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"Empowered and driven to help:" Learning about childhood trauma during preservice training

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ABSTRACT

Preservice trauma-focused training is one promising, yet presently understudied, opportunity to promote healing and wellbeing across child-serving fields. Additional research is needed to inform the implementation of trauma-focused learning within preservice training programs. While scholars offer theories regarding how to integrate trauma-focused learning, student perspectives remain virtually absent from the conversation. Student perspectives are essential for informing responsive and sustainable adoption. They are particularly relevant, given the unique nature of trauma-focused learning, the prevalence of trauma exposure, and the risks of adverse reactions (e.g., retraumatization). In this descriptive study, we qualitatively analyzed students' reflections on experiences engaging in trauma-focused learning activities in one course, using dissemination and implementation science frameworks. Findings highlight four learning activities and essential characteristics that promote healthy engagement, learning, and motivation to apply insights to future work with trauma-affected children. Implications for higher education are discussed.

Keywords: trauma, higher education, preservice training, trauma-informed teaching, early childhood

Trauma exposure is pervasive in the general population and is a well-established risk factor for psychopathology and a host of negative physical and psychosocial outcomes across the lifespan (Benjet et al., 2016). Fortunately, responsive child-serving professionals, such as teachers and counselors, can play a vital role in promoting healing and recovery in trauma-affected children (Alisic, 2012; Brunzell

et al., 2018; Wolpow et al., 2016;). Accordingly, in recent years, trauma-focused professional development efforts have burgeoned, especially within PK-12 education. Such interventions demonstrate promise for promoting warm and supportive adult-child relationships and mental health benefits for both adults and children (Wolpow et al., 2016). However, the implementation of trauma-focused learning opportunities before child-serving professionals enter the field remains scant (Ko et al., 2008). Such training is crucial for disrupting pervasive inequities in the quality of care that children receive across sectors and mitigating soaring rates of burnout and attrition among practitioners (Anderson et al., 2015; Rodger, 2020).

The longstanding absence of trauma-focused preservice training has poorly positioned novices to provide responsive care to children facing adversity, while also safeguarding their own mental health and wellbeing (Courtois & Gold, 2009; Miller & Flint-Stipp, 2019). A lack of evidence-based training may lead to serious negative implications for children (e.g., misclassification, mistreatment, and even iatrogenic effects, such as re-traumatization), as well as professionals (e.g., secondary traumatic stress, re-traumatization, burnout, low self-efficacy). These consequences dynamically interact to limit the aggregate impact of promising initiatives that are intended to increase professionals' trauma literacy and responsiveness in order to support trauma-affected children (Glasgow et al., 1999). Moreover, they perpetuate high levels of early-career attrition, which take an economic toll on fields, most notably education (McLean et al., 2020; Miller & Flint-Stipp, 2019; Gallant & Riley, 2014; Scheopner, 2010). Increased calls for and funding of related training initiatives across research, practice, and policy (e.g., The American Rescue Plan; Children's Mental Health Initiative; Project AWARE) are encouraging signs that traction will persist. Additional research will provide the needed evidence to inform the efficacy of emerging efforts, especially given the unique nature of the content (Carello & Butler, 2015; Carello & Thompson, 2021; Koller & Bertel, 2006).

Trauma-focused content is distinct from other content that is currently integrated into preservice training for child-serving professionals. Trauma-focused training traditionally addresses trauma theory and brain development, the range of potential effects of different traumatic events, children's potential trauma responses, how to communicate with other adults in a child's life, how to differentiate instruction, assignments, and assessment, how to help students understand, anticipate, and regulate their responses to triggers or trauma reminders, and how to manage self-care (Craig, 2016). Inherently sensitive, certain trauma-focused learning activities may jeopardize student engagement, learning, and wellbeing. For example, instructors are cautioned against indiscriminate use of audiovisual or written accounts of traumatic events (Cless, 2018; Kostouros, 2008). This recommendation is based on the established risks of adverse reactions when teaching and learning about trauma (Black, 2006; Carello & Butler, 2015; Cunningham, 2004). Additionally, there is a high probability that undergraduate students who plan to enter child-serving fields have trauma histories themselves (Bryce et al., 2021). As such, instructors are encouraged to exercise great intentionality and care in their approaches.

Despite calls for trauma-focused preservice training and the significance of student experiences in this context, the existing research on effective trauma-focused instruction remains sparse. It also overwhelmingly centers instructor perspectives of

student experiences. To date, empirical investigations of students' perspectives of trauma-focused learning activities have yet to be established. A richer understanding is imperative for informing the integration of trauma-focused learning in preservice training programs. Without them, well-intentioned efforts may actually cause harm, particularly to trauma survivors (e.g., trigger warnings, see Jones et al., 2020). Providing learning opportunities that are responsive to all needs is a central tenet of best teaching practices, and social justice aims in education (Connell, 2012) can promote future responsive practice with children and enhance professional wellbeing.

In the following section, the current literature is reviewed. First, the prevalence and potential consequences of trauma exposure for children and child-serving professionals is noted. Next, the case for implementing effective preservice trauma-focused training is discussed. Then, considerations for how to provide this training are reviewed. Finally, the present study, which focalizes student perspectives on engaging in trauma-focused learning activities is introduced. Taken together, this work may help advance theory and improve the implementation of preservice trauma-focused training.

LITERATURE REVIEW

For the purposes of this review, trauma is defined as encountering one or more adverse experiences that overwhelm an individual's capacity to effectively respond to developmental and environmental demands (Rice & Groves, 2005). Potentially traumatic events include witnessing or experiencing physical, psychological, or sexual abuse and neglect; violence at home, school, or in the community; and experiencing racism, war, terrorism, and medical trauma, among others (National Child Traumatic Stress Network [NCTSN], 2005).

Trauma Exposure is Ubiquitous and Consequential

Trauma exposure is a well-established risk factor for multiple psychological and physical health outcomes and can have substantial and enduring consequences for developmental trajectories across a host of domains (e.g. cognitive, social-emotional) when experienced in childhood (Finkelhor et al., 2005). To be clear, trauma is "an experience and not a disorder;" while children may experience negative outcomes, this is certainly not guaranteed (Danese, 2019, p. 244). Though potentially traumatic experiences differentially impact individuals, children under the age of five are at greater risk for both exposure to trauma and experiencing negative outcomes than adults (Lieberman & Knorr, 2007). Nationally representative studies of youth ages 2-17 suggest that, prior to the Covid-19 pandemic, roughly 68% have experienced at least one traumatic event; roughly 18% have experienced four or more events (Finkelhor et al., 2009; Copeland et al., 2007). Evidently, childhood trauma exposure has risen sharply in recent years, in association with the Covid-19 pandemic (Hillis et al., 2021).

Child-serving professionals are also likely to have histories of trauma exposure. Child-serving professions are those that are concerned with the welfare of children and address their physical, psychological, intellectual, and social-emotional

wellbeing (e.g., teaching, counseling, pediatrics). In one study, more than 70% of adults, in 24 countries across six continents, reported lifetime exposure to one or more of 29 potentially traumatic events; more than 30% reported exposure to four or more events (Benjet et al., 2016). Research suggests that high exposure rates are significantly more likely among child-serving professionals than those in other fields. For example, Bryce et al. (2021) found that adults who experienced adversities in childhood (e.g., parentification, family of origin dysfunction) were more inclined than those without such histories to seek careers in helping professions.

With supports that foster wellbeing and meaning-making (e.g., reflective supervision), careers that involve supporting trauma-affected children can be rewarding and even play an important role in adults' healing from early experiences (Savickas, 2013). Trauma histories can also be a great source of strength for providers, lending deeper insight and empathy, as well as commitment, to their practice (Bryce et al., 2021). However, opportunities to learn helpful frameworks for meaning-making and tools to support wellbeing while working with trauma-affected children are rarely provided before entering the field.

Implications of Inadequate Training for Wellbeing and Practice

Children

Traumatic experiences during early childhood quite literally get "under the skin", causing neurophysiological dysregulation that can lead to enduring adverse effects on physical, social and emotional, and cognitive functioning (NCTSN, 2005). Children's trauma responses often manifest in behaviors that can be perceived by adults as problematic or defiant (Wolpow et al., 2016). These may include hyperarousal and hypervigilance, characterized by exaggerated startle responses; avoidance and social withdrawal; aggression and irritability; and difficulties concentrating because of intrusive thoughts and recollections of trauma (Stirling & Jackson, 2008). While these behaviors serve the adaptive function of preparing children to face potential threats in their environment, they simultaneously impair their executive functioning and self-regulation, which are central to success and wellbeing, particularly in academic settings (Perfect et al., 2016).

Without adequate knowledge of trauma, child-serving professionals often lack the skills needed to recognize trauma manifestations and misattribute them to conduct. As a result, they often respond with punitive, instead of trauma-responsive, approaches. These may unwittingly re-traumatize children and trigger a self-sustaining cycle of disruption, further derailing children's developmental and academic trajectories (Anderson, et al., 2015; Jennings & Greenberg, 2009; McInerney & McKlindon, 2014). For example, in school settings, traumatized children are more likely to be labeled 'problem' or 'troubled' children or receive office referrals, suspensions, and expulsions (Burke et al., 2011). They are also three times more likely to drop out of school than their peers (Burke et al., 2011). Moreover, this phenomenon is inextricably linked to adults' racial biases and disproportionately impacts children of color, beginning as early as preschool (Alvarez, 2020; Casey et al., 2011). Collectively, these data underscore the imperative of providing

opportunities to learn how to recognize and respond to all children in ways that, at minimum, "do no harm" (Courtois & Gold, 2009, p. 12).

Child-serving professionals

Inadequate trauma-focused training not only undermines adults' capacities to provide responsive care to trauma-affected children, but also places them at risk for burnout, compassion fatigue, increased susceptibility to vicarious trauma, and secondary traumatic stress (Courtois & Gold, 2009; Sandilos et al., 2018). When overwhelmed and unsupported, practitioners are more likely to engage in maladaptive coping behaviors, such as substance use and chronic overeating, and can display similar posttraumatic reactions as the children with whom they work (Craig, 2016). Concerningly, novices may resist help-seeking due to concerns about how they may be perceived by their employers (Jenkins et al., 2009). The need for increased attention to this phenomenon through research and prevention efforts has been noted (Rodger et al., 2020). Fortunately, preservice trauma-focused training may help improve self-awareness and self-efficacy, build resilience, and buffer novices, in particular, from secondary traumatic stress and sequelae (Craig, 2016; Hazen et al., 2020; Jennings, 2019). Strengths-based, healing-centered psychoeducation and initial mental health training bolsters child-serving professionals' resilience as they encounter adversity in the field (Antonovsky, 2022) and can lead to more fulfilling careers (Brunzell et al., 2018).outcomes and can have substantial and enduring consequences for developmental

Preservice Trauma-focused Training is Needed and Desired

The past decade has seen calls from practitioners and researchers (e.g., the seminal paper by Courtois & Gold, 2009) and several government and professional agencies (e.g., Children's Equity Project, 2020; International Society for Traumatic Stress Studies [ISTSS], 2016; Substance Abuse and Mental Health Services Administration [SAMHSA], 2014) to better prepare child-serving workforces to adopt trauma-responsive approaches and balance personal wellbeing. Child-serving professionals also feel that increased mental health-focused learning and support before entering the field would be beneficial for both themselves and the children they seek to support (Capizzi & DaFonte, 2012; Reinke et al., 2011).

While ongoing, in-service professional learning and support is undoubtedly important, trauma-focused training may be most effective when implemented during initial preservice training. In-service professional developments are often isolated, superficial, and disjointed; researchers have found inconclusive results regarding their effectiveness (Choufleas et al., 2016). Further, becoming trauma-responsive requires perspective shifts that are essential for practitioners at the beginning of their career (Rodger et al., 2020). With professional ideologies still forming, preservice child-serving professionals are more receptive to new perspectives and hold more positive views of mental health initiatives than those already in the field (Bostock et al., 2011; Rodger et al., 2014). High-quality preservice training is also linked to increased self-efficacy and resilience. Self-efficacy is a key protective factor in

novice practitioner resilience (Beltman, et al., 2011). Importantly, self-efficacy has been linked to greater enactment of culturally responsive and inclusive practices (Mankin et al., 2018; Siwatu, 2011).

Research on the effects of traumatic experiences for children and adults, effective training practices, and increased funding initiatives have positioned the field of education to investigate methods to allocate resources and implement trauma-focused training effectively. However, preservice programs may feel that their curriculum is already saturated with content required for licensure (Hobbs et al., 2019). They may also view a lack of faculty expertise as a barrier to implementing mental health-focused training (Carello & Butler, 2021). Fortunately, powerful examples of inter- and intra-institutional collaboration and the integration of trauma-focused learning activities across existing classes in the curriculum are growing (Rodger et al., 2020). Institutions may, indeed, have purveyors eager to support this training and readily accessible evidence-based resources (e.g., NCTSN online modules; virtual or in-person guest speakers).

Current Recommendations for Trauma-focused Training

The content and delivery of trauma-focused activities are important to consider in order to promote applied trauma literacy. Craig (2016) posits that initial training should include specific attention to: foundational trauma theory and brain development; the range and effects of different traumatic events children's potential trauma responses; how to communicate and coordinate care with other adults in a child's life; how to differentiate approaches to care; how to help children understand, anticipate, and regulate their responses to trauma reminders; and how to safeguard their own professional wellbeing. The trauma-informed framework set forth by SAMHSA (2014) is also frequently referenced in trauma-focused training. It includes the four overarching principles (R's) of trauma-informed care, which states that professionals should be able to:

- realize the widespread impact of trauma;
- recognize the signs and symptoms of trauma;
- respond by fully integrating knowledge about trauma into policies, procedures, and practices; and
- resist re-traumatization (SAMHSA, 2014).

Six additional guideposts are central to trauma-informed care: safety, trustworthiness and transparency, collaboration and mutuality, empowerment, voice and choice, and resilience and strengths-based perspectives (SAMHSA, 2014).

Emerging evidence suggests that trauma-focused instruction, absent a trauma-informed pedagogical approach, is problematic. Unresponsive instruction may trigger adverse student reactions, such as secondary traumatic stress or re-traumatization, and undermine engagement and learning (Agllias, 2012; Cless, 2018; Kostouros, 2008). For example, in an examination of an undergraduate social work course on crisis intervention and interpersonal violence, Rhodes (2019) acknowledged the unfortunate irony that the principles of trauma-informed care discussed in coursework were not being applied in the very classrooms where it was taught – and to the detriment of students. Carello (2019) also identified potentially retraumatizing

situations during trauma-related coursework: those that involved classic triggering, secondary injury, high-stakes mistakes, and/or compound injury. While risk for and severity of student reactivity varies, trauma-responsive instructors can play a vital role in resisting further harm and promoting healing and healthy engagement. Instructor recommendations for effectively teaching about trauma are well-documented in the social work literature.

A trauma-informed approach to teaching about trauma centers on the same principles reviewed above: understanding the various impacts that trauma exposure may have on all involved in the learning process and using this knowledge to both actively resist re-traumatization or harm and maximize meaningful, responsive learning experiences (Carello & Butler, 2015; Harris & Fallot, 2001). It does not require instructors to become therapists who diagnose and treat learners using psychological interventions, but rather asks instructors to be informed about and sensitive to the potential impacts of trauma on learning and wellbeing and provide support responsive to the needs of trauma-affected learners (Harris & Fallot, 2004). In other words, instructors are encouraged to practice what they teach (Carello & Butler, 2015). This student-centered approach aligns with socially just and caring classroom communities and universal design for learning (Connell, 2012). A crucial first step in creating trauma-focused learning experiences that are responsive to the needs of preservice child-serving professionals is focalizing their perspectives.

Student Perspectives are Essential for Effective Implementation

Dissemination and implementation (D&I) science has generated theoretical perspectives that can inform efforts to implement trauma-informed pedagogy in higher education. These theories posit that individual perspectives should be attended to in implementation studies of mental and behavioral health innovation, as all individuals involved are active participants in implementation processes, rather than passive recipients (Chambers, 2014; Greenhalgh et al., 2004; Rogers, 1995). The seminal Model for Considering the Determinants of Diffusion, Dissemination, and Implementation of Innovations in Health Service Delivery and Organization (Greenhalgh et al., 2004) and the Theoretical Domains Framework (Michie et al., 2005) can serve as central frameworks when considering implementation barriers and facilitators for trauma-focused preservice training. Together, these frameworks suggest that successful implementation requires an understanding of social, cognitive, affective, and environmental influences on behavior in any given context. To this end, particular attention should be paid to the needs, motivation, values, goals, skills, and learning styles to ensure the desired outcome of effectively prepared trauma-responsive child-serving professionals.

Student perceptions play a significant role in empowering or constraining engagement in coursework and can affect learning outcomes (Shertzer & Schuh, 2004). In didactic courses, students who perceive course content as useful, helpful, interesting, and aligned with their goals may be more motivated and engaged than those who do not (Frymier & Shulman, 1995). In addition, ensuring the psychological wellbeing of students in these courses is imperative, especially for trauma survivors. Statistics on the pervasiveness of trauma exposure support the strong likelihood that

trauma survivors are students in these training programs. At least 67-84% of undergraduate students have trauma histories (Read et al., 2011) and may be at risk for re-traumatization following exposure to trauma-focused content (Cless, 2018). Students who identify as BIPOC, LGBTQ+, undocumented, low-SES, female, and veterans are disproportionately at risk for trauma exposure, undoubtedly making trauma sensitivity a matter of social justice and equity in higher education (Ackerman et al., 2009; Marx & Sloan, 2003; Norris & Sloan, 2007; Smyth et al., 2008).

Without deep consideration of students' experiences, well-intentioned practices may be implemented that are countertherapeutic. For example, trigger warnings, once widely theorized to support adult learners with trauma histories before reading trauma-focused material, were found in a recent randomized control trial to be not only ineffective, but also countertherapeutic. Trigger warnings increased survivors' beliefs in the centrality of their trauma to their identity, instead of buffering them against past trauma-related responses (Jones et al., 2020). While some degree of student reaction to trauma-focused material may be inevitable regardless of instructor intentionality (Cunningham, 2004), every effort must be made to understand and provide safe and effective learning environments.

The implementation of trauma-focused pedagogy is essential for narrowing the research-to-practice gap and supporting systematic efforts to scale up effective programs. Exploratory studies that assess fit and feasibility reveal crucial information that determines whether approaches will be adopted, yet are underutilized in the field (Metz et al., 2013). To address this, the present study attends to students' characteristics most proximal to the research questions, namely their learning preferences, knowledge and self-efficacy, environmental and social influences, affective experiences, professional values and goals, and motivation to enact trauma-responsive practices. Our goal was to determine whether the successful implementation of trauma-focused content into training programs may be facilitated or constrained by the degree to which course activities are responsive to students. Responsive training may promote conceptual and applied learning, which can translate into more effective practice and child outcomes. While empirically testing the theoretical model is beyond the scope of this paper, the descriptive investigation of student experiences is a warranted preliminary step.

METHODS

At a descriptive level, student perspectives on effective trauma-specific learning activities are important to establish and can motivate further lines of inquiry. A deeper understanding of students' experiences may advance an understanding about both the teaching and learning of trauma-related material in higher education. Practically, findings can offer programs an important starting point for reflecting and ascertaining pathways for implementing trauma-focused learning opportunities.

This study investigated preservice child-service professionals' reported experiences of trauma-focused learning activities in one elective course. Student affective experiences and reported motivations for applying principles of trauma-responsive care into their future practice were explored. The research questions included:

1. How do preservice child-serving professionals describe their experiences engaging in trauma-focused learning activities?
2. What affective experiences do they report related to these activities?
3. How do these relate to motivation to enact trauma-responsive practices in future work with children?

This qualitative study explored how preservice child-serving professionals described their experiences engaging in trauma-focused learning activities during a four-week elective course taken alongside two co-requisite courses in education and neuroscience. The elective course, itself, was not required as part of their pre-service training. This course was cross registered in the departments of education and psychology at a large public university in the Mid-Atlantic United States during the summers of 2018 and 2019. Course learning objectives can be found in Table 1. These objectives include being able to describe the impacts of traumatic stress on children, trauma symptomology and manifestations, resilience factors, and the importance of personal reflexivity (e.g., addressing biases) and cultural humility for equitable practice.

Table 1: Course Learning Objectives

Learning Objective [b]	TIC Principle(s)[a]
1. *Describe and be able to explain the specific impacts of stress caused by conflict, adversity, and trauma* on psychological functioning, emotion regulation capacity, and mental and physical health in the developmental period from a developmental perspective including the experience of children exposed to war, refugee status, and other stressors.	Realize; Recognize
2. *Identify and list the symptoms and signs of stress and trauma*, including diagnoses and syndromes secondary to stress and trauma, as exhibited by children through behavioral, emotional, and neurological signs.	Recognize
3. *Describe and explain resilience factors and evidence-based intervention approaches* that reduce and/or eliminate the consequences of conflict, adversity, stress and trauma in children and their families including regional and international efforts to support these individuals and their families	Recognize; Respond; Resist Re-traumatization
4. *Attain cultural competence* and understanding including reflection on one's own implicit bias, cultural sensitivity, and opportunity to experience interactions with individuals of other cultures who have experienced refugee and immigration status regionally and internationally	Recognize; Respond; Resist re-traumatization

Note. TIC = Trauma-informed Care. [a] Principles are listed in abbreviated form. In full, they are "Realize the widespread impact of trauma and understands potential paths for recovery; Recognize the signs and symptoms of trauma in clients, families, staff, and others involved with the system; Respond by fully integrating knowledge about trauma into policies, procedures, practices, and settings; Seek to actively resist re-traumatization" (SAMSHA, 2014).
[b] Objectives are listed as presented in the course syllabus. Italics were added for emphasis.

Course activities are detailed in Table 2.

Table 2: Focal Course Activities

Activity	Description
Brain Architecture Simulation	The Brain Architecture Game was developed as an educational activity for early education stakeholders through a partnership between the Harvard Center on the Developing Child and the University of Southern California's School of Cinematic Arts. A partnership between these centers, the University of Pittsburgh Clinical and Translational Science Institute, and the Frameworks Institute made this game accessible to the public. It is formatted as a tabletop board game that has groups of 4-6 participants construct "brains" with manipulatives (straws and weights) and then walk through different scenario cards, discussing and manipulating the brain in response to risk and protective factors in the environment. In this way, participants gain a hands-on understanding of how children's brains develop, get strengthened, derailed, and the role of society in these experiences. The game has since been translated into an online edition to allow for dissemination and implementation during the ongoing Covid-19 pandemic.
Role-playing	All participants experienced the activity in the tabletop board game format and were guided by master facilitator, Dr. Judy Cameron. Dr. Cameron also lectured from her own research and advocacy related to childhood trauma. Following the activity, the class engaged in reflection. During an instructor-arranged visit to the Refugee Council, the class learned about trauma-informed, culturally responsive mental health support for refugee children and asylum seekers. Two trainers and specialist therapists from the organization led the class through didactic and hands-on activities.
Site Visit	The role-playing activity drew on real-life examples from interventionists' practice to illustrate the impact of war, displacement, and asylum on children's mental health and wellbeing, through a culturally responsive lens. The class was split up into small groups, or "families", from different countries who would embark on resettlement journeys. Each person represented a different member of the family and was asked to embody their

	perspectives. Each "family" moved through scenarios they were given before, during, and after the resettlement process. Scenarios included language and communication challenges, mistrust, mistreatment, fear, loneliness, and homesickness, among other barriers to resettlement. Following the activity and visit, participants had the opportunity to engage in a class reflection. The instructors of the course arranged a class visit to a local refugee-serving organization, Casa San Jose Latino Immigrant Resource Center. The center supports the Latino community through a range of social, nutritional, educational, and mental health-focused programs. Immigrant children have opportunities to develop leadership skills, engage in civic and grassroots action, receive tutoring, and attend a recreational summer camp.
Guest Speakers	All participants attended and engaged in semi-structured activities (e.g., arts and crafts, free play, sports) with children at Casa San Jose. The visit lasted approximately two hours. Following the visit, the class had an opportunity to debrief and reflect. Throughout the course, individual speakers and panels of speakers shared their expertise with the class. Speakers included researchers, refugee and immigrant support specialists, historians, therapists and early childhood interventionists. Following each speaker, the class had an opportunity to reflect.

Table 3 details the course expectations listed in the syllabus that fostered a safe environment in which to share openly and honestly

Table 3: Class Norms as Stated in the Syllabus

Professional Behavior	"You are expected to demonstrate professional and courteous behavior during class, within Blackboard and in email communications. Such behaviors include listening quietly and attentively when others are speaking, communicating respectfully with others (especially if you disagree with someone's perspective or idea), using professional language, maintaining a professional demeanor, and maintaining anonymity and confidentiality of client and/or classmate information discussed in class" (Syllabus, p.3).
Statement on Classroom Recording	"To ensure the free and open discussion of ideas, students may not record classroom lectures, discussion and/or activities without the advance written permission of the instructor, and any such recording properly approved in advance can be used solely for the student's own private use" (Syllabus, p.5).

Participants

Following IRB approval, preservice child-serving professionals who completed this course in 2018 or 2019 were contacted by their former professor via email in the fall of 2020, by request of the first author. The email contained a recruitment flyer with key study information and a link to the online informed consent form.
A total of 22 participants submitted the online consent form; two were excluded due to incomplete submissions. The final analytic sample included 20 participants, comprising 15% sophomores, 35% juniors and 45% seniors. They identified as 85% women, 15% men, and 0% gender expansive. 100% expressed interest in a child-serving profession (e.g., teaching, social work). See Table 4.

Table 4: Demographic Characteristics

Characteristic	Full Sample	
	n	%
Gender Identity		
Woman	17	85
Man	3	15
Gender expansive	0	0
Year of Study		
Sophomore	3	15
Junior	7	35
Senior	10	45

Data Sources

Data were drawn from final written reflection assignments previously submitted as part of the course. Instructions specified that reflections should "include personal reflections and outcomes from experiences in the course" (Willford & Gallen, 2018, p.3). Please see Table 5 for additional details

Table 5: Reflective Journal Instructions

Assignment	Instructions as Stated in the Course Syllabus
Reflective Journal	"Students will complete journal entries reflecting on their ideas, thoughts, questions, connections between course content, etc. Students may also share personal experiences, feelings, and reactions to course content. Entries will be checked by the instructor. Journals will be graded for completion, content and quality" (Willford & Gallen, 2018, p.4).

Final Reflective Journal	"Students will be expected to document their experiences in this course using images and narratives collected over the four-week course duration. This content will be organized into a Final Presentation created in Power-Point presentation format. Students will develop slides that exhibit their experience and learning within the class. Domains will include personal reflections and outcomes from experiences in the course such as 1) trauma, 2) impact of war, 3) culture, 4) travel experiences, 5) and personal impact and growth. Quality will be evaluated/rated by the instructor via rubric" (Willford & Gallen, 2018, p.5).

Implications

A three-cycle qualitative coding process was employed by two doctoral students. Both coders identify as white and have professional and academic backgrounds in developmental psychology and education, with expertise in trauma studies. The strategy allowed for the identification of experiences with trauma-focused learning activities, an understanding of student affective experiences during these activities, and the ability to examine perceptual shifts and motivation to apply lessons to practice. During each cycle, the first and second authors independently coded and then discussed areas of convergence and divergence until consensus was reached. Aligned with best practice, consensus was determined by 85% intercoder reliability (Miles & Huberman, 1994).

Round 1: Data Reduction and Trauma-focused Learning Activities

First, a list of potential codes to indicate "learning activities" while reading course artifacts and reviewing prior literature was generated. Given the robustness of the data in the final reflective assignments, these were selected as the primary data source for our analyses. The first-cycle coding scheme employed descriptive coding techniques (Saldaña, 2013) to reduce the data into excerpts most relevant to the constructs of interest (i.e. course experiences). First-cycle coding was done in NVivo (version 12; QSR International, 2018) and yielded a total of 48 unique accounts. As trauma-focused learning activities are the subject of this study, only those that explicitly addressed content related to children's mental health, traumatology, and trauma-responsive practice were included.

Round 2: Affective Experiences

In the second cycle of coding, the excerpts coded as trauma-explicit learning activities were reviewed and descriptive coding strategy (Saldana, 2013) was used to identify affective experiences mentioned within these accounts was used. To ensure accuracy, the first author and second coder created a validation tool to confirm that coding designations were aligned with the language that participants used. This strategy involved generating a list of words and phrases that indicated positive and

negative affect within descriptors of experiences. Examples included adjectives (e.g., enjoyable), verbs (e.g., laughed), and nouns (e.g., concern). Twenty-two excerpts were identified in this round of coding.

Round 3: Motivation

Excerpts coded as affective experiences were reviewed and coded as indicators of perspective shifts and motivation to enact responsive practices. To ensure accuracy, a second validation tool that reflected perspective shifts and indicators of motivation was created. Examples of perspective shifts included transition words (e.g., then, now), verbs (e.g., learn, change, realize), and sentence structures (e.g., before this class; after hearing this). Examples of motivation included sentence structures and phrases (e.g., in the future; when I'm a professional), verbs (e.g., I will; I plan to). This yielded a total of 14 excerpts. After completing coding, memos were written about each excerpt which allowed for articulation of meta inferences and improved the insightfulness of the conclusions.

RESULTS

Trauma-focused Learning Activities

Meaningful learning was reported after engaging in four trauma-focused activities: a brain architecture simulation game, a role-playing activity, a site visit to a local refugee-serving organization, and a series of guest speaker visits. At least half of all participants chose to focalize these activities in their reflections.

Brain Architecture Simulation

The brain architecture simulation activity was based on a research-based neuroscience boardgame. During one class, small groups of students received manipulatives to construct a 'developing brain'. Groups adjusted their 'brains', reinforcing or weakening its structure, based on the scenario cards they received, and the risk and protective factors inherent in each (see Table 2). 56% of participants discussed the brain architecture simulation in their reflections. They described this activity as engaging and effective for learning about how risk and protective factors can affect the development of a young child's brain architecture. For example, one remarked that the activity was "simple, yet impactful…it gave us experiential evidence that helps us understand child mental health". Another said the activity "made it easy to understand how adverse experiences can affect developing brains," and that it "was fun, engaging, and helped [them] understand neuroplasticity […] on a more practical level." Another shared that the activity illuminated broader societal and systemic factors in brain development:

> [The game] drove home the idea that people with limited resources can have a hard time coming out extremely successful on the other end. [it] helped me better understand just how hard that is to do and how I must always try and remember that before I judge someone. […] That "lazy slob on welfare"

> turns into "that man who has been through a lot" and with that kind of compassion, we can try and help one another instead of degrading.

Finally, participants perceived this activity as relevant to their future work. For example, "[It] is relevant to my future in that I will be working with kids who have experienced past trauma, so it will be imperative for me to understand them and find them the right resources."

Role Playing

The role-playing activity involved embodying the perspectives of refugee families as they navigated various steps of the resettlement process (see Table 2). All scenarios were based on real families. Slightly over 50% of participants chose to write about the role-playing activity in their reflections. This activity gave one student "a better understanding of some of the challenges that families and refugee children face" and, for another it, "[showed] us that social support systems are vital for the mental health of refugee children." Commenting both on the effectiveness of the activity and its applications, one student reflected that it:

> Really put the language and cultural barrier into perspective for me […] It taught me about how important little things like body language and eye contact are […] I have now learnt to be more mindful of the communication process with others.

Site Visit

The class visited a regional refugee assistance center that provides social services and programs for Latino community. During this visit, the class engaged in semi-structured recreational time with Latino refugee children (see Table 2). 70% of participants chose to reflect on the site visit. This learning activity was described as "profound" by multiple respondents. One noted that spending time with refugee children helped them learn that "a simple attempt to connect on a basic level could make all the difference." Another reported learning about the power of resilience, saying, "[It] was one of the most eye-opening experiences for me. I learned many things […] Most importantly, I was able to observe resiliency in these children […]." This learning activity, too, was perceived as relevant to future work. As one shared:

> There is constant war and violence going on all around the world, so this will always be able to be applied [...] something as simple as the importance of play can really help. This is once again something I'd like to take into consideration during my career.

Guest Speakers

Individual and panels of expert researchers, clinicians, historians, and advocates visited throughout the course. They shared personal experiences and work around to childhood trauma, as well as opportunities for students to explore their related interests. 80% of participants reflected on their learning after hearing from a series of

guest speakers. Descriptors of this activity included "eye-opening" and "engaging." In one participant's words, "It was more interactive than listening to someone speak at us for hours." They expressed appreciation that "The lecturers also opened up the room to us [...] and discussed with us our thoughts, feelings, and interpretations of what we were learning." Some participants even reported being "captivated" and "left feeling filled with hope that there are people working to help the future of child development and early intervention."

Participants noted effective characteristics and actions of guest speakers in their reflections. They described speakers as "amazing," "extremely knowledgeable," "interesting", "refreshingly self-aware," "animated and cheery [...] enthused us way more than I expected," and that their "passion and interest were infectious." Specific features mentioned included: "...explained every topic with unique analogies and emphasized the child's way of thinking," "used many activities to drive home her points," and "shared personal experiences working with patients with trauma therapies that we had learned about in class."

Finally, themes of perceived relevance and utility of this learning activity emerged. For example, one shared that the content "really connected with my own personal experiences." Others reflected on the utility of the activity, saying, "If anyone I know goes through a traumatic event, I will be better equipped to help" and "I feel that this is significant content that I will use in my future in social work when working with trauma-exposed children."

Affective Experiences

Positive Affect

Preservice child-serving professionals overwhelmingly described positive affective experiences engaging in trauma-focused learning. Descriptors of activities included "gratifying," "fun," "mind-blowing," "enjoyable," and "reassuring." Positive affect was further demonstrated in enthusiastic excerpts such as "I can't stop telling my friends" and "had a lasting impact on me. It is something that I have told my parents, bosses, and friends about."

Positive affective experiences related to both the nature of activities (e.g., "astonished at how the nature of trauma […] could be taught just from playing this game;" "I really enjoyed the hands-on experience."), as well as the powerful messages they received from them (e.g., "gave me hope that I can make a difference [...] made me realize my past adversities don't have to negatively impact my future."), and the facilitators of the activities (e.g., "I really enjoyed what we learned and the people we learned it from."). Positive affect extended to thoughts about future work, as well. For example, "[...] I feel empowered and driven to help not only refugees but also trauma victims."

Negative Affect

Contrary to adverse student reactions documented in the literature, we identified only two accounts of negative affective experiences in the data. During the site visit,

one student learned that refugee children were hesitant due to fears about Immigration and Customs Enforcement (ICE). She recounted:

> We were there for almost 45 minutes yet none of the families […] showed up. That's when we [learned from staff] that their reason for not coming was because they might be afraid of ICE. […] I could tell that [the children] were very hesitant at first. [...] It hurt to see that the kids have to be aware of their surroundings out of fear. Children should go to school and have fun. They shouldn't have to worry about their safety. Playing with children was so much fun. I learned that we should never judge individuals based on their background.

While realities prompted discomfort, this student experienced deeper empathy and still expressed positive experiences and powerful takeaways from the visit.

The second negative affective experience aligned more closely with the psychological toll discussed in extant literature. The participant reflected on the nature of trauma-focused learning, saying, "The first half of the class was challenging. Not only was I spread thin because of the workload but the material was extremely heavy." She also described the growth she experienced:

> I learned a lot about myself through this challenge. I am very fortunate that I have a therapist who I see regularly [...] I am proud of myself for seeking healing through my support system, nature, and exercise [...] I am very grateful to have had this opportunity to learn and connect more with myself.

Trauma-focused learning, paired with meaningful support, helped promote not only academic learning, but also self-awareness, self-efficacy, and gratitude.

Perspective Shifts and Motivations

Preservice child-serving professionals discussed perspective shifts as a result of learning experiences and identified implications for applying lessons learned to their future teaching. For example, one student said that a guest speaker "helped me better understand insecure attachment and led me to be able to fix the problem, not the child." Students also discussed how activities, in this case, a guest speaker visit, motivated them to broaden their awareness of children's ecological contexts. One wrote, "I now see that it is important to look beyond the immediate effects. In the future, I will expand my view and examine how interactions, specifically attachment interactions, can affect generations." Another perspective shift related to new insights about working with different populations. For example,

> [The site visit] changed how I look at my interactions with people from other communities. […] Moving forward I will be more understanding and try to break down the barriers […] find the similarities with groups I used to label as having nothing in common.

Finally, one student concluded,

> I think having these experiences are crucial to shaping our view of refugee and immigrant families. This can […] eliminate biases […] I will use this to teach others [...] to be kind and understanding of another person's background and story and strengths.

Perspective shifts that participants mentioned were also broader in nature. For example, after engaging in the role-playing scenario around the refugee experience, one said, "the simulation showed me not to judge cultural values because they are different than mine and not to try to change their ways to fit what I see as right."

Finally, participants noted crucial new insights about sustaining their future efforts in the field. For example,

> Before, I had never considered the implications of working with traumatized or neglected populations every day. I now see how important taking care of yourself is. It is crucial that you are in a good state of mind before you can begin to help others.

Another discussed how the course instructors and a guest speaker helped them understand professional risk and resilience when working with trauma-affected children. They remarked,

> These are very heavy stories [...], so hearing how openly they talked about seeking help made [it] seem slightly less impossible. Having a realistic idea about how much goes into taking care of these children's mental health is crucial if we want to be happy in our fields [...] I will make sure that I make my own mental health a priority.

Similarly, another mentioned honoring incremental change and prioritizing one's mental health when challenges feel daunting:

> I'm slowly trying to alter my mentality that it's okay that this field seems so impossible to make a difference in. Small positive changes in these children's lives should be seen as huge victories and professionals in the field shouldn't look at baby steps as a negative thing. This kind of mindset will not only help in my future career, but my own mental health as well.

These reflections highlight the critical insights and perspective shifts gained through these activities that will support them, and the children they will work with, immensely.

DISCUSSION

Student accounts overwhelmingly indicated positive affective experiences during, and knowledge and perspective shifts after, engaging in four primary trauma-focused learning activities. Such findings suggest that healthy engagement and meaningful learning are indeed feasible during preservice training. In addition to expressions of knowledge gained, students reported that activities provided novel opportunities to gain insights about themselves and the world around them that helped them interrogate and diminish their biases. Perspective shifts, critical reflection, self-

discovery, empowerment, and motivation to support others clearly emerged in the data as outcomes of these activities. Finally, students reported new insights about the importance of self-awareness and wellbeing when engaging in work with trauma-affected children. Importantly, student trauma survivors had the opportunity to make meaning from and identify the strengths in their positions to support similarly affected children. This is both encouraging and consistent with theoretical literature that posits effective trauma-focused learning helps safeguard professional wellbeing (e.g., Cunningham, 2004). Importantly, our findings begin to address the call that García-Martínez and colleagues (2022) make for more research to inform effective preservice training around psychosocial factors that impact mental health and can promote resilience.

Across all activities, student accounts substantiated features theorized in the literature to promote positive training outcomes. Content was perceived as personally and professionally relevant, and the methods of instruction aligned with trauma-responsive approaches. For example, students were given explicit opportunities to process their emotions related to the content, and to have their reactions validated and normalized. Instructors selected all material and methods intentionally (i.e., avoiding overexposure to graphic details, building off cases presently covered in the media, like the family separation at the border between the United States and Mexico, and heightened anti-immigrant climate after the 2016 election). Instructors also modeled strengths-based perspectives, encouraged collaboration through group learning activities, and endorsed help-seeking and self- and community care to manage the impacts of trauma work, even with personal examples. Aligned with Stress Inoculation Theory (Meichenbaum & Fitzpatrick, 1993), students appeared to benefit far more than not from exposure to trauma-focused material ahead of encountering it in the field.

These features of the instructional content and methods were particularly important as trauma survivors were present in this class. While students were not asked at any point to disclose their trauma histories, over one-third of the sample (n = 7) volunteered personal connections in their final reflections. Encouragingly, adverse reactions to trauma-focused activities did not emerge across student accounts of their affective experiences, save the instances detailed in the previous section. While the absence of more reports cannot be mistaken as evidence that they were not experienced, the fact that they were proportionally quite small (10%; n = 2) may suggest that careful instructor intention and meaningful learning activities minimize the likelihood of harm for trauma survivors. This corroborates prior findings that adverse student reactions may be inevitable but can also be reduced and constructively addressed by instructors (Cunningham, 2004; Black, 2006).

Finally, the Covid-19 pandemic has underscored the imperative of providing trauma-focused support for child-serving professionals. Worldwide, conservative estimates suggest that millions of children lost at least one caregiver within the first 14 months of the pandemic; over one million of these children were orphaned as a result (Hillis et al., 2021). Nationally, as of June 30, 2021, more than 140,000 children lost caregivers from Covid-19; nearly three quarters of these children were under the age of 13. These figures do not account for additional the host of other political and pandemic-related potentially traumatic experiences. Population data can also obscure

current and longstanding racial disparities in trauma exposure and support. A deeper look clearly reveals how the events of recent years have "magnified the pre-pandemic fault lines" of inequity in American society (Seedat, 2021, p.1062).

Hillis et al. (2021) found that minoritized children have 1.1 to 4.5 times the risk of white children of losing a parent from the pandemic. Another study found that, compared to white children, Black and Hispanic children were two-to-three times more likely, and Native American children were almost four times more likely, to be bereaved as a result of the pandemic (Treglia et al., 2021). Every child-serving professional will encounter trauma-affected children, and BIPOC children may be disproportionately represented among them. As Alvarez (2020) notes, "Trauma may be one of the most under-explored racial equity issues" (p. 31). These realities must be centered in all future trauma-specific training efforts.

Implications for Higher Education

Teaching and learning about trauma will remain a uniquely challenging—and crucial—endeavor for this generation. Our findings, which confirm and extend prior literature, suggest that institutions of higher education with training programs for child-serving professionals can play a significant role in effectively and ethically promoting conceptual and applied trauma literacy. Intentionally designed and adopted trauma-focused learning activities can engender novices to adopt equity-minded, trauma-responsive perspectives, skills, and practices that lead to cascades of resilience across the education ecosystem.

More exploratory studies are needed to understand how to best collaborate to meet child-serving professionals where they are (Halle et al., 2013). For example, a program may investigate the needs and perspectives of each training cohort through an anonymous enrollment survey effort. Similar to this study, artifacts from prior courses that capture student perspectives could also be retrospectively analyzed. It is also important to understand the program's current trauma-responsive culture and practices by using departmental and faculty self-assessments (Carello, 2020).

Trauma-focused discourse must be situated within a racialization framework and disrupt deficit beliefs and white-dominated notions of mental health (Alvarez, 2020). As such, it is essential that institutions of higher education provide professional learning support to instructors that are hesitant or unprepared to engage in anti-racist pedagogy (Carter Andrews et al., 2018). Further, steps should be made to mitigate instructor secondary traumatic stress and institutional support should be made abundant (O'Halloran & O'Halloran, 2001).

Many preservice training programs have limited time and resources to devote to new training initiatives. Fortunately, integrating trauma-focused learning into the curriculum does not necessarily require creating a new course or having departmental experts on staff. Scholars even argue that it may benefit preservice child-serving professionals to "see their instructors struggle with sometimes not knowing all the answers to tough questions about the world and, as a practice, become more aware of their own precarity" (Carter Andrews et al., 2018, p. 206). In addition, as with the activities we discuss, external resources may be utilized to great effect. Investments

in cross-departmental and community collaborations may be mutually enriching and can advance justice orientations in learning spaces (Carter Andrews et al., 2018).

Limitations

While this study presents many strengths, a number of limitations warrant discussion. First, the analytic design relied on one secondary data source from two cohorts of preservice child-serving professionals who self-selected into this four-week course. It is possible that their responses to the reflective assignments may have been impacted by social desirability bias. Additionally, the sample size was modest. A larger sample may have allowed for the collection and analysis of other participant factors necessary for fully understanding experiences, which we did not incorporate in this study due to confidentiality concerns. There may be meaningful differences in perspectives among preservice child-serving professionals who hold a range of intersectional identities such as race/ethnicity, gender identity, sexual orientation, socioeconomic status, citizenship status, trauma history, because of the associations with increased risk for trauma exposure among those with minoritized identities (Alvarez, 2020).

Further, the data were aggregated for all preservice child-serving professionals in this study, which may have concealed distinctions across those enrolled in different types of undergraduate training programs; those preparing for careers in teaching, pediatrics, social work, or other fields may vary in their perspectives of trauma-focused learning activities, such as relevance and utility, based on their training and professional goals. Additionally, the cross-sectional nature of this study limits the ability to speculate about growth trajectories; it similarly cannot be determined how the reported perspective shifts and knowledge gained will persist or be applied to practice.

Finally, the timing of this study may also be considered a limitation. The learning experiences and reflections analyzed occurred in the summers of 2018 and 2019, prior to the Covid-19 pandemic. It may be that preservice child-serving professionals entering the field in 2020 and after may experience trauma-focused learning activities differently than prior cohorts.

Future Directions

In future studies, multiple reporters and data sources should be used to strengthen results by reducing potential for single-reporter bias. Longitudinal designs may also lend insight into the duration or fadeout of any potential training effects, as well as mediators and moderators thereof.

Future research should also consider the perspectives and experiences of other stakeholders in training and implementation processes (Aarons et al., 2012). This may be particularly relevant as different types of child-serving professional training programs embark on this; research will likewise need to investigate varied approaches in methods and timing of integrated trauma-focused activities. Relatedly, future implementation research should attend to instructor- and other classroom-level factors. Our data begin to shed light on instructor characteristics and activity features

that are favorable to learning and application; however, more focused analyses, for example, examining the potential moderating role of instructor-student racial congruence, or experiences that could be considered neither positive nor negative, are needed moving forward. Finally, research should adopt strengths-based approaches to understanding the unique experiences of trauma-affected preservice child-serving professionals.

There is substantial room for exploration in this emerging research area. This study represents a small yet vital preliminary step in a line of larger needed studies in this area. We encourage future studies using multiple training sites and across other types of training programs for those preparing to work with children.

Conclusions

The current study begins to fill important gaps in the trauma education literature by examining the perspectives of preservice child-serving professionals regarding trauma-focused learning activities. Overall, participants reported numerous benefits (e.g., increased knowledge, perspective shifts) from engaging in intentionally designed and delivered small-group and whole-class activities. While discomfort could not be wholly avoided, guided opportunities to reflect in a psychologically safe class environment reportedly contributed to learning, growth, and motivation. These opportunities were particularly empowering for those who disclosed personal trauma histories. Additional research is needed to consider effective ways to offer preservice trauma-focused training for child-serving professionals who hold a variety of identities and experiences through a strengths-based lens. Investments in this research may be a promising pathway to promote more equitable, responsive practice and increase the wellbeing of children and professionals.

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