International Journal of Child and Adolescent Resilience
Revue internationale de la résilience des enfants et des adolescents

# Trauma and Society: Intervention Development Report on a Trauma-Specific Psychoeducation Course for Adolescents in Schools, Residential, and Community Settings

**Julia SENG[1], Marin SENG[1], and Laura GULTEKIN[2]**

1 Growing Forward Together, a 501(c)(3), Ann Arbor, Michigan
2 School of Nursing, University of Michigan, Ann Arbor, Michigan

**Corresponding Author:** Laura Gultekin, 400 N. Ingalls Rd., Room 2172, Ann Arbor, MI 48109, 734-647-0193.
Email: lgulteki@umich.edu

## Abstract

**Objectives:** We report on the development of *Trauma and Society* (*T&S*), an innovative trauma-specific program. *T&S* is a mental health literacy program, a psychoeducation intervention, and a standards-aligned social studies or health elective course for adolescents in high school and cross-sector settings.

**Methods:** We built the *T&S* intervention on theory, similar trauma psychoeducation interventions for other client populations, experience implementing psychoeducation in the healthcare sector, and a 3-step patient and public involvement (PPI) process. It is manualized for individual, small-group, and classroom use. The credit-bearing course format for use in schools is aligned with the national common core for social studies and for health and consistent with the Understanding by Design™ framework.

**Results:** The prototype was evaluated by 7 adult and 14 adolescent stakeholders who provided extensive feedback. The "mock lesson" beta testing by a small group of interns ($n = 16$) provided detailed input on key content, leveling of homework assignments, lesson format and content, group dynamics in a virtual class setting, and feedback about the writing and layout of the student materials. Ecological momentary assessment of "distress scores" among these youth indicated a high level of safety. Peer review of the student book by one cadre of school mental health professionals ($n = 14$) gave strong insight into the forms of manualization needed to support implementation and acceptability for staff.

**Conclusions:** The fully-manualized pilot version of the *T&S* intervention and curriculum is ready for cross-sector early-adopter demonstration projects and outcomes research.

**Keywords:** Adolescent, trauma, posttraumatic stress, psychoeducation, mental health literacy.

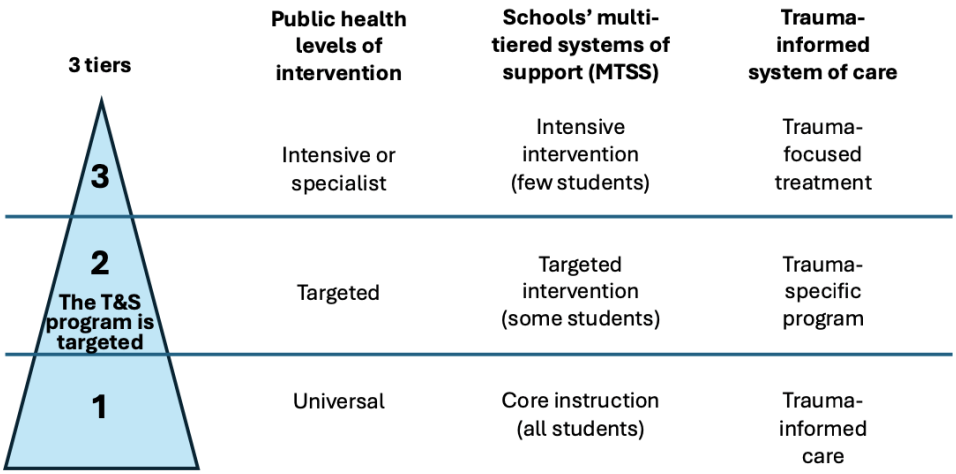

Copyright © 2026 IJCAR / RIREA

## Introduction

Trauma and its effects on adolescent physical, psychological, and social well-being, and life outcomes is a well-understood problem. By age 18, most adolescents in the United States (U.S.; 60%–70%) are exposed to a potentially traumatic event (PTE; Gunaratnam & Alisic, 2017). The effects of PTEs can be minimal for resilient adolescents or can present as complex sequelae that may or may not meet diagnostic criteria for posttraumatic stress disorder (PTSD; Alisic et al., 2014). General adolescent populations in the U.S. that have PTEs demonstrate an overall PTSD rate of 15.9% (Alisic et al., 2014), with some populations of marginalized youth, (e.g., Black, Indigenous, People of Color [BIPOC]; lesbian, gay, bisexual, transgender, and queer [LGBTQ]; youth with immigrant or refugee status) demonstrating posttraumatic stress disorder (PTSD) rates near 30% (Belivanaki et al., 2017; Dierkhising et al., 2013; Greeson et al., 2011; Havens et al., 2012; Palines et al., 2020; Wong et al., 2016). Adolescents with PTSD frequently have comorbid diagnoses of depression, substance use disorder, or both (MacDonald et al., 2010). Youth may be vulnerable to complex PTSD (CPTSD; Chiu et al., 2023), which includes PTSD (American Psychiatric Association, 2013) as well as affect dysregulation, negative self-concept, and relationship difficulties (World Health Organization, 2018). Youth with PTE can present with a range of posttraumatic sequelae that affect their ability to learn, navigate relationships, develop a positive identity, and stay connected to prosocial opportunities. This in turn derails achievement of basic positive life outcomes for emerging adults: educational attainment, gainful activity, desistence from criminal activity, interpersonal functioning, responsible sex and parenting, residential independence, mental health, and abstaining from substance use (Abram et al., 2017).

Adolescents need trauma-specific programs that reach them in the spaces where they are already receiving services. U.S. schools structure services on a multi-tiered system of supports (MTSS; Lehigh University College of Education, 2020). The MTSS three tiers (see Figure 1) parallel the public health (1) *universal*, (2) *targeted*, and (3) *intensive or specialist* levels of healthcare, and the (1) *trauma-informed*, (2) *trauma-specific*, and (3) *trauma-focused* levels of a trauma-informed system of care (Substance Abuse and Mental Health Services Administration [SAMHSA], 2014). Currently Tier 1: *universal, trauma-informed approaches* and Tier 3: *specialist, trauma-focused treatment or therapy* are more available than Tier 2: *targeted, trauma-specific programs.* Tier 2 targeted programs should be the bridge between universal and intensive levels (Moore et al., 2019; Ridgard et al., 2015). Tier 2 programs in schools are for "some students". Trauma-specific programs are for people who can self-identify that they have a trauma history and opt into a program, without need of a diagnosis. While trauma-specific programs require trained facilitators and typically require a relationship with a clinician for safety purposes, facilitators are not necessarily clinicians. This can extend the reach of a program in underserved mental health regions and improve equity of reach.

**Figure 1.** Tiered Services with Vocabulary Used in Public Health, Schools, and Trauma-Informed Systems




This project's goal was to develop a safe, feasible, acceptable, and ultimately beneficial trauma-specific program for youth with any history of trauma that can reach them in schools, residential settings, and through community organizations. The purpose of this paper is to report on the development (Staniszewska et al., 2017: www.equator-network.org/reporting-guidelines/gripp2) of *Trauma and Society* (*T&S),* an innovative, trauma-specific

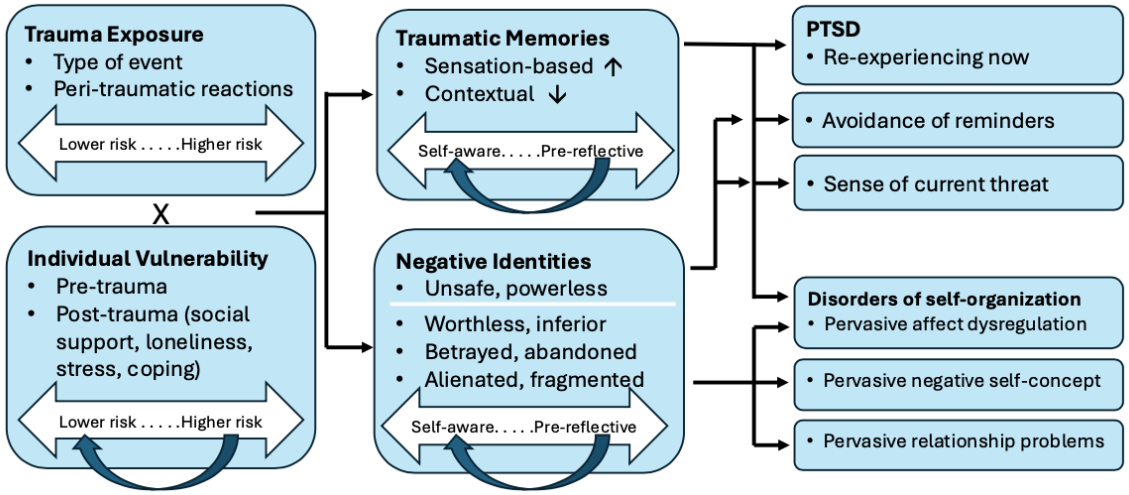
mental health literacy and psychoeducation program for trauma-exposed young people who are at risk for or who may have PTSD or CPTSD and related conditions.

## Theoretical Underpinnings and Frameworks

To enhance the credibility and acceptability of *T&S,* we conformed to numerous theories and frameworks. The U.S. National Institute for Mental Health outlines standards for behavioral interventions, including that they be theory-based, articulate a theory of change, and be fully manualized (Bellg et al., 2004). Curricula also must use a coherent framework for aligning objectives, content and activities, and assessments; and the learning outcomes must align with national standards for school subjects. *T&S* was built upon the following theories and frameworks.

The psychopathology content of the book and the rationale for using education to decrease risk or lower symptom burden rest on the Memory and Identity Theory of Complex PTSD (Figure 2; Hyland et al., 2023). Education can move the person from "Pre-reflective" responses to trauma memories and negative identities to "Self-aware" responses. This theory is well-suited to interventions for adolescents because it centers the effects of trauma and intrusive memories on identity formation, a central developmental task for youth (Erickson, 1994).

**Figure 2.** Memory and Identity Theory of Complex PTSD Diagram Simplified to Show How T&S Psychoeducation Could Decrease Risk for PTSD and Disorders of Self-Organization (i.e., Complex PTSD)




*T&S* includes two forms of therapeutic education. It conforms with the conceptualization of mental health literacy frequently cited in relation to adolescent programs (Mansfield et al., 2020). Mental health literacy provides knowledge of the mental health condition, reduction of stigma and self-stigmatization, and self-efficacy to seek mental health treatment if needed. *T&S* is also psychoeducation, which is characterized by information, skills training, and emotional support for learning. The theory of change (Bellg et al., 2004) addresses both PTSD and CPTSD. The target client is any adolescent or emerging adult who self-identifies as having experienced a trauma event. The proximal target outcome is re-regulation in mind, body, and interpersonal domains. The distal target outcomes are attaining the eight positive life outcomes for emerging adults put forth by the U.S. Department of Justice and listed above (Abram et al., 2017). There are three target mechanisms that drive skills training and practice: (1) management of PTSD reactions despite the presence of triggers; (2) emotion regulation; and (3) interpersonal regulation. These mechanisms address learning needs consistently identified for adults with PTSD and CPTSD, and thus could logically extend to late adolescents for problems they have already developed or for prevention. Programs with these target mechanisms include Skills Training in Affective and Interpersonal Regulation (STAIR; Cloitre et al., 2002), Dialectical Behavior Therapy (DBT; Lynch et al., 2007), and Trauma Adaptive Recovery Group Education and Therapy (TARGET; Ford, 2025; Ford & Russo, 2006). Consistent with educational and developmental settings, *T&S* is learning and achievement oriented. *T&S* builds these skills to prevent trauma-related losses of or derailments from developmental attainments via symptom management skills, even if the youth cannot or is not yet ready to engage in treatment that might lead to PTSD or CPTSD improvements or remission.

The curricular structure of *T&S* uses the framework by Wiggins and McTighe (2005) known as Understanding by Design™. Early in the development process, *T&S* was also framed to align with the U.S. Common Core curriculum for social studies; subsequently colleagues adapted the curriculum to align with the Common Core for health and for English language arts (Common Core, 2010) increasing the likelihood of receiving formal administrative approval.

## Program Description

The principal innovation of *T&S* is its unique formatting as an elective high school course open to any student. This delivers mental health literacy and psychoeducation while maximizing reach and reducing stigma. An expected secondary use is to implement the curriculum in other settings in a short format (i.e., "mini-course") in 1:1 or small groups where it is facilitated by a "tutor". What follows is a brief description aligned with the TIDierR checklist (Hoffman et al., 2014; http://www.tidierguide.org/).

**Rationale, Theory, and Goal.** The rationale and theoretical framework, mental health literacy and psychoeducation theories of change, and pedagogical framework were presented above. The goal of *T&S* is to fill the gap in Tier 2 trauma programs for adolescents served in a range of settings.

**Materials.** The student workbook has an introduction and five units with multiple sections, reference and resource lists (see Table 1 for topics). The course is written for eleventh and twelfth graders with low-literacy supports built in. These include a preview, vocabulary lists, graphics for key points, and short assignments at the low learning taxonomy levels of remembering, understanding, and applying section content, with a section summary that uses each new vocabulary word. There are section-specific three-minute videos that recap the key points. A Classroom Materials Portfolio for teachers provides a lesson activity for each section and a unit project, giving higher-level opportunities to analyze, evaluate and create that facilitate assessment for grading and awarding credit (previews are available from the corresponding author). Fidelity to the content and curriculum requires using the book.

**Table 1.** T&S Contents



**Procedures.** Trauma-informed teaching and learning suggests that tutoring sessions and classroom periods should be non-triggering to maximize learning. Students choose between two threads to titrate intensity: the standpoint of a person with trauma doing psychoeducation to learn to help themselves or the standpoint of a person exploring future careers working with people with trauma to learn to help others. Students make agreements at the start of the course, including agreeing not to disclose their past trauma exposures, but to stay present- and future-focused. Each tutoring meeting or class period ends with 3-5 minutes for a "finding flow" activity to transition out of content that might be intense. Fidelity to the process requires adhering to these tutoring meeting or classroom lesson routines.

**Interveners.** In schools, interveners are social studies, health, or English language arts teachers. In other settings interveners are staff (e.g., probation officers, social workers, patient techs or nurses) referred to as "tutors". The developers require that teachers and tutors have a licensed psychologist, social worker, or nurse as a "clinician partner" who can provide referrals if needed and support the intervener with reflective supervision. Training is fully manualized. Fidelity to the relationship involves sticking to teaching or tutoring, not venturing into psychotherapy or trauma processing.

**Modes.** *T&S* can be delivered in-person or virtually. Tutors can work with one individual or in small groups. The mini-course version was designed with justice-involved youth, those aging out of foster care, or those in partial hospital or intensive outpatient programs in mind. It has a subset of content and does not include academic activities or projects.

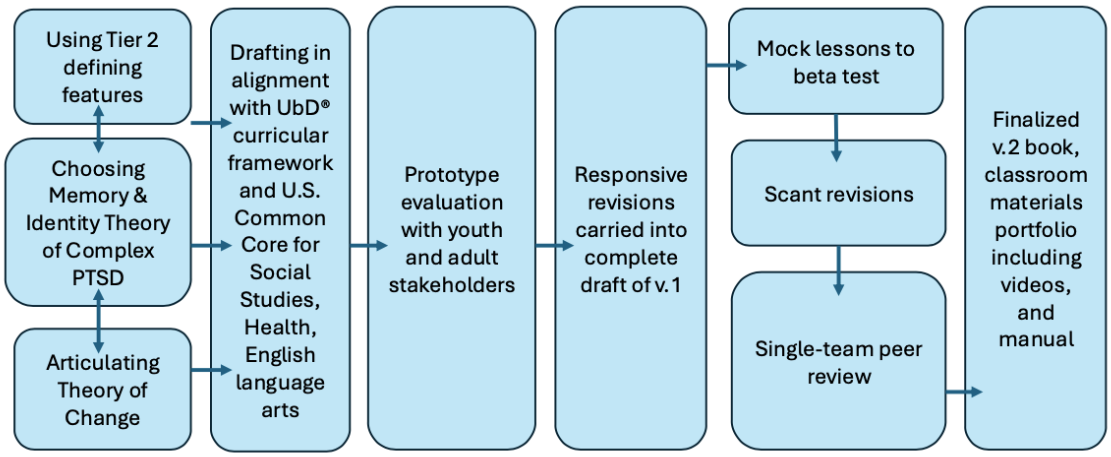
**Tailoring.** Flexibility is built into *T&S.* The tutor and learner can select which sections to prioritize. If *T&S* is used with learners who have similar trauma histories (e.g., in a program for youth who are refugees) sections more salient to those exposures can be chosen, such as those focusing on trauma and human rights. If learners are preparing for individual psychotherapy, they can prioritize understanding how treatment works and how to manage exposure therapies.

**Fidelity.** Fidelity monitoring is built into the manualized tools and reflective supervision. Manualization design choices were heavily influenced across the development work based on patient and public involvement (PPI) processes that are reported in the following section.

## Method

The components and processes used to develop *T&S* are depicted in Figure 3. Having identified the gap in trauma-specific programs, chosen the theories and frameworks, considered practical constraints, planned the content, and imagined the design, a PPI process was then utilized to maximize acceptability and feasibility.

**Figure 3.** T&S Intervention Development Components and Project Flow




The purpose of PPI is not research. Rather it is a process used to engage the target clients (and other stakeholders) in the creation of an intervention. Use of PPI in intervention development increases the relevance of the intervention for the target population (Greenhalgh et al., 2019). PPI also lives out the principles of a trauma-informed approach between developers and the target population by offering voice and mutual collaboration in shaping the intervention (SAMHSA, 2014). The developers engaged with young people and staff across a range of settings. Invitations included transparency about how their input would be used, and they were assured they would not be identified. At each phase, the procedures were applied loosely enough to include as many volunteers as possible (e.g., individual interview, focus group, or survey). Developers chose a 3-stage approach with each stage tailored to the phase of development and contributing to iterative advances toward completion of a version ready to pilot: (1) prototype

feedback toward completion of the book; (2) beta-testing to inform the classroom materials portfolio (i.e., lesson structure, learning activities and assessments); and (3) peer review of the entire final draft to inform manualization.

Although PPI is not research, it is useful to apply a systematic approach to prevent overlooking input due to haste or bias. For all three PPI projects a qualitative content analysis approach was used (Morgan, 1993). Qualitative content analysis applies a systematic approach tailor-made for what can be a commonsense purpose, such as collecting feedback about a program design. At each phase, questions started out specific, asking for feedback about details of the materials. The next set of questions moved to more general questions asking, given what they had examined, how likely they thought students would be to choose the program and why, and how likely they thought adults in schools or other settings would be to offer it and why or why not. Finally, they were asked for open-ended suggestions to make the materials stronger and, if some of the developers' questions were not addressed spontaneously, specific probes were added. At all 3 phases, all text from survey answers and interview or focus group transcripts was coded into categories: (1) affirmations; (2) critiques or concerns; or (3) suggestions. Elements receiving affirmations were retained. Every critique/concern and suggestion was listed and a response was determined by the co-developers with three interns participating in this process.

### Prototype Evaluation

The purpose of the first PPI project, a prototype evaluation, was to gain early feedback on the general idea after drafting the first two units of the book and after a book designer laid out the content. Evaluators were recruited from the developers' professional networks including teachers, therapists, clinic staff and adolescents active in community organizations, and members of a children's hospital advisory group. Five adult professionals and four adolescents provided input via an electronic survey. Two adults completed interviews and staff of an adolescent clinic participated in a focus group; these were conducted by a graduate student intern. Ten adolescents took part in focus groups led by two high school summer interns on this project. All had read the first two units. Analysis results led to text revisions, adding an introduction, and design of the lesson routine.

### Mock Lesson Beta Testing

The next phase, teaching the lessons to students, aimed to assess safety and well-being during lessons and acceptability to a range of learners. The developers engaged 19 adolescents as beta-testing interns. They were referred by adults from an adolescent health clinic, a high school mental health club, a student advocacy center, a county youth commissioner, an anti-gun violence community youth organization, two high schools (one virtual, one traditional), and a juvenile justice facility. The interns were paid stipends of $15 per hour for 20 hours to attend seven weekly virtual lessons, to do homework and a group project, and to provide anonymous feedback via electronic survey at three points across the two-month period.

The first survey asked for feedback on similar aspects as were asked in the prototype evaluation, using rating scales with the option to comment about the content and materials. They were asked questions about hopes and concerns starting out, about their sense of comfort and safety in the group and with the teacher, and to share comments about the virtual class experience. The middle survey focused on any experiences of distress or regret and if they would recommend the course to others, as well as asking about any insights they were gaining, and anything else they wanted to say, including suggestions for improvement. The final survey repeated the items in the middle survey.

A nursing student volunteer sat in on the virtual lessons to collect safety data. The nursing student used private chat messages to collect "subjective units of distress" (SUD) scores as an ecological momentary assessment (Wolpe, 1969). That is, she asked students to use the 1-10 (no distress to the worst distress they could imagine) scale to rate how distressed they were in real time. SUD scores are commonly used in PTSD therapies to monitor emotional engagement versus distress; doing so in the moment enhances validity by avoiding recall bias. The nursing student followed up scores greater than five using the Zoom chat function to assess the cause and determine needs for help. Homework and small group projects were assessed by the co-developers and the nursing student for evidence of learning.

### Single-Team Peer Review

A team of school mental health, wellness, and learning specialists from a multi-district, consolidated service area provided the first adult professional peer review of the entire student book; this was prior to development of the

classroom materials portfolio and manualization. These 14 staff convened in a two-day retreat in the summer, for which they were paid by the district. They had a brief introduction to the program via videoconference with the co-developers who provided guiding questions. The retreat was facilitated by their team leader. Chart paper notes and a written summary were compiled. The team met with the co-developers again at the end of the second day to convey their review verbally as well. A second, brief meeting was held with some participants whose divergent input did not fit into the first meeting's timeframe and group dynamics.

The guiding questions queried first impressions and opinions about theoretical soundness; fit with young people's mental health needs generally and with the needs of those they work with specifically; the benefits and risks they perceived; acceptability to students and staff, and appropriateness to the eleventh and twelfth grade target age group. Specific appraisals were asked about the alternative career exploration focus, the requirement for a clinician partner, the practices used to address safety considerations, and their ideas about ways to shorten the program for non-school settings. Many of the guiding questions were addressed and many unqueried topics also surfaced and were reported in chart paper notes, a written summary, and notes from the concluding meeting where the input was provided verbally.

Due to lack of agreement within this team, the co-developers engaged two additional academic peer reviewers expert on trauma-informed education programs delivered in communities.

## Results

### Influences from the 3-Stage PPI Trajectory

**Prototype Evaluation Results**. The participants who completed prototype surveys provided demographic and trauma history information. These nine volunteers were Latino (1), Asian (3), White (2), and Black (3). One was LGBTQ. Asked if they saw themselves as a person with trauma, 5 replied "definitely yes", 2 replied "probably yes", 2 replied "might or might not be", and 1 replied "probably not". Of the students, 3 were in eleventh grade and 1 was in twelfth grade. Demographic data were not collected in the contexts of interviews or focus group meetings.

Feedback about the prototype, whether it was coded as an affirmation, a critique or concern, or a suggestion, were grouped categorically as addressing: the big picture; authors' presence and tone; formatting and layout; the need to better introduce the concept of trauma; pedagogy; and safety features. Input was both strongly encouraging and very specific, prompting the developers to think about vocabulary, density of ideas, density of the text, and the order in which new ideas were presented. An introduction was added to contain the information about safety, non-disclosure, titrating intensity of the material, availability of referrals, the limits of confidentiality, explanations about mandatory reporting, and information about the option to drop the course (i.e., "to have an emergency exit plan"). The co-developers followed advice to streamline and simplify the text while maintaining richness and humor. They opted to enhance sign-posting, add a very low-literacy "preview", break up text with more figures and tables, and add a "summary" that used every new vocabulary word from the unit. Feedback about the relational nature of the writing was consistently positive; but suggestions included finding ways to make it both more obvious and less distracting. The authors retained the introductory letter from them to the students that frames each unit and the first-person plural voice of the main text. They separated some text intended to signal a sense of connection between students and the authors by using "speech bubbles" and "thought bubbles" for parenthetical topics or comments so the paragraphs could be simple and clear. This device provided a way to add enriching information, key take-aways, and pause points for self-check-ins.

**Mock Lesson Beta-Testing Results.** The aim of this second PPI strategy was to assess student safety, well-being, and acceptability in a "class" situation. The beta-testing interns were diverse in terms of personal identities, academic accomplishment, and academic setting, but they were not asked directly about demographics. Of the 19 original interns, 14 finished the 7-lesson sequence, and 10 returned the final survey. Of the 14 who finished the sequence, 9 indicated on the mid-point survey that they were a person with trauma, 3 were unsure, and 1 was not.

The survey responses were globally positive, with ratings about features that were changed based on the prototype evaluation uniformly skewed to the positive end of the 10-point rating scale. Comments on questions about comfort and safety in the virtual class setting and about the relationship with the teacher and clinical partner were uniformly positive.

SUD scores monitored in real time by the nursing student were reassuring. On average, scores at the start of class across the seven weeks ranged from 2.1 to 3.5 out of 10. Queries about higher (outlier) scores yielded information from the students that the distress was from events in their day, not from the class. Average scores at the end of the class ranged from 1.5 to 3.4. Initially, the plan was to use the SUD scores only as a tool to measure safety in the beta test, but the learners liked having this tool; thus, the use of distress scores was incorporated in the curriculum itself as a "check-in". Developers also formalized in the manualization the requirement to gather referrals or at least resources because a few students in this pilot came to the attention of the teacher and clinical partner as having high levels of distress — *unrelated to the course* — that should not be ignored.

Students liked the relational tone and devices intended to signal the presence of supportive adults, including the letters, speech and thought bubbles, and first-person plural text. They liked the homework, class activities, and the project they completed. They especially liked the writing prompts in each section. The developers considered the beta test results to be affirming and carried the approach and design into the last three units (the beta test report to the funders is available from the corresponding author).

**Single-Team Peer Review Results.** Input from the initial peer review of the student materials without manualization was mixed. The main responses presented in the debriefing meeting with the co-developers were concerns that teachers would think they could do therapy, that students would be far too triggered by the information, and that the school mental health staff did not have time to support teachers to deliver the course. They agreed that the youth mental health crisis was real and that Tier 2 programs are needed, but they expressed that their already overwhelming role demands would not permit taking on a new responsibility, even if it would reach more students efficiently. They also viewed the relational tone of the writing and the end-of-book location of references as unprofessional. They deemed the material not to be evidence-based. Some members dissented from these views and requested a second debrief. They were not as concerned about teachers as interveners or students being triggered by content. They noted and agreed with the relational tone of the writing as a form of presence and support while students read, picking up on the authors' voice as a proxy for a supportive adult relationship. They did not have concerns about the theory or research basis of the material. They concurred that time to support teachers to deliver the course was not in their current use of time, but they favored implementing because they viewed a Tier 2 program to be needed.

The two additional peer reviewers engaged due to the unexpected feedback that the book's writing was unprofessional and not evidence based. They strongly disagreed with that feedback. Each independently remarked that the writing made the topic approachable and conveyed a sense of hopefulness and adult presence. From their expert standpoints, they had no concerns about the validity of the information presented, the theoretical underpinnings of the curriculum, or the decisions to use a journalistic approach to citing source material in the text and to place references and resources in a dedicated section at the end of the book.

Based on this combined peer review, no changes were made to the student book. It seemed that the novelty of *T&S* was at the root of many of the critiques and concerns that arose. The critiques, concerns and misunderstandings strongly informed the next step, which was to produce the manualization for the program.

**Producing the Manualized Components.** The goals in producing the manualized components were to meet U.S. National Institute of Health standards for promoting and monitoring fidelity (Bellg et al, 2004), to embed trauma-informed care principles (SAMHSA, 2014), to address the concerns raised in the single-team peer review, and to make processes like gathering referral resources, incorporating reflective supervision, and undertaking training as easy as possible. Fidelity to the *T&S* design is defined by four intervener behaviors: (1) teaching the content; (2) using the structure of the curriculum; (3) adhering to the process routine for classroom lessons or tutoring sessions; and (4) maintaining adult-youth relationship quality in terms of being learning-focused and trauma-informed and not straying into psychotherapy. The training, documents, and reflective supervision support content, structure, process, and relationship fidelity. A 20-minute Guided Tour video was produced to ease exploration by providing verbal explanations paired with images from the text and manualization.

The first step in implementation and training is to read the book. A Community-Based Learning Collaborative approach was used (Hanson et al., 2019) to include multiple stakeholders in "book groups" involving potential teachers/tutors, clinical partners, administrators, and parents or advisory board members. This process was manualized by providing a book group guide that leads the group through examining the whole program over five weeks and helps them consider logistics of implementation. Training workshops rest on the assumption that the tutors, teachers,

and clinical partners have qualifications to work with young people, know something about trauma-informed care, are part of trauma-responsive settings, and want to take on the role.

## Discussion

The *T&S* program is an evidence-informed innovation based on theory and produced to be appropriate and supportive for high school aged people with trauma. The three-stage PPI process used for developing the book, curriculum, and manualization enhances likelihood of smooth installation across settings and successful learning outcomes for students. The beta test indicated a positive profile for safety, feasibility, and acceptability. *T&S* is currently advancing in the process to become an evidence-based program via demonstration projects in a range of settings.

There are strengths and limitations to the *T&S* program itself, as currently designed. First, although many stakeholders acknowledge the need for Tier 2 programs, addressing trauma has not been a typical part of teacher or staff member roles in schools or youth-serving organizations. It will take early adopter organizations to lead the way in demonstration projects, monitor fidelity, be on the lookout for adverse events or unintended consequences, and provide feedback to the developers so iteration can occur as needed based on real-world use. Second, *T&S* is not meant to work as a stand-alone solution. Groundwork laid in organizations that have started using a Tier 1, universal trauma-informed approach and who have Tier 3 specialist treatment resources are those most likely to see benefit from adding this Tier 2 program. Third, organizations may clamor for a less resource-intensive program such as simple handouts or online modules. However, many of the youth who are not resilient after trauma exposure are those whose trauma happened in a relationship. Navigating relationships well is a vital life skill. Supportive, safe, growth-producing relationships play a vital role in trauma recovery. Thus the resources required to implement a program with a teacher/tutor and clinical partner that involves interactions to grapple with this learning is worth investing in.

Using a PPI process with the "target patient population" and stakeholders is a strength in intervention development. Although the PPI process was limited by somewhat small numbers of people being engaged, the three steps resulted in improvements. The beta-test and peer review processes were the most valuable. The beta testers were diverse in multiple characteristics salient to this program. The peer review group members were not selected by the developers; they were likely typical of county-level teams by virtue of differing roles, levels of experience in their jobs, familiarity with trauma, a sense of being stretched thin in their roles, and opinions about addressing trauma outside of specialist treatment settings. Ultimately *T&S* may not be viewed as desirable in all settings. Early adopter organizations will likely be uniquely equipped to pilot because they are experienced at a trauma-informed approach and want a tool with which to fill the gap at Tier 2.

The next step, demonstration projects in a range of settings with evaluation, is underway. After any revisions suggested by those projects, it will be vital to partner with research-capable organizations or academics who have capacity to conduct outcomes research. Measures exist to assess mental health literacy, including stigma and self-stigma (Docksey et al., 2022) and self-efficacy to seek treatment (Moore et al., 2015). Psychoeducation outcomes could be assessed by content-specific knowledge and self-efficacy measures. Self-report symptom checklists could be used to evaluate increased ability to manage symptoms. The Posttraumatic Stress Disorder Checklist (PCL-5), which is sensitive to change from intervention could be used for pre-to-post comparison (Weathers et al., 2013) and has been validated and used with adolescents (Ghazali & Chen, 2018). The Child PTSD Symptom Scale for DSM-5 (CPSS-5) is another option (Foa et al., 2017). However, for the elective course version, not all students who enroll are required to have a trauma history or any mental health condition. By design, the amount of the program used and the learning outcomes from homework, activities and projects are to be proximal outcomes and moderators or mediators of the distal outcomes. The eight positive life outcomes will not have been attained at the end of the learner's engagement. However, one of the capstone assignments in the fifth and final unit is a student self-assessment for how "on track" they are to achieve these outcomes. In psychiatric treatment settings, adherence to individual treatment and symptom reduction outcomes will be aligned with the purpose of *T&S*. In justice settings *T&S* may be best used as an alternative to community service or sentencing or as a re-entry support opportunity. Staff may set individual goals depending on the young person's risks, such as managing anger expression during triggered PTSD reactions or reduced self-medicating with substances. Youth aging out of foster care may benefit from putting their experience into context and gaining narrative self-understanding. In other words, *T&S* is flexible enough for organizations to set their own target outcomes that logically fit their clients and the mechanisms of mental health literacy and psychoeducation that *T&S* teaches.

The youth mental health crisis has stubborn roots in trauma. *T&S* offers progress on creating a multi-tiered system of supports that embodies a trauma-informed approach to addressing youth mental health across all three MTSS tiers.

## Acknowledgment

The authors would like to acknowledge the work on the patient and public involvement project of Elise Girardot, RN, BSN, Christine Gradert, MSW, Ben Layer PhD, Grace Nadler MSW, Hannah Schneider, MPH, Alissa Kersey, and Juna Hume Clark. We thank health teacher Rebecca Brent for developing the alignment with the Health Common Core.

## Funding

Funding was provided by the Ann Arbor Area Community Foundation, the United Way of Washtenaw County, and the Eastern Iowa Region Mental Health and Disability Services.

## Conflict of interest

The authors have no conflict of interest to disclose.

## References

Abram, K. M., Azores-Gococo, N. M., Emanuel, K. M., Aaby, D. A., Welty, L. J., Hershfield, J. A., Rosenbaum, M. S., & Teplin, L. A. (2017). Beyond detention: A 12-year longitudinal study of positive outcomes in delinquent youth. *JAMA Pediatrics*, *171*(2), 123-132. https://doi.org/10.1001/jamapediatrics.2016.3260

Alisic, E., Zalta, A. K., van Wesel, F., Larsen, S. E., Hafstad, G. S., Hassanpour, K., & Smid, G. E. (2014). Rates of post-traumatic stress disorder in trauma-exposed children and adolescents: Meta-analysis. *British Journal of Psychiatry*, *204*(5), 335-340. https://doi.org/10.1192/bjp.bp.113.131227

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). American Psychiatric Publishing.

Belivanaki, M., Ropi, S., Kanari, N., Tsiantis, J., & Kolaitis, G. (2017). Trauma and post-traumatic stress disorder among psychiatric inpatient children and adolescents. *European Journal of Psychotraumatology*, *8*(sup4), Article 1351161. https://doi.org/10.1080/20008198.2017.1351161

Bellg, A. J., Borrelli, B., Resnick, B., Hecht, J., Minicucci, D. S., Ory, M., Ogedegbe, G., Orwig, D., Ernst, D., & Czajkowski, S. (2004). Enhancing treatment fidelity in health behavior change studies: Best practices and recommendations from the NIH Behavior Change Consortium. *Health Psychology*, *23*(5), 443-451. https://doi.org/10.1037/0278-6133.23.5.443

Chiu, H. T., Alberici, A., Claxton, J., & Meiser-Stedman, R. (2023). The prevalence, latent structure and psychosocial and cognitive correlates of complex post-traumatic stress disorder in an adolescent community sample. *Journal of Affective Disorders*, *340*, 482-489. https://doi.org/10.1016/j.jad.2023.08.033

Cloitre, M., Koenen, K. C., Cohen, L. R., & Han, H. (2002). Skills training in affective and interpersonal regulation followed by exposure: A phase-based treatment for PTSD related to childhood abuse. *Journal of Consulting and Clinical Psychology*, *70*(5), 1067-1074. https://doi.org/10.1037//0022-006x.70.5.1067

Common Core. (2010, June 2). Common Core state standards for English language arts & literacy in history/social studies, science, and technical subjects. *Common Core*. https://learning.ccsso.org/wp-content/uploads/2022/11/ADA-Compliant-ELA-Standards.pdf

Dierkhising, C. B., Ko, S. J., Woods-Jaeger, B., Briggs, E. C., Lee, R., & Pynoos, R. S. (2013). Trauma histories among justice-involved youth: Findings from the National Child Traumatic Stress Network. *European Journal of Psychotraumatology*, *4*(1), 1-12. https://doi.org/10.3402/ejpt.v4i0.20274

Docksey, A. E., Gray, N. S., Davies, H. B., Simkiss, N., & Snowden, R. J. (2022). The stigma and self-stigma scales for attitudes to mental health problems: psychometric properties and its relationship to mental health problems and absenteeism. *Health Psychology Research*, *10*(2), Article 35630. https://doi.org/10.52965/001c.35630

Erickson, E. H. (1994). *Identity and the life cycle*. WW Norton.

Foa, E. B., Asnaani, A., Zang, Y., & Capaldi, S. (2017). Psychometrics of the child PTSD symptom scale for DSM-5 for trauma-exposed children and adolescents. *Journal of Clinical Child & Adolescent Psychology,* *47*(1), 38-46. https://doi.org/10.1080/15374416.2017.1350962

Ford, J. D. (2025). Juvenile justice and forensic settings: The TARGET approach. In M. A. Landolt, M. Cloitre, & U. Schnyder (eds), *Evidence-based treatments for trauma-related disorders in children and adolescents* (pp. 655-675). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-77215-3_25

Ford, J. D., & Russo, E. (2006). Trauma-focused, present-centered, emotional self-regulation approach to integrated treatment for posttraumatic stress and addiction: Trauma adaptive recovery group education and therapy (TARGET). *American Journal of Psychotherapy*, *60*(4), 335-355. https://doi.org/10.1176/appi.psychotherapy.2006.60.4.335

Ghazali, S. R., & Chen, Y. Y. (2018). Reliability, concurrent validity, and cutoff score of PTSD Checklist (PCL-5) for the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* among Malaysian adolescents. *Traumatology, 24*(4), 280-287. https://doi.org/10.1037/trm0000156

Greenhalgh, T., Hinton, L., Finlay, T., Macfarlane, A., Fahy, N., Clyde, B., & Chant, A. (2019). Frameworks for supporting patient and public involvement in research: Systematic review and co-design pilot. *Health Expectations, 22*(4), 785-801. https://doi.org/10.1111/hex.12888

Greeson, J. K., Briggs, E. C., Kisiel, C. L., Layne, C. M., Ake, G. S., Ko, S. J., Gerrity, E. T., Steinberg, A. M., Howard, M. L., Pynoos, R. S., & Fairbank, J. A. (2011). Complex trauma and mental health in children and adolescents placed in foster care: Findings from the National Child Traumatic Stress Network. *Child Welfare*, *90*(6), 91-108.

Gunaratnam, S., & Alisic, E. (2017). Epidemiology of trauma and trauma-related disorders in children and adolescents. In M. A. Landolt, M. Cloitre, & U. Schnyder (Eds.), *Evidence-based treatments for trauma related disorders in children and adolescents* (pp. 29-47). Springer International Publishing. https://doi.org/10.1007/978-3-319-46138-0_2

Hanson, R. F., Saunders, B. E., Ralston, E., Moreland, A. D., Peer, S. O., & Fitzgerald, M. M. (2019). Statewide implementation of child trauma-focused practices using the community-based learning collaborative model. *Psychological Services*, *16*(1), 170-181. https://doi.org/10.1037/ser0000319

Havens, J. F., Gudino, O. G., Biggs, E. A., Diamond, U. N., Weis, J. R., & Cloitre, M. (2012). Identification of trauma exposure and PTSD in adolescent psychiatric inpatients: An exploratory study. *Journal of Traumatic Stress*, *25*(2), 171-178. https://doi.org/10.1002/jts.21683

Hyland, P., Shevlin, M., & Brewin, C. R. (2023). The memory and identity theory of ICD-11 complex posttraumatic stress disorder. *Psychological Review*, *130*(4), 1044-1065. https://doi.org/10.1037/rev0000418

Lehigh University College of Education. (2020, August 28). Tier 2 supports. *Trauma-Responsive MTSS Toolkit.* https://sites.google.com/lehigh.edu/mtsstoolkit/tier-2-supports

Lynch, T. R., Trost, W. T., Salsman, N., & Linehan, M. M. (2007). Dialectical behavior therapy for borderline personality disorder. *Annual Review of Clinical Psychology*, *3*(1), 181-205. https://doi.org/10.1146/annurev.clinpsy.2.022305.095229

Macdonald, A., Danielson, C. K., Resnick, H. S., Saunders, B. E., & Kilpatrick, D. G. (2010). PTSD and comorbid disorders in a representative sample of adolescents: The risk associated with multiple exposures to potentially traumatic events. *Child Abuse & Neglect*, *34*(10), 773-783. https://doi.org/10.1016/j.chiabu.2010.03.006

Mansfield, R., Patalay, P., & Humphrey, N. (2020). A systematic literature review of existing conceptualisation and measurement of mental health literacy in adolescent research: current challenges and inconsistencies. *BMC Public Health*, *20(1)*, Article 607. https://doi.org/10.1186/s12889-020-08734-1

Moore, C. D., Schofield, C., van Rooyen, D. R., & Andersson, L. M. (2015). Development and preliminary validation of a scale to measure self-efficacy in seeking mental health care (SE-SMHC). *SpringerPlus*, *4*(1), Article 339. https://doi.org/10.1186/s40064-015-1109-1

Moore, S. A., Mayworm, A. M., Stein, R., Sharkey, J. D., & Dowdy, E. (2019). Languishing students: Linking complete mental health screening in schools to tier 2 intervention. *Journal of Applied School Psychology*, *35*(3), 257-289. https://doi.org/10.1080/15377903.2019.1577780

Morgan, D. L. (1993). Qualitative content analysis: a guide to paths not taken. *Qualitative Health Research, 3*(1), 112-121. https://doi.org/10.1177/104973239300300107

Palines, P. A., Rabbitt, A. L., Pan, A. Y., Nugent, M. L., & Ehrman, W. G. (2020). Comparing mental health disorders among sex trafficked children and three groups of youth at high-risk for trafficking: A dual retrospective cohort and scoping review. *Child Abuse & Neglect*, *100*, Article 104196. https://doi.org/10.1016/j.chiabu.2019.104196

Ridgard, T. J., Laracy, S. D., Dupaul, G. J., Shapiro, E. S., & Power, T. J. (2015). Trauma-informed care in schools: A social justice imperative. *Communique, 44*(2). https://www.nasponline.org/publications/periodicals/communique/issues/volume-44-issue-2/trauma-informed-care-in-schools-a-social-justice-imperative

Staniszewska, S., Brett, J., Simera, I., Seers, K., Mockford, C., Goodlad, S., Altman, D. G., Moher, D., Barber, R., Denegri, S., Entwistle, A., Littlejohns, P., Morris, C., Suleman, R., Thomas, V., & Tysall, C. (2017). GRIPP2 reporting checklists: Tools to improve reporting of patient and public involvement in research. *BMJ*, *358*, Article j3453. https://doi.org/10.1136/bmj.j3453

Substance Abuse and Mental Health Services Administration (SAMHSA). (2014, July). SAMHSA's concept of trauma and guidance for a trauma-informed approach (HHS Publication No. [SMA] 14-4884). *SAMHSA,* https://store.samhsa.gov/sites/default/files/sma14-4884.pdf

Weathers, F. W., Litz, B. T., Keane, T. M., Palmieri, P. A., Marx, B. P., & Schnurr, P. P. (2013). The PTSD Checklist for DSM-5 (PCL-5). *U.S. Department of Veterans Affairs.* https://www.ptsd.va.gov/

Wiggins, G., & McTighe, J. (2005). *Understanding by design* (2nd ed.). Assn. for Supervision & Curriculum Development.

Wolpe, J. (1969). *The practice of behavioral therapy.* Pergamon Press.

Wong, C. F., Clark, L. F., & Marlotte, L. (2016). The impact of specific and complex trauma on the mental health of homeless youth. *Journal of Interpersonal Violence*, *31*(5), 831-854. https://doi.org/10.1177/0886260514556770

World Health Organization. (2018). Complex posttraumatic stress disorder. *International Classification of Diseases 11th Revision*, https://icd.who.int/en/