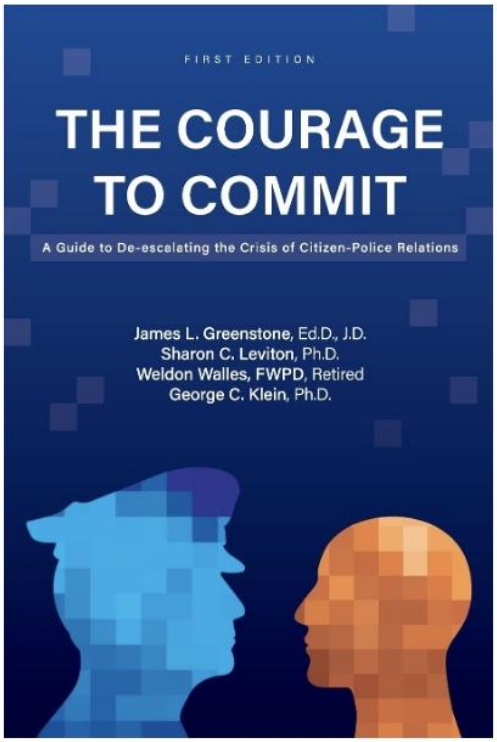


This work offers a critical analysis of the institutional barriers that prevent survivors from achieving true safety, drawing on her 25 years of linical experience this book aims to explore the societal blind spot that prevents legal, medical, and religious institutions from identifying the abuse and coercive control. For those of us working in crisis management and traumatic stress, we often witness the "Secondary Crime Scene", the moment a survivor reaches out for help only to be re-traumatized by the very institutions meant to protect them. This book serves as both validation for survivors and a practical manual for practitioners navigating the support systems for survivors, providing a trauma-informed lens for analyzing institutional responses ranging from the neurobiology of trauma to the "Failure to Protect" paradox in child protection systems. Key topics include "Proxy Abuse by the Gavel," which examines how the legal system is weaponized against survivors and how survivors' trauma symptoms are used to discredit them in the judicial system; how medical and religious sanctuaries become snares; a review of key roles in an abusive relationship and how the dynamics of abuse impacts them. As experts in traumatic stress, we recognize that recovery cannot happen in a vacuum, and this work challenges us to move beyond asking "why they stay" to auditing the systems that offer little to no options but to stay.

CLICK HERE TO ORDER BOOK

The Courage to Commit:

A Guide to De-escalating the Crisis of Citizen-Police Relations



The Courage to Commit: A Guide to De-escalating the Crisis of Citizen-Police Relations is designed to inspire vital dialogue regarding the United States' founding principles, its social covenants, and the relationship between its police force and its communities. Featuring diverse perspectives, the text illuminates the needs to both enact significant changes in policing and examine and fix police-citizen culture.

The book considers the characteristics that make up a good police officer, the place of power in the actions of police officers, Sir Robert Peel' s principles for police work, and the often-tenuous relationship between the police and the community. It also addresses the role of the police during turmoil, the use of force, conflict management, crisis intervention, and de-escalation. Chapters examine the importance of training and supervision for police-citizen encounters, as well as police response to families in crisis. The book discusses potential solutions and presents readers with a framework for improved police-community relations. Throughout the text, vignettes and case studies bring the material to life and encourage lively discussion and debate.

The Courage to Commit is an essential textbook for courses and programs in policing and law enforcement management and administration. It is also an ideal resource for community members, community leaders, elected and appointed officials, and all concerned citizens who are interested in improving police-citizen relations.

James L. Greenstone, Ed.D., J.D. is a psychotherapist, mediator, arbitrator, negotiator, author, professor, police officer, editor-in-chief, military officer, and police behavioral health specialist.

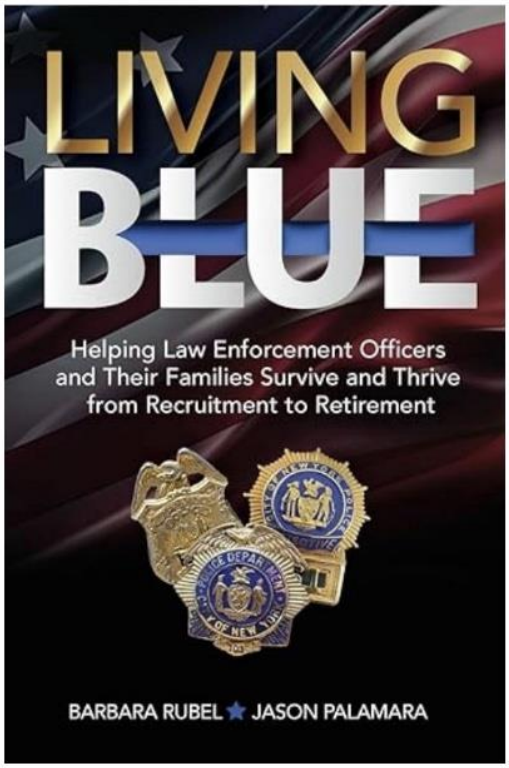
Sharon C. Leviton, Ph.D. holds degrees in education and crisis intervention and serves as a crisis specialist and dispute mediator in private practice.

Weldon Walles is an honorably retired Texas Master Peace Officer who served with the Fort Worth Police Department for 25 years.

George C. Klein, Ph.D. is a professor emeritus at Oakton Community College. He has a doctorate in sociology and criminal justice. He was a part-time police officer, is a trained hostage negotiator, and was a consultant to the FBI.

CLICK HERE TO ORDER THIS BOOK

Living Blue: Helping Law Enforcement Officers and Their Families Survive and Thrive from Recruitment to Retirement



Two perspectives. A retired Cold Case Homicide detective, Jason Palamara, and acclaimed author and thanatologist, Barbara Rubel, whose parents were police officers. As you read this book on law enforcement wellness, you'll notice that each chapter begins with Palamara's memoir, "In My Experience and Lessons Learned" and describes how he coped with on the job traumatic experiences, such as 9/11, homicide of young victims, and LODD.

Barbara Rubel's section, "My Story and Evidence-Based Practices" follows, and includes cutting-edge science, research-based practices, and personal insight. She shares her childhood stories of living blue, as well as the devastating loss of her father, a retired sergeant, who died by suicide while she was awaiting the birth of triplets.

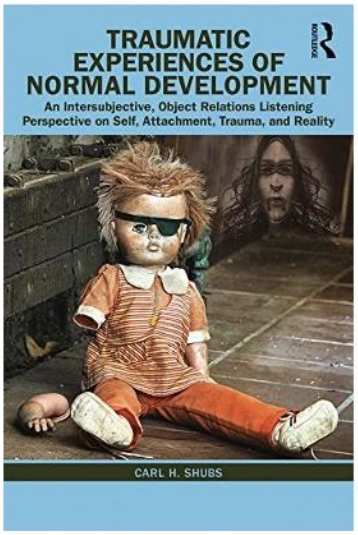
What sets this book apart is its approach to vicarious trauma-informed practices based on the personal experiences of the authors, and that of over 70 law enforcement professionals and experts in mental health.

Living Blue is designed to increase wellness in officers, their families, and ultimately, their communities. In *Living Blue*, you will learn how to:

- Incorporate a vicarious trauma-informed approach to policing.
- Manage compassion fatigue, burnout, secondary trauma, and moral injury.
- Change the culture and stigma that prevents law enforcement professionals from getting help.
- Boost resilience and achieve post-traumatic growth.
- Prevent law enforcement officer suicide.

CLICK HERE TO PURCHASE BOOK

Traumatic Experiences of Normal Development: An Intersubjective, Object Relations Listening Perspective on Self, Attachment, Trauma, and Reality



Traditionally, trauma has been defined as negatively impacting external events, with resulting damage. This book puts forth an entirely different thesis: trauma is universal, occurring under even the best of circumstances and unavoidably sculpting the very building blocks of character structure.

In *Traumatic Experiences of Normal Development*, Dr. Carl Shubs depathologizes the experience of trauma by presenting a listening perspective which helps recognize the presence and effects of traumatic experiences of normal development (TEND) by using a reconstruction of object relations theory. This outlook redefines trauma as the breach in intrapsychic organization of Self, Affect, and Other (SAO), the three components of object relations units, which combine to form intricate and changeable constellations that are no less than the total experience of living in any given moment. Bridging the gap between the trauma and analytic communities, as well as integrating intrapsychic and relational frameworks, the SAO/ TEND perspective provides a trauma-based band of attunement for attending to all relational encounters including those occurring in therapy.

Though targeted to mental health professionals, this book will help enable therapists and sophisticated lay readers alike to recognize the impact of relational encounters, providing new tools to understand the traumas we have experienced and to minimize the hold they have on us.

Reviews

Carl Shubs has done it again! In his prior writings on transference and countertransference with trauma victims, using somatic therapies as well as psychoanalytic psychotherapy, Shubs has demonstrated a remarkable capacity to stand in many theoretical and clinical worlds at once. His unique gift is to understand and be able to effectively integrate in highly original ways numerous schools of psychoanalytic thinking as well as neuropsychological studies, infant research, and somatic psychotherapy practices. In this tour de force through the complex world of developmental, neuropsychological, and trauma studies, Shubs makes clear that all of the features described in pathological trauma situations are also to one degree or another a part of normal development.

- Lawrence E. Hedges, Ph.D., Psy.D., ABPP - Listening Perspectives Study Center, Founder and Director, and author of numerous books on psychoanalysis.

In this volume, Traumatic Experiences of Normal Development, Dr. Shubs has produced an encyclopedic work on the title subject. He brings to the task his understanding that comes from his clinical experience of working for decades with victims of violent crimes. In addition, he provides, in their own words, the personal theories and interpretations of the leading authorities in the field.

His research comes from a personal, theoretical, and experiential base. This is no more evidenced than in a poem he wrote, “To Be in a Closet,” which he inserts at the beginning of his work, where he says, “The final version [of the poem] grew out of my self-awareness regarding my own array of closets and my knowing that each of us has them.”

This book is an invaluable resource for anyone working with the impact of traumatic experience on their clients or themselves.

- Robert Hilton, Ph.D. - Co-founder of the Southern California Institute for Bioenergetic Analysis (SCIBA) and Trainer Emeritus of the International Institute for Bioenergetic Analysis (IIBA).

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When The Solution Becomes the Problem:
Helping Families Struggling with Addiction and Trauma

Denver, Colorado - Barnes Education and Consulting, LLC is excited to announce the launch of Michael Barnes, Ph.D., LAC, LPC's new book, When The Solution Becomes the Problem: Helping Families Struggling With Addiction and Trauma. Dr. Barnes' book, available in digital format and paperback, will provide comprehensive information on addiction and trauma by weaving scholarly literature with real-life scenarios, allowing the book to be approachable to families and professionals.

A report from KFF Health News in July 2023 revealed that nearly 30% of U.S. adults have experienced addiction within their family. This issue deeply affects family dynamics, mental health, and finances for half of those surveyed. Addiction and trauma, as transgenerational issues, significantly influence the well-being of many Americans. When the Solution Becomes the Problem will introduce many families struggling with addiction and trauma to a new approach to the recovery process.

Dr. Barnes is a Diplomate in the American Academy of Experts in Traumatic Stress. He is the Chief Clinical Officer at Foundry Treatment Center in Steamboat Springs, CO. He is also the Founder and Director of the Michael Barnes Family Institute, which is part of NRT Services. Dr. Barnes frequently speaks at local, state, and national conferences on the co-occurrence of addiction and trauma and their impact on the family system. He is also an adjunct faculty member at the University of Colorado Denver and Colorado Mountain College.

Dr. Barnes's book can be purchased on his website (www.drmikebarnes.com), Amazon, and other web-based bookstores. He is available for podcasts, interviews, and other media opportunities to promote the book. Contact Patrick Barnes for scheduling. Patrick can be reached at either 720-484-0647 or pat@barnesedandconsulting.com.

BOOK SUMMARY

Unlike most books on families and addiction that provide prescriptive advice, When The Solution Becomes the Problem takes a different approach. This book partners with families, aiming to help them understand why implementing expert recommendations can be so challenging. By delving into the "why," families gain insights into their current crisis and the factors contributing to it.

The book's primary goals are twofold. Firstly, it aims to provide comprehensive information on addiction and trauma, drawing from scholarly literature while presenting it in a family-friendly style with relatable stories and clinical descriptions. Real-life scenarios woven through the chapters allow readers to recognize themselves and their family's circumstances from fresh perspectives.

Secondly, the book encourages readers to embark on a transformative journey of self-discovery, leading to growth, healing, and positive change for the entire family system. Divided into two parts, the educational section offers insights into addiction as a chronic, progressive disease that hijacks the brain's reward system and impairs a loved one's self-awareness of their problem. The trauma chapters introduce readers to a continuum of traumas, including Post-traumatic Stress Disorder, Transgenerational Trauma, Complex/Developmental Trauma, and Secondary Trauma arising from living with a loved one struggling with addiction and trauma.

The second part of the book expands on resilience as both an individual and family process, exploring the dynamics of change, improving communication, and the path to family healing. These chapters provide practical steps empowering individual family members to effect positive changes that ripple into transformative shifts for the entire family. The book guides families in supporting their loved one's journey to recovery and reintegration into the family with full membership.

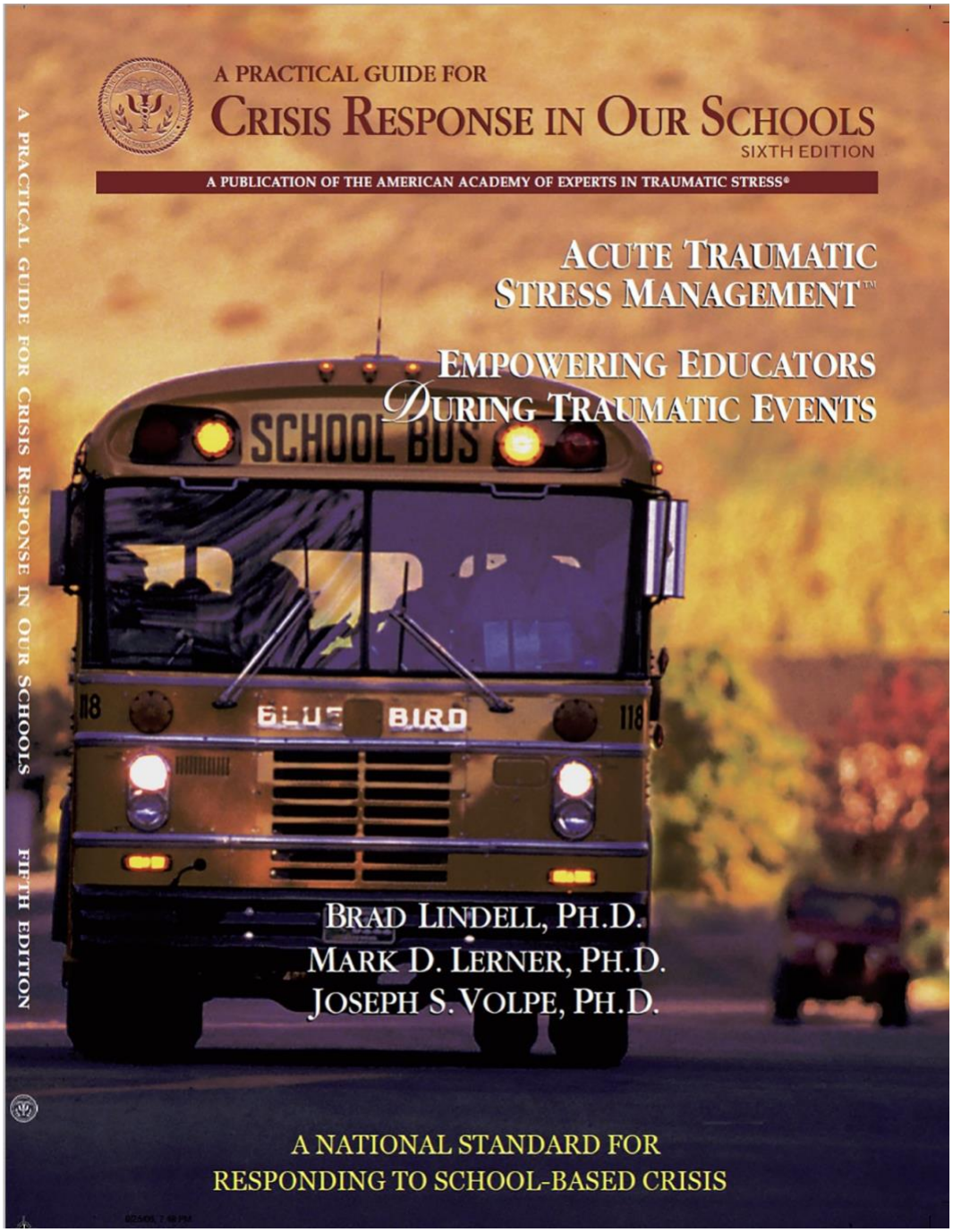
Ultimately, the book aims to guide families away from the perspective of "we are a family with a loved one who struggles with addiction" towards embracing the identity of "we are a family in recovery from addiction and trauma." By fostering understanding, empathy, and actionable guidance, this book seeks to empower families to break free from the cycle of addiction and trauma, promoting healing and a renewed sense of togetherness.

CLICK HERE TO ORDER THIS BOOK

PRACTICAL DOCUMENTS FROM

A PRACTICAL GUIDE FOR CRISIS RESPONSE IN OUR SCHOOLS

PUBLISHED BY THE AMERICAN ACADEMY OF EXPERTS IN TRAUMATIC STRESS



CLICK HERE FOR MORE INFORMATION

RESOURCES FOR DEALING WITH TRAUMATIC EVENTS IN SCHOOLS

NATIONAL CENTER FOR SCHOOL MENTAL HEALTH

The **National Child Traumatic Stress Network (NCTSN)** has a wealth of resources to assist caregivers and educators with how to best talk to and support students following traumatic events such as school shootings. **Click on the title to view the article.**

FOR EDUCATORS

- **Responding to a Mass Casualty Event at a School: General Guidance for the First Stage of Recovery**
- **Guidelines for Responding to the Death of a Student or School Staff**
- **Sample Letter Templates (Death of student, staff)**
- **Creating, Supporting and Sustaining Trauma-Informed Schools**
- **Providing Psychological First Aid: Principals and Administrators**
- **Creating Effective Child and Family Focused Disaster Behavioral Health Messages on Social Media**
- **School Crisis Guide**
- **The NASSP Principal Recovery Network Guide to Recovery**
- **Leading Through Crises**

SUPPORTING STUDENTS

- **Returning to School After A Crisis: A Guide to Addressing Traumatic Events at School**
- **Federal Resources for Helping Youth Cope after a School Shooting**
- **Childhood Traumatic Grief: Information for School Personnel**
- **Tips for Helping Students Recovering from Traumatic Events**
- **Talking to Children about Violence: Tips for Parents and Teachers (English)**
- **Talking to Children about Violence: Tips for Parents and Teachers (Spanish)**
- **Providing Psychological First Aid: Teachers**
- **Helping Youth After Community Trauma: Tips for Educators**
- **Suggestions for Educators: Helping a Traumatized Children in School**
- **Childhood Traumatic Grief: Information for School Personnel**
- **Systematic Review: Post-Crisis Interventions**

SELF CARE

- **Understanding Compassion Fatigue**
- **Compassion Resilience for School Leaders and Staff**

FOR YOUTH

- **When Terrible Things Happen: For Students**
- **Childhood Traumatic Grief: Youth Information Sheet**
- **Draw your Feelings**
- **For Teens: Coping After Mass Violence**
- **How to Cope with Traumatic Events**
- **Helping Kids Grieve: Feelings Journal Worksheet**
- **Taking Care of Yourself During and After a Disaster Crisis**

FOR CAREGIVERS

TALKING WITH YOUR CHILDREN

- **Talking to Children about Violence: Tips for Parents and Teachers**
- **Talking to Children about Violence: Tips for Parents and Teachers (Spanish)**
- **How Children Understand Death and What you Should Say**
- **Talking with Children about Tragic Events**
- **Guiding Adults in Talking to Children About Death and Attending Services**
- **Guidelines for Talking to Children about Terrorist Attacks and School and Community Shootings in the News**

TRAUMA/GRIEF RESPONSES IN CHILDREN

- **Age Related Reactions to a Traumatic Event**

HELPING CHILDREN COPE

- **After a Loved One Dies- How Children Grieve and Parents and other Adults Can Support Them**
- **Helping Young Children with Traumatic Grief: Tips for Caregivers**
- **Helping School-Age Children with Traumatic Grief: Tips for Caregivers**
- **Helping Teens with Traumatic Grief: Tips for Caregivers**
- **Tips for Survivors of a Disaster or other Traumatic Event: Managing Stress**
- **Helping Children Cope with Tragedy Related Anxiety**
- **Helping Children and Adolescents Cope with Disasters and Other Traumatic Events**
- **Tips for Helping Students Recovering from Traumatic Events**
- **Helping Children Cope with Trauma**
- **How to Cope with Traumatic Events**
- **Childhood Grief: When to Seek Additional Help**
- **Helping Your Children Manage Distress in the Aftermath of a Shooting**
- **Helping Children and Adolescents Cope with Traumatic Events**

SELF-CARE FOR CAREGIVERS

- **Compassion Resilience Toolkit for Parents and Caregivers**

FOR MENTAL HEALTH PROFESSIONALS

SUPPORTING STUDENTS

- **Psychological First Aid for Schools: Field Operations Guide**
- **Childhood Traumatic Grief: Information for Mental Health Providers**
- **Tips for Helping Students Recovering from Traumatic Events**
- **Helping Children Cope with Trauma**
- **Skills for Psychological Recovery: Field Operations Guide (*must be administered by a mental health professional)**
- **Culturally Competent Crisis Response**

SELF-CARE

- **Understanding Compassion Fatigue**
- **Compassion Resilience for School Leaders and Staff**

ADDITIONAL RESOURCES

- **American Academy of Pediatrics**
- **American Psychological Association**
- **Child Mind Institute**
- **Dougy Center**
- **Mental Health America**
- **National Association of School Psychologists**
- **National Association of of Sectionary School Principals**
- **National Center for School Crisis and Bereavement**
- **National Center for School Safety**
- **National Education Association**
- **National Institute of Mental Health**
- **New York Life Foundation**
- **PBS Kids**
- **Sesame Workshop**
- **Substance Abuse and Mental Health Services Administration SAMHSA**
- **The Jed Foundation**
- **The National Child Traumatic Stress Network**
- **U.S. Department of Education**
- **Wise**
- **Youth.gov**

Source https://www.nc2s.org/trainings-resources/crisis-navigation-resources/school-crisis-resources/

MANUSCRIPT GUIDELINES FOR THE
JOURNAL OF THE AMERICAN ACADEMY OF EXPERTS IN TRAUMATIC STRESS

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Preparation of Manuscripts

Authors are required to submit manuscripts via email (manuscripts@aaets.org) in Word format. The written material must be double-spaced, on single sided paper that is 8.5 by 11 inches. There must be one-inch margins. Pages must be numbered consecutively. Tables and figures should be numbered consecutively. Tables and figures will be placed near their first mention in the text. Reference must be made to the tables and figures in the manuscript.

Title Page

The following elements must be included:

- Title of the article;
- Name(s) and initial(s) of author(s), preferably with first names spelled out;
- Affiliation(s) of author(s);

Abstract

Each article is to be preceded by a succinct abstract, of up to 250 words, that highlights the objectives, methods, results, and conclusions of the paper.

Key Words

The author(s) should supply five to 10 keywords that identify the article.

References

In the text, references to the literature should be by author and year; where there are two authors, both should be named; with three or more only the first author's name plus "et al." need be given. The list at the end of the paper should include only works mentioned in the text and should be arranged alphabetically by name of first author. References should be cited as follows:

Journal papers
Name(s) and initial(s) of author(s), year in brackets, full title, name of the journal as abbreviated in Chemical Abstracts, volume number, first and last page numbers

Example: Lindell, B. (2010) Variability in response style as a function of interview method and impression management. Dissertation Abstracts 265:785

Books
Name(s) of author(s), year in brackets, full title, edition, publishers, place of publication, page number:

Example: Lindell, B., Lerner, M., Volpe, J. (2012) A practical guide for crisis response in our schools, American Academy of Experts in Traumatic Stress, New York

The responsibility for the accuracy of bibliography references is with the author(s). The American Academy of Experts in Traumatic Stress bears no responsibility for inaccuracies in references caused by the author(s).

AMERICAN ACADEMY OF EXPERTS IN TRAUMATIC STRESS
NATIONAL CENTER FOR CRISIS MANAGEMENT

APPLICATION FOR THE

AMERICAN ACADEMY OF EXPERTS IN TRAUMATIC STRESS
SCHOLARSHIP PROGRAM

AMERICAN ACADEMY OF EXPERTS IN TRAUMATIC STRESS
NATIONAL CENTER FOR CRISIS MANAGEMENT
127 ECHO AVENUE ● MILLER PLACE, NY 11764 ● 800-810-7550 ● 631-543-2217

APPLICATION FOR THE ACADEMY SCHOLARSHIP PROGRAM

THE AMERICAN ACADEMY OF EXPERTS IN TRAUMATIC STRESS®
THE NATIONAL CENTER FOR CRISIS MANAGEMENT®

The American Academy of Experts in Traumatic Stress, in collaboration with the National Center for Crisis Management, is proud to announce a Scholarship Program for members of our organizations and their immediate families who are in the process of or planning to obtain education and/or training in the areas of traumatic stress or crisis management.

The program will begin offering yearly scholarships of between $200 and $500 to individuals who meet the criteria set forth below. All applications being of equal quality, the first individuals to submit applications will receive priority. The scholarships will be awarded upon a winner providing proof of enrollment and payment for the education/training.

- Be a current member of the American Academy of Experts in Traumatic Stress or an immediate family member of a current member.
- Currently receiving education and/or training in traumatic stress or crisis management; or planning to become enrolled in said training.
- Currently attending an accredited institution or educational/training programs offering CEU's accredited by a recognized organization (e.g., Critical Incident Stress Foundation, American Psychological Association, etc.) or planning to become enrolled. The Academy reserves the right, after a review, to award scholarships to individuals attending educational/training programs that do not meet the above criteria.
- Provide proof of enrollment and payment in an eligible program.
- If under the age of 18, applicant must have a parent or guardian co-sign the application.
- Must demonstrate a history of success in the educational or training environments.
- Complete the Academy's application for the Scholarship Program and provide the required documentation.
- Submit the completed application to the Academy by the stated due date.

I. PERSONAL INFORMATION

FIRST NAME MIDDLE NAME LAST NAME

ADDRESS CITY STATE/PROVINCE COUNTRY ZIP CODE

WORK PHONE NUMBER EMAIL ADDRESS

PLEASE INDICATE THE FAMILY MEMBER WHO IS A MEMBER OF THE ACADEMY (ENTER 'SELF' IF YOU ARE THE MEMBER).

II. PROFESSIONAL/ETHICAL/LEGAL INFORMATION

	YES	NO
Have you ever been convicted of a felony?	❒	❒
Have you ever been disciplined for any type of unethical or illegal conduct?	❒	❒
Has your professional license/certification ever been revoked, suspended or limited?	❒	❒
Is there action pending related to your professional practice?	❒	❒
Is there action pending to revoke or limit your professional license/certification?	❒	❒
Have you ever voluntarily surrendered your license/certification?	❒	❒
Do you abuse alcohol or other substances?	❒	❒
Have you ever been denied professional liability insurance?	❒	❒

If you answered yes to any of the questions in Section II, please provide additional information for consideration with your application in the space provided below (use additional paper as needed).

III. EDUCATIONAL/TRAINING PROGRAM INFORMATION

Please indicate the name of the educational/training program.

_____

Please indicate the name of the organization or institution that is providing the educational/training program.

_____

Please indicate the type of educational/training program (e.g., workshop/seminar, college/university, formal training program).

_____

Please indicate the format of the program (e.g., online course(s), in-person, Zoom) _____

Please indicate the length of the program in total hours. _____

How many CEU's would you receive as a result of participating in the educational/training program? _____

Please provide the website address for the educational/training program. _____

IV. PERSONAL STATEMENT

Please indicate what contributions you have made to the field of traumatic stress and/or crisis management. If you do not yet have experience, how do you see yourself contributing to these fields in the future. Please also indicate why you were drawn to the areas of traumatic stress and/or crisis management (use additional paper as needed).

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V. PROFESSIONAL BENEFITS OF EDUCATIONAL/TRAINING PROGRAM

Please indicate how the educational/training program will benefit you when engaging in professional activities within the areas of traumatic stress and/or crisis management (use additional paper as needed).

VI. DECLARATION

I hereby certify that all the information provided in this Application for Scholarship from the American Academy of Experts in Traumatic Stress is accurate and complete. I understand that my application will be reviewed by members of the Executive Board and the decision from the Executive Board regarding my application is final. I also understand that if more applications than scholarships are submitted and candidates are of equal quality, preference will be given to the applications that were submitted earliest. I agree to hold harmless the American Academy of Experts in Traumatic Stress and the National Center for Crisis Management, its officers and employees for decisions made on my application.

_____ _____

SIGNATURE DATE

_____

PRINT NAME

If applicant is under the age of 18, a parent/guardian's signature is required.

_____ _____

PARENT/GUARDIAN SIGNATURE DATE

_____

PRINT NAME

MAIL TO:
American Academy of Experts in Traumatic Stress
127 Echo Avenue, Miller Place, NY 11764

EMAIL TO:
scholarships@aaets.org

QUESTIONS:
Contact Annmarie Arleo at:
aarleo@aaets.org

AMERICAN ACADEMY OF EXPERTS IN TRAUMATIC STRESS
NATIONAL CENTER FOR CRISIS MANAGEMENT
127 ECHO AVENUE ● MILLER PLACE, NY 11764