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An Examination of Measures Related to Children's Exposure to Violence for Use by Both Practitioners and Researchers

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Abstract

Millions of children each year are exposed to violence in their homes, schools, and communities as both witnesses and victims. As a result, evidence-based programs for children and adolescents who have been exposed to traumatic events (CEV-EBPs) have been widely disseminated but rarely evaluated in their real-world applications. One crucial aspect of conducting such evaluations is finding appropriate measures that can be of use both to the practitioner and to the researcher. This review aims to provide guidance to the field by first identifying any gaps in the availability of psychometrically tested measures for certain outcome domains and age ranges and then recommending the measures that are most appropriate for use by both researchers and practitioners. Interviews with content experts in the measurement of trauma symptoms and parent–child relationships were conducted to identify the key outcome domains for measurement that are critical to the evaluation of CEV-EBPs and the criteria for *dual-use measures*, defined as measures that are useful to both researchers and practitioners. A database of 46 relevant measures was created by compiling measures from existing repositories and conducting a focused literature review. Our review of these measures found that existing repositories had few measures of depression, a major gap that should be addressed. Further, there were few measures for young children ages 0–3 years ($n = 15$) and only a handful of measures ($n = 9$) had both a child and parent version of the measure. Overall, although the different repositories that currently exist are helpful, researchers and practitioners would benefit from having a single reputable source (e.g., a centralized repository or item bank) to access when searching for measures to use in evaluating CEV-EBPs. Such a tool would hold promising to narrow the current gap between research and practice in the field of children's exposure to violence.

Keywords

exposure to violence, child, measurement, program evaluation

Millions of children each year are exposed to violence in their homes, schools, and communities as both witnesses and victims. According to the National Survey of Children Exposed to Violence (NatSCEV), nearly one half of the sample reported being assaulted at least once in the past year, 10% were injured during the assault and one third experienced multiple incidences of victimization (Finklehor, Turner, Ormrod, Hamby, & Kracke, 2009; Hamby & Finklehor, 2001). With these exposure rates, children and adolescents in the United States are more likely to be exposed to violence than adults (Finklehor, 2008). Exposure to violence can adversely affect children's physical and mental health and has been linked with increased risk for further victimization, behavior and conduct problems, and mental health problems such as posttraumatic stress disorder (PTSD), depression, and anxiety (Baum, 2005; Fergusson, Boden, & Horwood, 2008; Finklehor et al., 2009; Gilbert, Widom, Browne, Fergusson, Webb, & Janson, 2009; Kilpatrick, Saunders, & Smith, 2003).

Given its prevalence and effects, the issue of children's exposure to violence has been characterized as a public health emergency with significant personal and societal consequences (Leiberman & DeMartino, 2006). As a result, there has been an increasing emphasis on widespread dissemination of evidence-based programs to provide early intervention and treatment for children and adolescents who have been exposed to traumatic events (CEV-EBPs; Hoagwood et al., 2007) and to address related symptoms that have been shown to help reduce future exposure and reduce its negative impacts (MacMillan et al., 2009). CEV-EBPs for use by traditional mental health service providers, as well as for use by nonclinical settings such as schools, juvenile detention facilities, shelters, and other community settings have proliferated. Federal registries of these CEV-EBPs have also been developed to capture these evidence-based programs in a

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centralized location (e.g., Substance Abuse and Mental Health Services Administration's National Registry of Evidence-Based Programs and Practices, Office of Juvenile Justice and Delinquency Prevention (OJJDP)s Children Exposed to Violence Evidence-Based Guide, Safe Start Center, etc.). Despite the availability of CEV-EBPs, their impact in real-world settings remains untested for the most part. Thus, there is a pressing need for agencies or organizations that implement these programs to monitor their outcomes and conduct evaluations whenever possible.

Practitioners and researchers can collaborate on such evaluation endeavors but approach assessments differently. Practitioners tend to rely upon clinical assessment and judgment to assess children, while researchers rely on standardized measures (Earls & Shackelford, 2006; Sand et al., 2005). For example, one study found that a majority of mental health practitioners considered clinical intuition more useful and accurate than standardized tools (Garland, Kruse, & Aarons, 2003). Without the use of standardized measures for screening, assessment, and tracking of outcomes related to exposure to violence among children, it is difficult to compare study results or monitor whether CEV-EBPs adapted by community practitioners hold the same promise as they did in research trials. Thus, finding a balance between standardization and practical clinical utility is important. While most experts agree that the impact of trauma can be far reaching across a wide variety of outcomes, what outcomes to measure is still a matter of opinion and depends on the specific outcomes targeted by the CEV-EBP in question.

One challenge of conducting such evaluations is finding appropriate measures that can be used across the age span. Developmental differences between children and youth at different ages make measure selection complex. For example, problematic behavior is an outcome domain relevant for both toddlers and teenagers, yet the behaviors that define this domain are different for the two age groups. For practitioners, this presents substantial challenge in assessing individual children as they age. For researchers, it presents challenges in selecting comparable measures for samples containing children in broad age ranges.

Another challenge is finding measures that can be used with multiple informants, such as children, parents, and teachers. Multiple informants provide different points of view on a problem that can have important implications for measurement of child psychopathology (De Los Reyes & Kazdin, 2004). For example, children and parents can report that the child experienced different levels of exposure to violence due to parental underestimation of children's witnessing of violent events (Edleson et al., 2007; Gewirtz & Medhanie, 2008). Ramifications of these discrepancies include incorrect estimation of the prevalence of child dysfunction and misdiagnosis. In light of the potential benefits of multiple informant ratings, content experts suggested that multiple informants should be widely utilized in assessing child psychopathology.

More resources have become available in recent years to help facilitate the selection of assessment tools. Several repositories have emerged to provide researchers and clinicians options for measures across a wide variety of outcomes. For example, the National Child Traumatic Stress Network developed an online searchable database containing reviews of measures relevant for assessing child traumatic stress. A small subset of these reviews are cross-listed on the website of the National Center for Posttraumatic Stress Disorder. Other organizations, such as the Children and Families Institute for Research, Support, and Training, the Family-Informed Trauma Treatment Center, the Trauma Institute, and the National Center for Children's Exposure to Violence, each developed measure banks for practitioners. However, the criteria that these repositories use to include measures and the information they provide vary, with little guidance to researchers and practitioners on how and when to use them effectively.

The present review aims to address these challenges and provide guidance to the field by first identifying any gaps in the availability of psychometrically tested measures for certain outcome domains and certain age ranges and then recommending the measures that are most appropriate for use by both researchers and practitioners.

Method

To accomplish the aims of the review, we first identified key outcome domains and dual-use measure criteria, shared them with experts, and refined the outcome domains and dual-use criteria based on their feedback. Second, we created a database of relevant measures in these key outcome domains by compiling data from existing repositories of measures for children exposed to violence and conducting an extensive literature review to identify additional measures. Third, measures in the compiled database were categorized according to the key outcome domains identified by content experts, appropriate age group, cost, and whether they had published psychometrics. Finally, each measure was rated using the criteria for dual-use measures. Each of these methods is discussed in more detail below.

Identifying Key Outcome Domains and Dual-Use Measure Criteria

We first engaged in an iterative process with content experts in the measurement of trauma symptoms and parent–child relationships. The purpose of this expert consultation was to identify the key outcome domains for measurement that are critical to the evaluation of CEV-EBPs and the criteria to identify *dual-use measures* defined as measures that are useful to both researchers and practitioners. In this process, we conducted telephone interviews with eight experts in the measurement of trauma symptoms and parent–child relationships selected because of their track record in developing specific measures (e.g., Child Report of Posttraumatic Symptoms), involvement developing a repository of measures related to children's exposure to violence, or their work conducting large multisite evaluations of CEV-EBPs. We sent them a draft list of key outcome domains for measurement, a set of criteria to identify dual-use measures, and a list of measures and measure repositories and obtained their feedback on each.

List of key outcome domains. Experts were sent a draft list of possible key outcome domains which included those related to screening and assessing children exposed to violence and assessing outcomes of CEV-EBPs. The list was drawn from those used in the OJJDP-funded National Evaluation of Safe Start Promising Approaches, in which our team was engaged (Jaycox et al., 2011). Content experts were asked whether the outcome domains listed were the most appropriate areas for the evaluation of CEV-EBPs; whether there were any domains missing; and whether any domains needed to be revised or refined. The final list of outcome domains was organized into two categories to provide guidance about the key purpose of these types of measures in the context of evaluating CEV-EBPs:

- *Category 1—Outcome domains related to screening and assessing children exposed to violence:* Resilience of the child; exposure to violence, including whether it was direct or indirect, the type, frequency and duration, setting, and severity; parenting practices; emotional qualities of the caregiver–child relationship (e.g., closeness); stability (e.g., out-of-home placements); chronic and acute stressors to the caregiver and child; and peer interaction.
- *Category 2—Outcome domains related to the outcomes of children's exposure to violence:* Conduct and behavioral problems (e.g., anger, aggression, substance abuse), social–emotional development (e.g., self-control, assertion), depression, anxiety, PTSD, cognitive functioning, and academics (e.g., school readiness, academic performance, school functioning).

Criteria to identify dual-use measures. We also drafted a set of criteria to identify dual-use measures. Content experts were asked to comment about whether the proposed criteria appropriately captured measures that can be used by both researchers and practitioners; whether any key criteria were missing from the list; and whether any of the existing criteria needed to be revised or refined. The final set of criteria was built on those identified by Arteaga (2007) through interviews with researchers and practitioners. Our expert consultants agree on the following criteria for dual-use measures:

1. *Used in a research setting:* The measure has been used in a research setting. For example, there is a published journal article describing its use between 2000 and 2011.
2. *Clinically relevant:* The measure provides clinical information that could be used by clinicians or nonclinical providers to determine whether a referral to clinical care for trauma-related symptoms is needed. For example, the measure has cut scores or clinically meaningful labels to measures so that scores derived from the measure can be compared to norms, or scales correspond to symptom categories identified by the Diagnostic and Statistical Manual.
3. *Published psychometrics:* The measure has published psychometrics that can be used by researchers and practitioners to determine whether the measure is a good fit for use in their evaluation study.
4. *Minimal burden:* The measure imposes a minimal burden on respondents. Burden was determined by the number of items (fewer than 50 items) or the time (15 min or less) the respondent takes to complete the measure. Measures that cover multiple areas of interest may also help to minimize burden to respondents.
5. *Optional: Multiple informants:* The measure has versions for multiple informants (i.e., child AND caregiver, teacher, etc.).

List of measures and measure repositories. Content experts also received a draft list of 118 measures compiled from existing measure repositories and an independent literature review (see below for a complete description). Content experts provided feedback on whether we were missing any key measures or any existing measure repositories. As a result of interviews, we included 15 previously unidentified measures and an additional repository which contained 51 measures, 17 of these previously unidentified.

Creating a Database of Relevant Measures

To identify measures, we reviewed existing repositories and conducted a focused literature review.

Review of existing measure repositories. To locate the existing repositories, we conducted web searches by population (''child'' OR ''adolescent''), synonyms for measure (AND ''measure*[1]'' OR ''tool'' OR ''instrument*'' OR ''assessment''), synonyms for repository (AND ''repository'' OR ''collection'' OR ''database'' OR ''review''), and key outcome domains. As previously mentioned, we also asked for expert recommendations.

As a result of searching we identified seven existing measures repositories that contained child measures relating to the key outcome domains identified by content experts. Table 1 presents each of these repositories including a brief description of the purpose, the number of measures, age ranges covered, and a summary of the key constructs included in each repository. Repositories contained between 7 and 51 measures and targeted respondents of age 0 to 20 years. A total of 103 measures were identified from these repositories.

Literature review. Since the newest of the measure repositories launched in 2006 and it is unclear how frequently the repositories are updated, we conducted a focused literature review to capture any more recently published measures. We reviewed the most recent 5 years of scientific literature on measuring outcomes of children's exposure to violence from January 2006 to November 2011. Two online databases (i.e., MEDLINE and PsychInfo) were searched using terms for specific populations (''child'' OR ''adolescent'' OR ''pediatric'' OR ''youth'' OR ''teen''), outcome domains, and synonyms for measure (AND ''measure*'' OR ''tool'' OR ''instrument*'' OR ''assessment'').

Table 1. Measure Repositories Reviewed

Repository	Description	Number of measures for children or adolescents	Age range of measures for children or adolescents	Outcome domains											
				Resilience	Parenting practices	Emotional quality of caregiver–child relationship	Chronic and acute stress	Peer interaction	Exposure to violence	Conduct/ behavioral	Social–emotional develop-ment	Depression	Anxiety	PTSD	Cognitive functioning
National Child Traumatic Stress Network	Measures for the screening and assessment of trauma	48	0-20 years	π	π	π	π	π	π	π	π		π	π	π
National Center for PTSD	Trauma and PTSD measures for children, however children is not the primary audience	13	0-20 years	π		π	π		π		π			π	
Children FIRST (Fordham University)	Measures that assess the symptoms and indicators of distress associated with exposure to trauma among children	35	8-16 years	π		π	π		π		π			π	π
Family-Informed Trauma Treatment Center	Evaluation measures of family interventions for underserved urban families and military families experiencing chronic trauma and stress	14	0-20 years	π			π		π	π	π			π	
Trauma Institute	Objectively scored measures of child/adolescent posttraumatic stress symptoms for children	10	3-20 years						π					π	
National Center for Children's Exposure to Violence	Measures of childhood violent trauma for children	7	0-18 years	π		π	π		π		π			π	
Handbook of Childhood Measures	Both child and family measures to assess the impact of trauma on children	51	0-20 years		π		π		π	π	π			π	

Note. A checkmark (π) indicates that the repository contains measures that include the outcome domain. PTSD = posttraumatic stress disorder.

The results of this search yielded citations to 1,301 publications. The list of citations was narrowed by determining whether they met a set of inclusion and exclusion criteria. Articles were included if they contained a reference to a measure of one of the three aforementioned outcome domains and if they described some aspect of psychometric evaluation of the measure (e.g., calculation of scale reliability, test of validity). Articles were excluded if they were published before 2006, published in a language other than English, were dissertations, or other nonpeer-reviewed publications (e.g., conference abstracts, letters to the editor), were focused solely on individuals over the age of 18, or examined a specialized subpopulation of youth (e.g., cancer patients with depression, patients with chronic pain, or specific inpatient populations). Further, we did not review publications that addressed children exposed to violence without substantively addressing measurement or measure development.

We first conducted a title review to narrow the list of citations followed by an abstract review and finally a full text review. During each of these reviews, we identified articles that did not meet our inclusion criteria or that met our exclusion criteria (see Figure 1). Ultimately, 143 articles met our inclusion and exclusion criteria and represented the final sample for the focused literature review. Using the abstraction procedure described below, we were able to abstract information from the 143 articles for 62 measures, 47 of these measures were previously unidentified. The literature search bolstered measures of social–emotional development ($n = 15$), parenting practices ($n = 12$), depression ($n = 9$), the emotional qualities of the caregiver–child relationship ($n = 7$), conduct and behavioral problems ($n = 6$), resilience ($n = 5$), peer interaction ($n = 3$), cognitive functioning ($n = 3$), and PTSD ($n = 2$).[2]

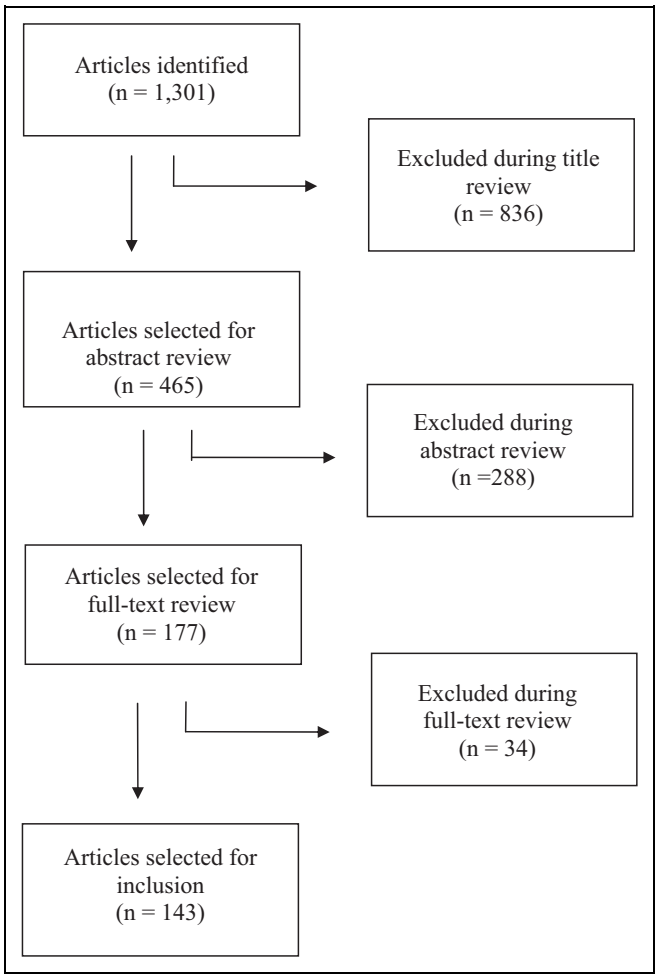

Figure 1. Flowchart for the focused literature search.* *More than one measure may be addressed in a single article, and more than one article may address a specific measure.

Categorizing Each Measure

We developed a data abstraction form (DAF) to collect a consistent set of information on each measure. The DAF was used by the research team to capture the characteristics of the measure that may be helpful to researchers and practitioners who were considering whether to use the measure and that would help us to rate each measure using the dual-use criteria, and to record citations for each measure. Abstracted information included the following:

- *Key outcome domain:* The outcome domain(s) relevant to each measure; for example, a measure might assess both symptoms of anxiety and depression.
- *Age group*: Information about the age with which the measure has been used.
- *Availability of psychometrics:* Whether the measures reliability or validity had been published in the peer-reviewed literature. It is important to note that we did not assess the reliability or validity of any of the measures but assessed only whether there was information available on their reliability and validity.
- *Availability of multiple formats*: Whether a parent or teacher version of the measure was available, in addition to a child version of the measure.
- *Clinical relevance*: Whether the measure provides clinical information that could be used by clinicians or nonclinical providers to determine whether a referral to clinical care for trauma-related symptoms is needed (e.g., cut scores).
- *Cost*: Whether or not there is a fee to obtain or use the measure.
- *Length*: The number of items and/or length of time it takes to administer the measure.

During this review, we found that the search had failed to yield information about the cost of 71 measures and length for 47 measures. To augment these two domains, we conducted a second, more targeted search of the same databases used in the initial search strategy (PsychInfo and MEDLINE), adding Google Scholar and relaxing the inclusion and exclusion criteria. This targeted search produced additional information that allowed us to determine the cost for an additional 28 measures and the length of all measures.

Rating Each Measure Using the Dual-Use Criteria

The categorization procedure, described above, provided the information needed to rate each measure using the dual-use criteria. To determine whether the measure had been *used in a research setting*, we reviewed the references listed for each measure. If a journal article published between 2000 and 2011 was listed, the measure was rated as having been used in a research setting. The *clinical relevance* criteria was directly abstracted using the DAF and measures were categorized as to whether they provide clinical information, such as cut scores, that could be used by clinicians or nonclinical providers to determine whether a referral to clinical care for trauma-related symptoms is needed. Similarly, the criteria for *published psychometrics* (were they available) and for *multiple informants* were both abstracted using the DAF. Only self-report measures were reviewed using the multiple informant criteria, as measures developed only for parent or teacher reporting would not be relevant to this criteria. Finally, we used the information on measure length (number of items or amount of time to complete) to determine whether the measure imposes a *minimal burden* on respondents. If a measure had fewer than 50 items or took less than 15 min to complete it was rated as imposing a minimal burden.

Results

The results of our review enabled us to identify the gaps in the availability of psychometrically tested measures for certain outcome domains and certain age ranges and recommend instruments that are most appropriate for use by both researchers and practitioners. Each of these aims is discussed in turn.

Where are the Gaps in the Availability of Psychometrically Valid Measures for Different Outcome Domains and Age Ranges?

We examined the measures to determine the extent to which existing measures had published psychometrics (see Table 2). Although we do not comment on the reliability or validity of individual measures or outcome areas, availability of published psychometrics is a key aspect in considering the use of a measure, so that users can review published psychometrics to determine whether the measure is a good fit for the intended use. Of the 150 measures identified, 136 measures had published psychometrics describing their validity or reliability for children or adolescents.

Among the measures with published psychometrics, we assessed whether measures were available for each outcome domain and each age group (0–3 years, 4–7 years, 8–11 years, and 12–20 years). The outcome domains of PSTD ($n = 33$), social–emotional development ($n = 30$), and exposure to violence ($n = 25$) were the most well represented in existing repositories. We identified the fewest measures for peer interaction ($n = 6$), anxiety ($n = 8$), and depression ($n = 9$). Measures for use with children 0–3 years had the smallest number of measures, and accordingly the smallest number with published psychometrics ($n = 27$). Measures for use with adolescents and young adults of age 12–20 years had the greatest number with published psychometrics ($n = 104$). The spread across both outcome domain and age group was most even for measures of exposure to violence, social–emotional development, and conduct/behavior which each had at least five different measures for each age group.

Table 2. Number of Measures With Published Psychometrics

Outcome Domain	Age 0–3	Age 4–7	Age 8–11	Age 12–20	Total unique measures
Resilience	3	5	5	8	10
Parenting practices	5	5	5	7	13
Emotional quality of caregiver–child relationship	4	6	9	9	12
Chronic and acute stress	2	2	6	6	10
Peer interaction	0	1	2	5	6
Exposure to violence	5	10	17	19	25
Conduct/behavioral	7	9	9	12	15
Social–emotional development	10	16	13	21	30
Depression	1	3	7	9	9
Anxiety	1	4	3	6	8
PTSD	2	10	24	27	33
Cognitive functioning	1	5	7	9	11
Total unique measures	27	55	83	104	–[3]

What Measures are Available for Use by Researchers and Practitioners?

To identify the measures that inform clinical treatment and help build the research base, a set of dual-use criteria were developed and applied to all measures. Table 3 provides information on the extent to which the identified measures adhered to the dual-use measure criteria. Most of the measures had published psychometrics available (90.6%) and had been used in a research setting (90.6%), however less than half were clinically relevant (44%).

Based on our review of existing repositories and focused literature review, we identified 46 measures (30.6%), or about a third of the measures identified, that matched all of the criteria (see Table 4) and thus are recommended for dual use. Fewer than a third of measures met two or fewer of the criteria (31.3%). Although an optional criteria, it is worth noting that among the measures we reviewed that had a child self-report version ($n = 119$), 20.2% ($n = 24$) also had a parent-report version and 7.6% ($n = 9$) of these met all four criteria. Among the 103 measures we were able to locate cost information for 46.6% ($n = 48$) at no cost. There were free measures available for all key constructs.

Table 3. Dual-Use Criteria for Measures

Criteria	Percent of measures (*n*)
Used in a research setting	90.6 (136)
Clinically relevant	44.0 (66)
Minimal burden	66.0 (99)
Available psychometrics	90.6 (136)
Breakdown of measures across multiple criteria	
Meets none of the criteria	2.7 (4)
Meet one of the criteria only	6.0 (9)
Meet two of the criteria	22.7 (34)
Meet three of the criteria	38.0 (57)
Meet all four of the criteria	30.7 (46)

Discussion

To advance the dialogue about measurement related to children's exposure of violence, the current review focused on important outcome domains for screening and assessing children exposed to violence and evaluating the outcomes of CEV-EBPs, including children's conduct/behavior, social–emotional development, and psychological (feelings of depression, anxiety, PTSD), cognitive functioning, resilience of the child, exposure to violence, parenting practices, emotional qualities of the caregiver–child relationship (e.g., closeness), stability (e.g., out-of-home placements), chronic and acute stressors to the caregiver and child, and peer interaction.

Among the 150 measures we identified, there was at least one measure with published psychometrics for all aforementioned outcome domains and all age groups (0–3 years, 4–7 years, 8–11 years, and 12–20 years), except peer interaction measures for children of age 0–3. Such measures may be subsumed in the domain of social–emotional development. Across all outcome domains, there were fewest measures for age 0–3 and the most measures for age 12–20. Development of measures for the youngest children may be lagging behind measures for older children because of the need to rely on caregiver report or observation, and the difficulty in operationalizing some of the domains. However measures are needed for young children, which are frequently targets of evidence-based early intervention programs. Outcomes domains for PSTD, social–emotional development ($n = 30$) and exposure to violence ($n = 25$) were the most well represented in existing repositories. It is important to note that many measures of childhood depression exist and were identified in our focused literature search; however, they were not present in repositories for practitioners working with children exposed to violence. This is a major gap that needs to be addressed.

Although we identified 46 measures as meeting the criteria for dual use, there are still significant gaps in in the availability of psychometrically valid dual-use measures for certain constructs and certain age ranges. PTSD, depression, and social–emotional development had the greatest number of measures meeting all four criteria, while cognitive functioning and peer interaction had the fewest measures. Finally, there are no dual-use measures of exposure to violence that assess both direct victimization and indirect witnessing of violence. Only six of the dual-use measures are appropriate for use with children aged 0–3 years, about a third are for children of 4–7 years (36.5%, $n = 15$), and over half are for children of 8–11 years (63.4%, $n = 26$). In addition, only 9 (21.2%) of these dual-use measures had both a child version and a parent version of the measure. Since multiple informants provide different points of view on a problem that can have important implications for measurement of child psychopathology, researchers and practitioners should collaborate to further develop measures that allow for multiple informants.

To collaborate effectively, practitioners and researchers need to communicate and share information about clients and programmatic outcomes. One way to facilitate better communication is through the use of mutually acceptable and interpretable measurement tools. Although the different repositories that currently exist are helpful, researchers and practitioners need access to a single reputable source for measures. A centralized source could act as the clearinghouse for measures, making the future identification of gaps easier, and could also provide the opportunity for the development and application of a standardized rating of measures. For example, measures could receive a single dual-use rating (one star to four stars) that could be used to easily identify measures researchers and practitioners could use when collaborating. Alternatively, measures could receive separate ratings along two dimensions, one dimension could signify the appropriateness of the measure for use in research, and the other dimension could signify the appropriateness for use with practitioners. A measure that gets high scores on both dimensions could be considered a candidate for dual use.

Currently, the National Child Traumatic Stress Network (NCTSN) is the only repository that contains a rating system to allow both practitioners and researchers to rate measures from one star (*poor*) to five (*awesome*). However, these ratings are not guided by any standard criteria and do not denote whether the rater is a researcher or a practitioner. Additionally, the National Cancer Institute is currently in the process of building a Grid-Enabled Measures Database (GEM). GEM allows researchers to work together in a virtual environment to decide on a set of standardized measures to use in their work and share the resulting harmonized data. Although GEM contains some measures that may be relevant for the study of CEV (e.g., stress and mental health), it is broadly focused on a range of constructs (e.g., nutrition, cardiovascular health) and quality input is dependent on researcher contributions. Although there is currently no consensus on standardized measures related to stress and mental health, these may emerge as more researchers engage with GEM.

Alternatively, measures could be assembled into a centralized item bank. Item banking uses item-response theory measurement models to reduce and improve large pools of items from many available questionnaires and assemble them into domains of items which are unidimensional and not excessively redundant (Cella, 2004; Cella, Gershon, Lai, & Choi, 2007). These item banking models have been used in the area of patient-reported outcome assessment to improve the

Table 4. Measures That Meet All Four of the Proposed Dual-Use Criteria

Outcome Domains	Measure name
Resilience	Clinician Administered PTSD scale for Children and Adolescents (Nader et al., 1996); Devereux Early Childhood Assessment (Regular and Clinical Forms; LeBuffe & Naglieri, 1999)
Emotional qualities of parenting	Devereux Early Childhood Assessment (Regular and Clinical Forms; LeBuffe & Naglieri, 1999)
Chronic and acute stress	Child Stress Disorders Checklist (Saxe et al., 2003); Child's Revised Reaction to Traumatic Events scale (Perrin, Meiser-Stedman, & Smith, 2005); Clinician Administered PTSD scale for Children and Adolescents (Nader et al., 1996); Parenting Stress Index (Short Form; Reitman, Currier, & Stickle, 2002)
Peer interaction	Strengths and Difficulties Questionnaire* (Goodman, 2001)
Exposure to violence or trauma	Adolescent Clinical Sexual Behavior Inventory* (Friedrich, Lysne, Sim, & Shamos, 2004); Clinician Administered PTSD scale for Children and Adolescents (Nader et al., 1996); Lifetime Incidence of Traumatic Events* (Greenwald & Rubin, 1999)
Conduct/behavioral	Child and Adolescent Functional Assessment scale (Hodges & Wong, 1996); Child Behavior Checklist (Achenbach, 1991)
	Conduct Disorder Rating scale (Waschbusch & Elgar, 2007); Devereux Early Childhood Assessment (Regular and Clinical Forms; LeBuffe & Naglieri, 1999); Strengths and Difficulties Questionnaire* (Goodman, 2001)
Social-emotional development	Bell Object Relations and Reality Testing Inventory (Bell, 1995); Bell Relationship Inventory for Adolescents (Bell, 2005); Child and Adolescent Functional Assessment scale (Hodges & Wong, 1996) Child Behavior Checklist (Achenbach, 1991); Children's Peritraumatic Experiences Questionnaire (Wolfe & Birt, 1993); Devereux Early Childhood Assessment (Regular and Clinical Forms; LeBuffe & Naglieri, 1999); Strengths and Difficulties Questionnaire* (Goodman, 2001)
Depression	Beck Depression Inventory II (Beck, Steer, & Brown, 1996); Center for Epidemiological Studies Depression scale for Children (Faulstich, Carey, Ruggiero, Enyart, & Gresham, 1986); Chicago Adolescent Depression Risk Assessment (Van Voorhees,et al., 2008); Children's Depression Inventory* (Kovacs, 1992); Children's Depression Rating scale–Revised* (Poznanski & Mokros, 1995); Kutcher Adolescent Depression scale (Brooks, Krulewicz, & Kutcher, 2003); Pediatric Symptom Checklist (Jellinek et al., 1988); Reynolds Adolescent Depression scale (Short Form; Reynolds & Mazza, 1998)
Anxiety	Beck Anxiety Inventory (Beck, Epstein, Brown, & Steer, 1988); Screen for Child Anxiety Related Emotional Disorders (Birmaher et al., 1997); State-Trait Anxiety Inventory for Children (Spielberger, 1973); Strengths and Difficulties Questionnaire* (Goodman, 2001)
PTSD	Acute Stress Checklist for Children (Kassam-Adams, 2006); Child and Adolescent Trauma Survey (March, 1999); Child Posttraumatic Stress Reaction Index* (Nader, 1996); Child PTSD Symptom scale (Foa, Johnson, Feeny, & Treadwell, 2001) Child Stress Disorders Checklist (Saxe et al., 2003); Children's PTSD Inventory (Saigh et al., 2000); Clinician Administered PTSD scale for Children and Adolescents (Nader et al., 1996) Kauai Recovery Index (Hamada, Kameoka, Yanagida, & Chemtob, 2003); Los Angeles Symptom Checklist (Foy, Wood, King, King, & Resnick,1997); Posttraumatic Stress Disorder Semi-Structured Interview and Observational Record* (Scheeringa & Zeanah, 1994); Posttraumatic Stress Disorders Checklist* (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996)
	Posttraumatic Symptom Inventory for Children (Eisen, 1997); PTSD Symptoms in Pre-School Aged Children (Zerk, Mertin, & Proeve, 2009); Reactions of Adolescents to Traumatic Stress Questionnaire (Bean, Derluyn, Eurelings-Bontekoe, Broekaert, & Spinhoven, 2006); Screen for Child Anxiety Related Emotional Disorders (Birmaher et al., 1997); Screening Tool for Early Predictors of PTSD (Winston, Kassam-Adams, Garcia-España, Ittenbach, & Cnaan, 2003); Structured Interview for Disorders of Extreme Stress (Pelcovitz et al., 1997); UCLA PTSD Index for DSM-IV* (Rodriguez, Steinberg, & Pynoos, 1999)
Cognitive functioning	Child and Adolescent Functional Assessment scale (Hodges & Wong, 1996)

Note. An asterisk (*) indicates that in addition to the child version of the measure, there is a parent version of the measure. PTSD = posttraumatic stress disorder; UCLA = University of California–Los Angeles; DSM-IV = Diagnostic and Statistical Manual of Mental Disorder (Fourth Edition).

precision of measurement using fewer items and increase statistical power for smaller sample sizes (Fries, Cella, Rose, Krishnan, & Bruce, 2009), both of which are critical for rigorous small-scale evaluation and research. A similar approach could be used to develop a centralized bank of items for use in evaluation and research related to children's exposure to violence. Optimizing the use measures by selecting fewer items helps to reduce burden on respondents, one of the dual-use criteria, and provides researchers with a better chance at identifying the effects of CEV-EBPs.

The field of measurement is continually advancing, as measures continue to be utilized with different populations, existing measures modified and new measures created. A single centralized measure repository or item bank would need to be continually updated but could be a valuable tool to promote more effective collaboration between practitioners and researchers, which may ultimately result in better services and outcomes for clients. Such a tool would represent an important advancement and hold promising to narrow the gap that currently exists between research and practice in the field of

children's exposure to violence. In the meantime, the measures listed in this article are seen as good candidates for dual use.

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