Screening Children for Adverse and Positive Childhood Experiences in Primary Care

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KEYWORDS

• Adverse childhood experiences • Children • Positive childhood experiences • Primary care • Screening • Trauma • Traumatic stress • Trauma-informed care

KEY POINTS

- Screening for trauma, traumatic stress, and positive childhood experiences (PCEs) in primary care can be a practical and important strategy for addressing childhood trauma.
- For optimal individual and clinical utility, adverse childhood experiences, and trauma screening need also to screen for symptoms of traumatic stress.
- PCEs appear to protect from and help with negative trauma responses but have not been protocolized for primary care screening.
- Trauma and traumatic stress screening in primary care needs to extend beyond tool selection to physician training and support, trauma-informed response protocols, referral pathways, and family engagement.

INTRODUCTION

Childhood trauma is unfortunately, an all-too-common experience for children in the United States. The Substance Abuse and Mental Health Services Administration (SAMHSA) reports that over 65% of children experience 1 traumatic event by the age of 16.[1] Childhood trauma can result from adverse childhood experiences (ACEs), which broadly encompass childhood abuse and household dysfunction in childhood. Various studies have demonstrated a link between childhood trauma and adverse health

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Abbreviations	
AAP	American Academy of Pediatrics
ACE	adverse childhood experience
APCTSS	Adolescent Primary Care Traumatic Stress Screen
BCE	Benevolent Childhood Experience
BRFSS	Behavioral Risk Factor Surveillance Surveys
CD-RISC	Connor-Davidson Resilience Scale
CPM-PTS	Care Process Model for Pediatric Posttraumatic Stress
CYRM	Child Youth and Resilience Measure
HOPE	Health Outcomes from Positive Experience
NCTSN	National Child Traumatic Stress Network
PCE	positive childhood experience
PTSD	Posttraumatic Stress Disorder
PTSST	Pediatric Traumatic Stress Screening Tool
RI-5-VBF	Reaction Index for DSM-5-Very Brief Form
SAMHSA	Substance Abuse and Mental Health Services Administration
SEEK	Safe Environment for Every Kid
TIC	trauma-informed care
YCHC	Young Children's Health Center

outcomes in adulthood.[2–4] These studies have also indicated that traumatic experiences in childhood affect development on physical, cognitive, social, and emotional levels.[2–5] Fortunately, positive childhood experiences (PCEs) have been found to have a buffering effect on child well-being or post-trauma recovery[6–10] and a number of trauma-specific psychotherapies have been shown to be more effective than no treatment or treatment as usual therapies in alleviating post-trauma safety concerns and symptoms.[11–16] However, trauma and traumatic stress are currently underdetected or misdiagnosed, leaving many children untreated for traumatic stress or mis-treated following a care pathway for an incorrect diagnosis. With their predictable contact and rapport with families, pediatricians, and pediatric care teams have great potential for promoting trauma resilience, including PCEs, and identifying and responding early to childhood trauma and traumatic stress.[17–22]

There have been multiple calls, including from the American Academy of Pediatrics (AAP), for pediatric physicians to standardly address child trauma and traumatic stress, as well as to align pediatric practice, organizations, and systems with tenants of *trauma-informed care* (TIC).[18–23] TIC is a universal framework, which can be delivered within any organization, including pediatric primary care.[21] SAMHSA defines TIC as encompassing the 4 R's: *realizing, recognizing, responding,* and *resisting re-traumatization*.[24] The framework guides pediatric providers to *realize* the impact of trauma, *recognize* signs and symptoms of trauma in those interacting within their health care system, *respond* accordingly, and resist *re-traumatization*. Practically, the TIC approach enables clinicians and care teams to implement strategies to identify, respond, prevent, and help children recover from traumatic experiences.

This type of response often includes pediatric providers serving as a gateway to trauma-focused mental health supports through systematic screening processes.[17,19,25–29] Though studies have demonstrated the feasibility and acceptability of trauma screening in pediatric health care settings,[30–35] screening can pose implementation challenges, including time pressures and how the providers are able to utilize the information. A newer challenge in this literature is integrating what is now known about PCEs[36] and how screening for both positive and negative childhood experiences may be complimentary. This article provides an overview of practical screening measures for both trauma exposure and posttraumatic stress alongside

PCEs that can be utilized by pediatric providers. We first discuss the history of trauma screening in primary care, provide brief descriptions of screening tools for primary care practice, and end with clinical, training, and research implications.

TRAUMA AND POSITIVE CHILDHOOD EXPERIENCES SCREENING IN HEALTHCARE

Trauma screening gained the interest of the health care system after the seminal ACE study showed a link between ACEs and poor health outcomes spanning into adulthood.[2,3] The original ACE study involved adults retrospectively reporting on whether they had experienced any of 10 specific adverse events in their childhood. These 10 events include experiences that are consistent with medical and mental health definitions of potentially traumatic events (eg, child physical abuse, sexual abuse, and witnessing domestic violence) whereas others can be considered stressful and upsetting (eg, divorce, school bullying, and food insecurity), but would not consistently meet definitions of trauma exposure outlined in ICD-11 or the DSM-5. Following the initial ACEs research, many states have integrated ACE questions into their Behavioral Risk Factor Surveillance Surveys (BRFSS), providing population level data on the prevalence of ACEs. California's Surgeon General implemented a statewide effort to screen for ACEs in primary care settings. Beginning in 2020, Medi-Cal providers were reimbursed for conducting ACE screenings. This public health initiative is known as ACEs Aware. It includes provider training on ACEs, screening tools, and TIC.

ACES Aware has been instrumental in promoting the necessity of intervening upon the impact of childhood trauma. However, as a clinical tool, ACEs screening has limitations.[37–40] Statements by the National Child Traumatic Stress Network (NCTSN)[41] and the AAP[42] have cautioned the clinical or individual use of ACE screening, and recommended that trauma screening more optimally identifies traumatic stress symptoms, or how the trauma was experienced and what impact the trauma had. Therefore, the subsequent screening tools described in this review address both traumatic experiences and traumatic stress symptoms. However, more information can be accessed about ACE screening via a number of research publications[40,43] and the ACEs Aware website (www.acesaware.org).

Another strategy to counter the developmental impact of childhood trauma is the promotion of PCEs.[36] PCEs encompass supportive relationships, safe and stable environments, and constructive social engagement both internal and external to home environments. PCEs have been suggested to promote resiliency and improve mental and general health outcomes.[8,44,45] Research suggests that PCEs may contribute to adaptation following traumatic experiences and improve outcomes via this pathway,[44,45] but PCEs have also been found to positively influence mental health outcomes independent of ACEs.[8,9] PCEs may protect against childhood adversity[10] and its long-term effects.[46] Screening for traumatic stress and PCEs simultaneously may allow for increased risk identification and provides various opportunities for both prevention and intervention.

While the impact of PCEs is supported by literature, screening for PCEs is less evolved when compared to screening for trauma. In recent years, questions regarding PCEs have been added to the BRFSS in various states and the National Survey of Children's Health. Few studies have assessed the psychometrics and limitations associated with screening for PCEs and more research in this area will be needed in the continued development of screening tools. Similarly, practical application of these tools into practice settings or within trauma-informed systems is limited, yet potentially valuable in primary care. The PCEs approach is a strengths-based approach that

supports family engagement, builds on youth and family resilience, and buffers youth and families from trauma and negative outcomes.

PRACTICAL SCREENING TOOLS FOR PRIMARY CARE

In the next section, we briefly summarize screening measures for (1) both traumatic exposure and stress that have 15 or fewer items and have already been utilized within pediatric primary care settings and (2) in the case of PCEs, have the potential to be implemented in this setting.

An electronic search of publications was performed using Web of Science, Scopus, PubMed, APA PsycInfo and PsycArticles, Health and Psychosocial Instruments. Additionally, gray literature searching was completed to discover any supplementary resources in the review of screening options. Literature searches were not limited by date or language and keyword searching used concepts of children/adolescent, trauma diagnosis or identification, and PCEs or protective factors.

TRAUMA EXPOSURE AND TRAUMATIC STRESS SCREENING OPTIONS

Abbreviated Posttraumatic Stress Disorder Checklist-Civilian, 2 Item Version

While developed and mostly tested with adult patients,[47–49] the Abbreviated Posttraumatic Stress Disorder Checklist-Civilian, 2-item version (PCL-C2) has been applied, concurrent to a battery of other common mental health screening tools, with youth referred for brief, integrated mental health services within primary care.[29] The PCL-C2 asks how often 2 symptoms of traumatic stress have been bothersome in the past month. Selwyn and colleagues used scoring to delineate the likelihood of Posttraumatic Stress Disorder (PTSD) across unlikely, possible, and likely categories, and to identify adolescents to refer for further PTSD evaluation.[29]

Adolescent Primary Care Traumatic Stress Screen

The Adolescent Primary Care Traumatic Stress Screen (APCTSS) was developed by trauma clinicians at Boston Medical Center's for use in primary care.[34] The APCTSS adapts and combines the validated 31-item University of California at Los Angeles (UCLA) PTSD Reaction Index for DSM-5 (UCLA-RI-5)[50–53] for children and adolescents with the 5-item adult Primary Care PTSD Screen for DSM-5 (PC-PTSD-5); after a brief prompt that *sometimes people have scary, violent, or upsetting experiences where someone could have been badly hurt or killed*, it lists 5 yes/no screening items for traumatic stress symptoms.[54] Validity and reliability testing indicated internal consistency, good concurrent and discriminant validity, and good sensitivity and specificity in identifying adolescents (13 – 22 year old) at high risk for traumatic stress symptoms.[34]

Child Trauma Screen

The Child Trauma Screen (CTS) includes 4 items related to trauma exposure and 6 items related to posttraumatic symptoms in children of ages 6 to 17. The screener is meant to be incorporated into various health care settings and is not intended as a comprehensive assessment tool. It can be administered via in-person interviews or self-report. Cut-off scores are provided to guide clinical decision-making for further assessment and trauma-related care. It has been validated in pediatric primary care settings and has been reliable in identifying children with PTSD symptoms.[33] Previous literature on the CTS includes developmental and validation studies, showing the reliability of the CTS in a pediatric primary care setting.[33,55,56]

Trauma Surveillance Questions

As part of a quality improvement project to address traumatic stress at a pediatric primary care clinic serving low-income and minority families, the University of New Mexico's Young Children's Health Center (YCHC) implemented a clinic-wide trauma-informed procedure for screening and providing support to families for traumatic stress.[35] They used A Safe Environment for Every Kid (SEEK), a 20-item parent report screener about trauma exposure, parental mental health, family and home safety, and access to resources.[57] Then to engage families in a discussion of trauma and stressors, they asked 3 trauma surveillance and 2 triage questions during each well-child visit as a follow-up to the SEEK questionnaire. The questions addressed the occurrence and impact of major stressful and positive events. The triage questions asked the family to rate their concern and desire for help to help determine the necessity and priority of behavioral health referrals.[35] Across quality improvement cycles, the YCHC found that they increased the identification and referral of families to behavioral health for traumatic stress.[35]

UCLA Posttraumatic Stress Disorder Reaction Index for DSM-5-Very Brief Form

The UCLA PTSD Reaction Index for DSM-5-Very Brief Form (RI-5-VBF) with 4-items was developed and validated to be used with children 7 to 18 year old in settings requiring rapid and efficient screening.[58,59] After a brief prompt that people can have problems after bad things happen and instructions to rate how often the problem has happened in the past month, the RI-5-VBF lists 4 symptoms questions derived from the full UCLA PTSD RI-5.[50–53] Reliability and internal consistency of the RI-5-VBF was acceptable with high sensitivity and specificity for diagnostic accuracy[58] among youth seeking support at an academic medical center clinic or bereavement center.

UCLA Brief Screen

The UCLA Brief Screen[60] was developed to provide a validated, shorter version of the full measure, the UCLA Child/Adolescent PTSD Reaction Index.[50–53] Children ages 7 and up can complete the self-report form or interview. The measure consists of 13 questions total: 2 open-ended trauma exposure questions and 11 posttraumatic stress symptom questions, whereas the full version of the measure includes 48 total items addressing the child's trauma history, past month posttraumatic stress symptoms, and functional impairment and distress.

The UCLA Brief Screen provides a time-sensitive option for practice settings, which see many children in a short period of time and do not have a mental health provider with the ability to utilize the full version. Past research demonstrates that the measure is feasible to use in pediatric primary care settings and potentially more effective than depression screening alone at identifying mental health symptoms associated with trauma.[31] Adapted versions of the UCLA Brief Screen have successfully identified unmet needs specific to children with special health care needs and shown effectiveness at combining trauma screening with depression screening to further identify depression and suicidality.[30]

Care Process Model for Pediatric Posttraumatic Stress

The Care Process Model for Pediatric Posttraumatic Stress (CPM-PTS) includes an adapted version of the UCLA Brief Screen called the Pediatric Traumatic Stress Screening Tool (PTSST) to screen children ages 5 to 18 year old for exposure to trauma, posttraumatic stress, and suicidality in pediatric settings.[61] Caregivers complete the

screener for children ages 5 to 10, while children ages 11 and older complete the self-report version of the PTSST. The PTSST mirrors the UCLA Brief Screen as it contains the same, 2 open-ended trauma exposure items and 11 past month posttraumatic stress symptom items. However, the PTSST adds 1 additional sleep item from the full UCLA Reaction Index[50–53] and re-orders the symptom questions so that pediatric providers can quickly identify symptom profiles for sleep concerns, intrusive/hyperarousal symptoms, and avoidance/negative alterations in cognition and mood. Lastly, the PTSST includes 1 additional item from the Patient Health Questionnaire Adolescent Form[62] to screen for suicidality and self-harm in settings that do not already have suicide screening measures.

Unlike other screening tools, the CPM-PTS connects the PTSST to decision support, guiding pediatric providers and care teams through providing a family-centered response to the information gathered on the screener. This includes ensuring child safety (including suicide risk assessment and child protective services reporting), providing trauma education, connecting the family to evidence-based trauma assessment and treatment when indicated, and teaching a skill or providing resources for managing symptoms of concern. This means that the CPM-PTS is designed to identify children with trauma, measure how that trauma has initially impacted them, and provide a point of intervention. The CPM-PTS has been successfully implemented within pediatric primary care and family medicine clinics, Child Advocacy Centers, foster care clinics, and other pediatric settings across the United States.[63–65]

TRAUMA EXPOSURE AND TRAUMATIC STRESS—OPTIONS FOR INTEGRATED CARE SETTINGS

The above-mentioned trauma screening tools are time-sensitive approaches to screening for trauma in primary pediatric settings. However, there are tools that provide a more comprehensive evaluation and diagnostic assessment of children's trauma histories and symptoms. The feasibility of applying these lengthy tools in primary care settings is challenging. Many providers express concerns about the amount of time spent with each patient and the feasibility of adding yet another tool.[30] Additionally, many of these measures require specific training in mental health assessment. The following most common, validated assessment tools for trauma and traumatic stress may be appropriate for integrated care settings or in coordination with behavioral health providers experienced in providing comprehensive, trauma-focused assessments: the UCLA PTSD RI[50,51,53]; the Child PTSD Symptoms Scale[66]; The Trauma Symptoms Checklist for Children[67]; the Trauma Symptoms Checklist for Young Children[68]; and the Child and Adolescent Trauma Screen.[69] More information about these common, validated assessment tools for trauma and traumatic stress and many others can also be found at NCTSN's Measure Review (see https://www.nctsn.org/treatments-and-practices/screening-and-assessments/measure-reviews/).

POSITIVE CHILDHOOD EXPERIENCES SCREENING OPTIONS

Overall, there are limited screening options for PCEs compared to traumatic stress in part to this being an emerging field. PCEs have primarily been utilized in the research context and the PCEs measures currently available have several limitations for utility in pediatric health care settings. First, like the original ACEs literature, the practice of measuring and screening for PCEs has been limited primarily to retrospective report of adults' PCEs with limited literature in pediatric samples. For example, Raghunathan and colleagues (2024) recently published a scoping review of the measurement of

PCEs. Of the 66 studies reviewed, only 2 included child/adolescent reports of their PCES and 12 of them included caregiver report of their children's PCEs. Additionally, PCEs have been broadly defined, which makes it difficult to utilize 1 screening measure as there are several constructs that can be defined as PCEs; Raghunathan and colleagues found that half the studies reviewed included ad-hoc measures of PCEs meaning they were adaptations of other measures or combinations of questions from different measures. Hence, here we review the 2 measures that have predominated the PCEs literature, 2 measures of resilience, which is a construct often thought to be a positive outcome associated with PCEs, and a framework that may provide some guidance for screening in pediatric primary care while research and practice in this area continues to grow.

Benevolent Childhood Experiences Scale

The Benevolent Childhood Experiences (BCEs) scale[44] is a 10-item checklist that retrospectively assesses adults' childhood experiences including family and other close relationships, personal identity, and positive and consistent quality-of-life. It was developed as the counterpart to the ACEs screener and has been validated for use with adolescents internationally.[10,70,71] Example items include *Did you have at least one caregiver with whom you felt safe?*, *Did you like school?*, and *Did you like yourself or feel comfortable with yourself?* Though widely utilized in research studies alongside the ACES screener, the BCEs scale has not been evaluated as a feasible, practical tool to utilize in pediatric health care settings.

Positive Childhood Experiences Scale

The PCEs scale[36] has been used in previous literature to assess the impact of PCEs on mental health outcomes in adults.[72] The scale includes 7 items that assess family and social support, community participation and belonging, and safety at home. Items include how often the respondent *felt able to talk to their family about feelings*, *felt their family stood by them in difficult times*, *enjoyed participating in community traditions*, *felt a sense of belonging in school*, *felt supported by friends*, *had at least two nonparent adults who took genuine interest in them*, and *felt safe and protected by an adult in their home*. Similar to an ACE score, a cumulative score of PCEs can be calculated and in research studies has been utilized to look at correlations with mental and physical health outcomes. To date, the PCEs scale has primarily been utilized in research studies and not clinically with pediatric populations; however, it may provide pediatric providers with initial guidance for asking about PCEs in a clinical setting.

Health Outcomes from Positive Experiences Framework

The Health Outcomes from Positive Experiences (HOPE) framework[73] is not a standalone questionnaire, but provides a framework for characterizing PCEs into 4 broad categories: (1) nurturing and supportive relationships; (2) safe, stable, equitable environments; (3) opportunities for social engagement and connectedness; and (4) opportunities for emotional growth by learning social and emotional competencies. The framework has not been used to screen for PCEs in pediatric populations in a clinical setting; however, it has been used to identify PCEs in national datasets for children ages 0 to 15.[74] In a sample of Australian youth, the HOPE framework demonstrated predictive validity in that results indicated that adolescents ages 14 to 15 with higher PCEs scores had lower reports of mental health issues and academic challenges compared to youth with lower PCEs scores.[74] Though the HOPE framework has not been utilized as a screening tool, this framework may provide pediatric providers with initial guidance for asking about PCEs in a clinical setting.

Connor-Davidson Resilience Scale

A construct that is associated with PCEs and that could be screened for in pediatric settings is that of resilience. Resilience is a concept that is often associated with adaptation to adversity and refers to an individual's ability to cope with the impacts of adversity.[75] The Connor-Davidson Resilience Scale (CD-RISC)[76] is a 25-item scale with demonstrated validity at measuring resilience in the general population. A 10-item scale was also developed with strong psychometric properties that suggest a sufficient measure of resilience. The 10-item scale includes measures of one's ability to manage change, personal problems, illness, pressure, failure, and painful feelings.[76] The scale has not been used in pediatric populations or as a screening tool, but its brief nature and psychometric properties might make it a useful tool to use alongside screening for traumatic stress and PCEs in pediatric primary care.

Child Youth and Resilience Measure

Another commonly used measure of resilience in research studies is the Child Youth and Resilience Measure (CYRM) developed by Ungar and Liebenberg.[45] The CYRM is a self-report measure of 28-items of several factors associated with youth resilience and contains 3 subscales: individual capacities/resources, relationships with primary caregivers, and contextual factors that facilitate a sense of belonging. There are versions for both younger children ages 5 to 9 and older children through young adulthood ages 10 to 23. Additionally, there is a shorter version of the tool that contains only 12 items, the CYRM-12, which could be brief enough for a primary care setting. Similar to the CD-RISC and other PCE measures, the CRYM has not been evaluated as a clinical tool for pediatric primary care.

DISCUSSION AND IMPLICATIONS

Clinical Implications

There are feasible and clinically meaningful screening tool options for primary care that can be used to identify and respond to childhood trauma and traumatic stress. However, in addition to screening tool selection, consideration needs to also be given to provider training and well-being, clinic time and workflow, trauma-informed processes and response, and relational health and family engagement tools and strategies. In adult and pediatric primary care, trauma screening implementation studies have found that providers experience challenges with time, availability of behavioral health providers, and knowledge or training in TIC practices.[35,77] Patients have also expressed discomfort talking about their trauma with their primary care provider and some ambivalence about seeking treatment.[77] These complexities may confirm the recommendation that trauma screening not just occur, but that it is implemented within a larger context of TIC.[18,21,22,78,79] Of the trauma and traumatic stress screening tool options for primary care settings, these additional considerations may also elevate the CPM-PTS as the only tool including specific guidance and decision support for providing a trauma-informed response.[61]

Screening for PCEs does not appear to have been previously implemented in a primary care setting though a few research constructs and frameworks for PCEs might inform the development of primary care PCE screening and intervention strategies.[35] This might provide an opportunity for pediatricians and other providers to serve as collaborators in further developing this area of work and ensuring the measures of PCEs become practical and feasible tools that can be utilized alongside traumatic stress screening tools. Regardless, taking a strengths-based approach and discussing PCEs is consistent with larger frameworks of TIC.[19]

Policy Implications

Policy implications of trauma and PCEs screening should be considered as science and practice evolves. As previously mentioned, California has embarked on a statewide initiative to screen for ACEs. However, policies that require statewide public insurance plans to reimburse trauma screening are best applied to create consistency and incentivize providers in the most feasible and clinically useful tools, which in this case, should be screening tools that specifically address child traumatic stress and encourage TIC. Policies and funding that support trauma training and prioritize trauma-specific, evidence-based treatment are also recommended in support of trauma and traumatic stress screening.

Research Implications

Implementation of systems level approaches to screening for positive and ACEs need further research. To our knowledge, in a clinical setting, no studies have evaluated an approach that combines traumatic stress and PCE screenings. While state and national level surveys are beginning to include both questions about ACEs and PCEs, this information has not been translated to practice. Further understanding of the integration of trauma screening into primary care models is necessary to scale-up this practice. Additionally, PCEs screenings have been limited to research settings. Future research should support if and how these screening tools can be implemented into practice, as well as feasible interventions for PCEs.

Barriers to implementing trauma screening and screening for PCEs should continue to be evaluated with future research. Previous literature has highlighted challenges including screening fatigue, provider time constraints, and patient perceptions to receiving this information.[30,78–80] Providers express concern for fitting in another screening tool into their already busy schedules,[79,80] while some studies have suggested that the brevity and ease of administering trauma screening outweighs these concerns.[30] Further, previous literature suggests that trauma screening in pediatric primary care is well-received by parents, but some providers note that the process of screening and intervention can be overwhelming to parents.[78] Each of these barriers should be carefully explored in future mixed methods research.

SUMMARY

Screening for trauma, traumatic stress, and PCEs in primary care is a practical and important strategy for addressing childhood trauma and implementing TIC. There are feasible and clinically meaningful options for screening that can be used in primary care to identify and respond to childhood trauma and traumatic stress. Primary care physicians and teams will likely find additional value in considering the following when selecting and implementing a screening tool for child traumatic stress: physician training and support, clinic time and workflow, trauma-informed response protocols and resources, referral pathways, relational health and family engagement tools and strategies, screening or interventions for PCEs, and caregiver well-being vis-à-vis secondary-trauma exposure.

CLINICS CARE POINTS

- Adverse Childhood Experiences (ACEs) screening has clinical limitations.
- Feasible and clinically meaningful screening tools for identifying and responding to child trauma and traumatic stress exist.

- Screening for Positive Childhood Experiences (PCEs) may be clinically useful, but needs further testing and validation in primary care.
- Trauma and traumatic stress screening in primary care needs to also address physician training and support, trauma-informed response protocols, referral pathways, and family engagement.

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DISCLOSURE

The authors have no potential competing interests.

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