

Measuring children's exposure to domestic violence: The development and testing of the Child Exposure to Domestic Violence (CEDV) Scale[☆]

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Abstract

This article describes the development and testing of the psychometric properties of a self-administered Child Exposure to Domestic Violence (CEDV) Scale. The 42-item CEDV was systematically developed using both pre-existing and newly developed items and subsequently subjected to a review and revision by an international panel of experts to establish face validity. After initial pilot testing, the CEDV was administered to 65 children, ages 10 to 16 years of age, who were receiving services from several domestic violence prevention organizations. The measure was administered concurrently with the *Things I've Seen and Heard* measure of violence exposure to establish convergent validity and again one week later to establish test–retest reliability. The CEDV appears to be a valid and reliable measure of the level of exposure to domestic violence from a child's perspective. The authors discuss potential uses of this scale and the development of resources to support the use of the measure, including an online version of the scale. © 2007 Elsevier Ltd. All rights reserved.

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1. Introduction

Child exposure to domestic violence is increasingly recognized by researchers, policy makers and practitioners as a risk to healthy development. Several studies reveal the extent of child exposure to domestic violence each year. For example, [Carlson \(2000\)](#) estimated that from 10% to 20% of American children are exposed to adult domestic violence annually. Using U.S. Census data this would translate to approximately 7 to 14 million American children exposed to adult domestic violence annually ([US Census Bureau, 2000](#)). An analysis of two national surveys by [Thomson, Saltzman and Johnson \(2003\)](#) found high levels of child exposure in homes where violence occurred. They found that 33.2% of Canadian battered women and 40.2% of U.S. battered women reported that their children had been exposed to the violence against them.

Researchers, policy makers and practitioners have used several different terms to define children's exposure to adult domestic violence. The terms "witnesses" or "observers" of violence have been frequently used ([Fantuzzo & Mohr,](#)

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1999; Kitzmann, Gaylord, Holt, & Kenny, 2003) but these terms are being replaced with an expanded terminology referring to child “exposure” to domestic violence. Exposure usually refers to the multiple experiences of children in homes where one adult is using violent actions to control another adult (Edleson, 2006; Fantuzzo & Mohr, 1999). Edleson et al. (2007) expand the definition to include not only witnessing or seeing violence, but also hearing the violence and observing the aftermath of abuse, for example, bruises on their mother’s body or movement to a shelter. In this article, child exposure will refer to this expanded range of violence that many children experience but focuses on violence to mothers only for reasons we will outline later.

The impact of this exposure to adult domestic violence has been well documented in many previous studies (see Edleson, 2006; Ehrensaft et al., 2003; Fantuzzo & Mohr, 1999; Jouriles, Northwood, McDonald, Vincent, & Mahoney, 1996; Kitzmann et al., 2003; Margolin & Gordis, 2004). The frequency of adult domestic violence in a home correlates highly with children’s behavioral problems, including externalizing behavior such as aggression and disobedience, and the internalizing behavior such as depression, sadness and lack of self-confidence (Jouriles et al., 1996). In a review by Margolin and Gordis (2004), the consequences of being exposed to violence in a child’s home included both short- and long-term impacts on the child. Short-term impacts included aggression and delinquency; emotional and mood disorders; posttraumatic stress symptoms such as exaggerated startle, nightmares, and flashbacks; health-related problems and somatic symptoms such as sleep disturbances; and academic and cognitive problems. Long-term impacts included an increased likelihood that a child will become either a victim or perpetrator of aggression later in life.

Despite these findings there appears to be great variation among children’s exposure to domestic violence and the impact of this exposure. Graham-Bermann (2001) points out that many exposed children show no greater problems than children not so exposed. Several studies (Grych, Jouriles, Swank, McDonald, & Norwood, 2000; Hughes & Luke, 1998; Sullivan, Nguyen, Allen, Bybee, & Juras, 2000) found that approximately half of the exposed children studied to be similar to non-exposed children on a variety of measures.

Variation among children may result, in part, from the greatly varied ways in which exposure has been measured from study to study thereby prohibiting direct comparisons across studies. It is clear that there is a need for a standardized and multidimensional method of measuring children’s exposure to adult domestic violence in order to improve our understanding of the nature of such exposures and to develop and evaluate effective intervention programs for these at-risk children (see Mohr & Tulman, 2000).

Most previous studies are based on parents’ or other key adult informants’ reports using adapted versions of established measures such as the Conflict Tactics Scales (Edleson et al., 2007; Jouriles et al., 1996; Schuler, 2001). Previous studies have sought reports of child exposure from adult caregivers, not from the children themselves. Yet, reports of parents are often different from those of their children (Sternberg, Lamb, Guterman, & Abbott, 2006). This situation points to a need for measures that gather child self-reports of exposure to violence.

Unfortunately, few child self-report tools have been developed at this time (see Finkelhor, Ormond, Turner, & Hamby, 2005). This article describes the systematic development and psychometric properties of a 42-item child self-administered Child Exposure to Domestic Violence (CEDV) Scale. The CEDV was administered to a group of children using domestic violence prevention services and then the Scale’s psychometric properties were tested. We report on the content and convergent validity and test–retest reliability of the CEDV and then conclude with a discussion of its potential uses and further development.

2. Methods

2.1. Sample description

Participants in the study consisted of 69 children recruited during their stay at one of several domestic abuse shelters or their use of the programs’ community-based services, but four were excluded due to missing data resulting in a final sample of 65 child participants. Children between the ages of 10 and 16 years were included in the study. Mothers of children between these ages were invited by agency staff to volunteer their children for participation in the study and were provided with an explanation of the study’s purposes, confidentiality procedures as well as the study’s risks and benefits.

Child participants varied in age from 10 to 16 with the mean age being 12.5 years ($SD=2.1$). As seen in Table 1 below, 34 males and 29 females participated in the study, two children did not indicate their gender. Of all participants, 30.8%

Table 1
Comparison of child characteristics by group ($N=65$)

Variable	Mean	SD	%	<i>n</i>
Age of children				
Total	12.5	2.1	96.9%	63
Missing			3.1%	2
Gender				
Male			50.0%	34
Female			42.9%	29
Missing			3.1	2
Race				
White/Caucasian			30.8%	20
Black/African-American			30.8%	20
American Indian/Native American			6.2%	4
Asian or Pacific Islander			7.7%	5
Multi-racial/no primary identification			6.2%	4
Other			15.4%	10
Missing			3.1%	2
Where child lived				
House			35.4%	23
Apartment			10.8%	7
Shelter			44.6%	29
Other			6.2%	4
Missing			3.1%	2
People child lived with (multiple answers possible)				
Father			13.8%	9
Mother			84.6%	55
Grandparent			16.9%	15
Sibling			96.9%	63
Others			16.8%	11
Missing			1.5%	1

($n=20$) identified themselves as Caucasian, 30.8% ($n=20$) as African-American, 9.2% ($n=6$) were unsure as to how to categorize themselves based on race, 7.7% ($n=5$) identified as Asian or Pacific Islander, 6.2% ($n=4$) as being multi-racial, another 6.2% ($n=4$) as Native American, and 1.5% ($n=1$) chose not to answer the question. More than one in four of the participating children (44.6%, $n=29$) stated that they lived in a shelter during the time the survey was completed, roughly one-third lived in a house (35.4%, $n=23$), another 10.8% ($n=7$) lived in an apartment and 6.2% ($n=4$) stated “other” as shown in Table 1. Lastly, one child said that he/she was not sure where home was due to frequent traveling and moves.

Family composition varied with 84.6% ($n=55$) of the children stating they lived with their mother, only 13.8% ($n=9$) lived with their father and 16.9% ($n=15$) lived with a grandparent. Almost every child (96.9%, $n=63$) lived with a sibling in addition to a parent and 16.8% ($n=11$) said that they also lived with others such as their mother’s boyfriend, their mother’s partner, step-fathers or step-mothers.

2.2. Measurement instruments

2.2.1. CEDV Scale

This measure was assembled using a number of strategies. First, the research team gathered question items from a number of existing surveys and interview guides based on key content areas identified in an earlier review (see Edleson et al., 2007). A panel of nine international expert judges working with children exposed to domestic violence was invited to review each item online and suggest (1) keeping the question without changes, (2) deleting the question from the measure or (3) revising the question. When a revision was suggested, the expert judge was provided space to specify what changes should be made as well as a separate space to make comments. At the end of the online review the judges were also provided space to suggest additional items or content that should be included in the measure. These development processes established both content and face validity of the scale.

Child participants were assumed to be able to read and understand the CEDV. We analyzed the reading level of the measure and subsequently changed words and sentence structures to achieve a Flesch–Kincaid fourth grade readability

level. We also made a decision to simplify answers by framing questions in a way that assumed the child's mother was the target of her partner's violence. As we will discuss later, other formats for administering the CEDV may make it possible to collect information on multiple perpetrators.

A revised CEDV based on the above steps was then subjected to a pilot test with 10 children. Further changes were made based on this testing. A copy of the CEDV as used in this study appears in Appendix A.

The final result was the CEDV consisting of 42 questions in three sections. The first section included a series of questions that specifically target the types of exposure to domestic violence a child may have experienced. Each child was asked to rate 10 different items focused on types of adult domestic violence to which she or he may have been exposed. Each question was answered using a three-point Likert-type scale with their choices being "Never", "Sometimes", and "A lot". A second part of this first section required the child to indicate how he or she knew of the violence occurring at home. If a child responded "Never" to a particular question he or she moved onto the next question. However, if she or he indicated exposure to such violence, the child was led by an arrow to an additional set of options that asked how the child was exposed, including five choices: "I saw the outcome (like someone was hurt, something was broken, or the police came)", "I heard about it afterwards", "I heard it while it was happening", "I saw it from far away while it was happening" and "I saw it and was near while it was happening". After checking all applicable exposures the child was then instructed to move to the next item.

The second section of the CEDV asked a series of 23 questions using the same three-point Likert-type scale. Each child was asked here to rate how often he or she intervened in violent events and about other risk factors present in her or his life.

The third and final section of the CEDV consisted of nine questions asked to gather demographic information, including gender, age, race and ethnicity, current living situation, family composition and concluded with a question about favorite hobbies so as to end on a lighter note.

2.2.2. *Things I've Heard and Seen (TISH)*

The TISH questionnaire, used in this study to establish the convergent validity of the CEDV, was comprised of 20 questions that asked a child to indicate the frequency of perceived direct experience with and exposure to multiple forms of violence. The original TISH, developed by Richters and Martinez (1990), was tested on children aged 6 through 14 and intended to measure the level of direct and indirect exposure to violence that children experience at home, as well as in the broader community. Each child was asked to respond to each item using a five-point Likert-type scale that included: "Zero times", "One time", "Two times", "Three times", and "Many times" (Richters & Martinez, 1990). Items included "Somebody threatened to stab me" and "Grown ups in my home hit each other".

The TISH has demonstrated relatively strong internal consistency, with Cronbach's Alpha falling between $\alpha = .74$ and $\alpha = .76$. Additionally, high reliability has been established through strong test-retest ($r = .67$) and inter-rater reliability results ($r = .81$) (Richters & Martinez, 1990). Richters and Martinez (1993) used the TISH in a study of children's exposure to violence, their school performance and parent ratings of child behavior. Other studies have also used the TISH, including a study by Hurt, Malmud, Brodsky and Giannetta (2001) who used the measure to determine a relationship between child exposure to violence and behavioral problems, school performance and self-esteem. A more recent study conducted by Bailey, Hannigan, Delaney-Black, Covington and Sokol (2006) used the TISH to assess the relationship between child exposure to violence and child functioning.

2.3. *Data collection procedures*

The research team identified local domestic violence prevention organizations that provide service to large numbers of children. A series of presentations were made to key staff at each agency and they were invited to become partners in the scale development project. Three organizations, representing five shelters for battered women and their children and one non-shelter service agency, agreed to participate. These organizations offer a myriad of services for families experiencing disruption due to domestic violence and abuse, including but not limited to crisis services, legal advocacy, community-based transitional housing, job and education training services, counseling, life skills training, tutoring and preventive interventions.

Members of the research team then trained staff at each organization according to a specific protocol approved by a university-based Institutional Review Board. The protocol was also provided in written form to the staff members for reference at any time during the project and research team members were available to answer any questions. Agency staff were asked to identify potential mothers or other legal guardians with children between the ages of 10 and 16 who

were either residing at the shelter or were participating in other agency programs and services in the community. Agency staff contacted these adults to explain the purpose of the study, assure confidentiality, review mandated reporting guidelines and to request consent for their child(ren)'s voluntary participation. A \$25 gift card was offered as an act of gratuity for each child's participation. Each agency was compensated \$100 in movie tickets to use for their programs in exchange for the staff time involved in contacting mothers and administering the measures; \$50 in tickets during the study, and another \$50 after completion of data gathering.

Those adults who volunteered their children were given an informed consent form to read and verbally indicate consent for their child's participation. Once mothers or legal guardians consented, staff explained the study to each child who was provided with an assent form for their information and also asked to voluntarily participate in the study. Agency staff explained the questionnaires to each child, confidentiality measures, mandated reporting requirements and rules and that the child would receive a \$25 gift card upon completion of all measures. All children included in this study provided voluntary assent to participate.

The children were asked to take the CEDV twice, one week apart, in order to establish test–retest reliability of the measure. In addition, the children were asked to complete the TISH once, at the same time the first CEDV was administered. The TISH was administered to help establish convergent validity of the CEDV.

Agency staff read the directions on the first page of the CEDV to the children before getting started and answered any questions that any child may have had before, during and after the survey. The measures were administered in both group settings and individually.

Agency staff assigned each child a unique research identification number for the purposes of linking each child's completed surveys. The identification numbers on each survey corresponded to the child's name in only one place, on an identification sheet that was maintained by one agency staff member. The completed survey instruments only contained the identification number and no other identifying information. The list of names and corresponding identification numbers were kept for only one week so that staff could be sure to give the same identification number for the administration of the second CEDV. Agency staff were given specific instructions not to look at the completed surveys but were advised to follow their agency's mandated reporting requirements when any information revealed aloud triggered a report. After all three measures were completed; a \$25 gift card was given to either the child or to a parent or guardian for use on the child's behalf.

Completed CEDVs and TISHs were immediately placed in a sealed envelop after administration and retrieved by a member of the research team. Once all the surveys had been completed, staff destroyed the identification sheet to protect the identity of the study participants. The research team never knew the identity of the children who were involved. In addition, a federal Certificate of Confidentiality was obtained from the National Institutes of Health to protect data from being subpoenaed by a court of law.

2.4. Data analysis procedures

Reliability was assessed by measures of internal consistency and a test–retest analysis. More specifically, Cronbach's alpha statistics were calculated to assess the internal consistency of the CEDV. Cronbach's alpha aims to measure the coherence of a scale by testing the strength of the associations among items. To establish test–retest reliability, the child participants were tested twice at a one week interval, and then Pearson's correlations and paired *t*-tests were conducted to establish reliability. When the same results are received from the same samples by using the same measurement, it can be said that the test is reliable.

In terms of validity, content validity was assessed based on expert panel ratings. For convergent validity, the TISH was administered concurrently to the child participants. Then, scores for both the CEDV and TISH were compared using Pearson's correlations. Factor analysis was attempted in order to empirically generate subscales but conceptually relevant factors did not result.

3. Results

3.1. What the children reported

While taking the CEDV child participants reported their exposure to violence at home and in the community. As seen in [Table 2](#), the results from the first week administration of the CEDV revealed significant levels of violence

occurring in these children's homes. Almost half (43.1%, $n=28$) reported "Mom's partner hurt her body" sometimes and 15.4% ($n=10$) reported this happened a lot. Almost a third reported threatened use of weapons (29.2%, $n=19$) sometimes or a lot and 13.8% ($n=9$) reported actual injuries sometimes or a lot of the time to their mother by a partner using weapons.

The children in this study also reported deep involvement in violent events at home. More than four out of ten children (41.5%, $n=27$) sometimes hollered or yelled something to their mother and their mother's partner from a different room and 9.2% ($n=6$) did so a lot of the time. While in the same room, 36.9% ($n=24$) of the children reported they hollered or yelled to intervene sometimes and 23.1% ($n=15$) said they did so a lot while in the same room where fighting was occurring. Many children (41.5%, $n=27$) tried to physically stop fights sometimes or a lot and even more (47.7%, $n=31$) called for help sometimes or a lot. Over half (50.8%, $n=33$) tried to get away from the fights sometimes or a lot.

A large number of children reported having witnessed someone else get hurt sometimes or a lot of times (78.5%, $n=51$). Almost all children reported seeing someone being hurt or killed on television or in a movie (96.9%, $n=63$).

Table 2
Frequency (percentage) of 5 subscales ($n=65$)

Variable	Never (%)	Sometimes (%)	A lot (%)	Missing (%)
<i>Level of violence</i>				
Q1. Adults in your family disagree	6 (9.2)	34 (52.3)	19 (29.2)	6 (9.2)
Q2. Mom's partner hurt her feelings	9 (13.8)	34 (52.3)	17 (26.2)	5 (7.7)
Q3. Mom's partner stopped her from doing something	38 (58.5)	18 (27.7)	7 (10.8)	2 (3.1)
Q4. Mom's partner stopped her from eating/sleeping	54 (83.1)	2 (7.7)	2 (3.1)	4 (6.2)
Q5. Mom and her partner argued about you	26 (40.0)	29 (44.6)	8 (12.3)	2 (3.1)
Q6. Mom's partner hurt pet in the home	54 (83.1)	9 (13.8)	0 (0)	2 (3.1)
Q7. Mom's partner broke/destroyed something	28 (43.1)	27 (41.5)	7 (10.8)	3 (4.6)
Q8. Mom's partner hurt her body	25 (38.5)	28 (43.1)	10 (15.4)	2 (3.1)
Q9. Mom's partner threatened to use weapon	43 (66.2)	16 (24.6)	3 (4.6)	3 (4.6)
Q10. Mom's partner hurt her with knife, gun, object	53 (81.5)	8 (12.3)	1 (1.5)	3 (4.6)
<i>Community exposure</i>				
Q22. Heard a person do name calling and tease others	5 (7.7)	27 (41.5)	33 (50.8)	0 (0)
Q23. Someone called you a name/hurt your feelings	25 (38.5)	35 (53.8)	5 (7.7)	0 (0)
Q24. You call names/hurt someone else's feelings	21 (32.3)	40 (61.5)	4 (6.2)	0 (0)
Q25. You physically hurt a person on purpose	26 (40.0)	35 (53.8)	4 (6.2)	0 (0)
Q26. Seen someone get hurt by another person	14 (21.5)	28 (43.1)	23 (35.4)	0 (0)
Q27. Someone hurt you	42 (64.6)	20 (30.8)	3 (4.6)	0 (0)
Q28. Seen someone hurt or killed in a movie	2 (3.1)	15 (23.1)	48 (73.8)	0 (0)
Q29. Seen someone hurt or killed in a video game	6 (9.2)	9 (13.8)	50 (76.9)	0 (0)
<i>Involvement</i>				
Q11. Yelled at mom and partner during fight	32 (49.2)	27 (41.5)	6 (9.2)	0 (0)
Q12. Yelled at mom and partner during fight (room)	25 (38.5)	24 (36.9)	15 (23.1)	1 (1.5)
Q13. Called for help when partner hurts your mom	33 (50.8)	25 (38.5)	6 (9.2)	1 (1.5)
Q14. Physically tried to stop mom and partner's fight	37 (56.9)	18 (27.7)	9 (13.8)	1 (1.5)
Q15. Partner did something to you to hurt/scare mom	40 (61.5)	18 (27.7)	6 (9.2)	1 (1.5)
Q16. Tried to get away from the fighting	30 (46.2)	30 (46.2)	3 (4.6)	2 (3.1)
Q17. Mom's partner asked you to tell on your mom	33 (50.8)	21 (32.3)	10 (15.4)	1 (1.5)
<i>Risk factors</i>				
Q18. Worry about partner's drinking or drugs	24 (36.9)	17 (26.2)	23 (35.4)	1 (1.5)
Q19. Worry about your mom's drinking or drug use	37 (56.9)	18 (27.7)	10 (15.4)	0 (0)
Q20. Your mom seems sad, worried, or upset	3 (4.6)	44 (67.7)	18 (27.7)	0 (0)
Q21. You have had big changes in your life	11 (16.9)	25 (38.5)	28 (43.1)	1 (1.5)
<i>Victimization</i>				
Q30. An adult in your family hurt your feelings	30 (46.2)	28 (43.1)	7 (10.8)	0 (0)
Q31. An adult in your family hurt your body	40 (61.5)	22 (33.8)	2 (3.1)	1 (1.5)
Q32. Someone <i>not</i> in your family touched privates	57 (87.7)	8 (12.3)	0 (0)	0 (0)
Q33. Someone <i>in</i> your family touched private parts	61 (93.8)	4 (6.2)	0 (0)	0 (0)

Table 3
Frequency of the level of exposure to violence in the home

Variable	Saw the outcome	Heard about it afterwards	Heard it while it was happening	Saw it from far away while it was happening	Saw it and was near while it was happening
<i>Home exposure</i>					
Q1-1. Adults in your family disagree	12	23	34	6	25
Q2-1. Mom's partner hurt her feelings	13	18	31	7	26
Q3-1. Mom's partner stopped her from doing something	3	8	12	1	11
Q4-1. Mom's partner stopped her from eating/sleeping	5	3	3	2	1
Q5-1. Mom and her partner argued about you	4	10	26	1	15
Q6-1. Mom's partner hurt pet in the home	2	1	1	0	5
Q7-1. Mom's partner broke/destroyed something	11	10	12	3	15
Q8-1. Mom's partner hurt her body	13	19	10	4	13
Q9-1. Mom's partner threatened to use weapon	5	6	3	0	3
Q10-1. Mom's partner hurt her with knife, gun, object	2	1	3	0	3

Note. Answers are duplicated.

sometimes or a lot of times and almost all children also reported that they had seen someone being hurt or killed in a video game (90.7%, $n = 59$) sometimes or a lot of times.

Many children worried about their mother's partner's drinking or drug use sometimes (26.2%, $n = 17$) or a lot of the time (9.2%, $n = 6$). Many also reported an adult in their family physically hurting them sometimes (33.8%, $n = 22$) and a lot of the time (3.1%, $n = 2$). Finally, 12.3% ($n = 8$) of the children reported having their private parts touched by a non-family member sometimes and 6.2% ($n = 4$) reported family members sometimes touching their private parts.

After indicating the level of each type of violence in the home, children were asked to indicate all the ways how they knew about the violence. As seen in Table 3, many children reported seeing or hearing violence in multiple ways.

3.2. The reliability and validity of the reported information

Six subscales were supported by reviews of the expert panel at the initial stage of the development of the CEDV: (1) level of violence in the home; (2) level of exposure to violence in the home; (3) level of exposure to other forms of community violence; (4) level of child involvement in violent events; (5) risk factors in the child's home life and (6) other victimizations the child has experienced at home. The CEDV and TISH were compared using both items on exposure to violence in the home and in the community. Average scores, standard deviations and reliability coefficients

Table 4
Means, standard deviations and reliability coefficients for the CEDV and TISH

	<i>M</i>		<i>SD</i>		<i>Alphas</i>		<i>N</i> of items	Total range
	Week 1	Week 2	Week 1	Week 2	Week 1	Week 2		
<i>CEDV</i>								
Total	24.60	24.28	8.58	9.57	.86	.84	33	0–66
Violence	6.06	5.76	3.45	3.20	.78	.74	10	0–20
Home exposure	7.33	7.07	6.30	5.13	.85	.76	(10) ^a	(0–50) ^b
Community exposure	8.45	8.49	2.62	2.87	.64	.71	8	0–16
Involvement	4.32	5.06	2.81	3.41	.67	.50	7	0–14
Risk factors	4.06	3.97	1.61	1.96	.24	.60	4	0–8
Victimization	1.23	1.05	1.29	1.38	.59	.70	4	0–8
<i>TISH</i>								
	Week1	Week1	Week1	Week1	N of items		Total range	
Total	18.97	12.29	.83	.85	7		0–28	
At home	6.73	4.34	.85	.54	13		0–52	
In community	12.23	9.83	.54					

^a These are sub-questions to 10 items on the level of violence and are not included in the total score.

^b Child participants could choose more than one item on each sub-question. Chosen items were added to achieve a score on each these specific sub-questions.

Table 5
Test–retest reliability

	Mean (SD)		<i>r</i>	Paired <i>t</i> -test	
	Week 1	Week 2		<i>t</i>	<i>p</i>
Violence	6.06 (3.45)	5.76 (3.20)	.684**	.564	.576
Home exposure	7.33 (6.30)	7.07 (5.13)	.701**	.336	.739
Community exposure	8.45 (2.62)	8.49 (2.87)	.674**	.173	.863
Involvement	4.32 (2.81)	5.06 (3.41)	.570**	−2.154*	.035
Risk factors	4.06 (1.61)	3.97 (1.96)	.632**	.410	.684
Victimization	1.23 (1.29)	1.05 (1.38)	.571**	1.119	.267

* $p < .05$. ** $p < .001$.

for the CEDV and TISH for both Week 1 and Week 2 are presented in Table 4. As can be seen, the average scores on subscales of CEDV ranged between 1.23 and 8.45, and the average total score was 24.60 (SD = 8.58) at Week 1 as well as 24.28 (SD = 9.57) at Week 2.

As can also be seen in Table 4, the Cronbach's alpha coefficient for all but one subscale of the CEDV ranged from $\alpha = .59$ to $.85$ at the first week and the overall α of CEDV was a strong $.86$. At the second week, similarly, the CEDV subscales showed relatively high Cronbach's alphas ranging from $\alpha = .50$ to $.76$ and the overall α was $.84$, similar to the first week. The only subscale that resulted in a low reliability coefficient was the risk factor subscale ($\alpha = .24$) for the first week's administration. The risk factor subscale, however, reported a moderate association in the second week ($\alpha = .60$).

Next, in order to examine test–retest reliability, Pearson's correlation coefficients and paired *t*-test statistics between Week 1 and Week 2 were calculated, and the results are presented in Table 5 above.

According to Table 5, the Pearson's correlation coefficient for each subscale ranged from $.57$ to $.70$, and all of them were statistically significant at $p < .001$. Relatively strong and statistically significant Pearson's correlation coefficients and non-significant differences on *t*-tests between administrations showed that Week 1 and Week 2 test scores for the level of violence in the home, home exposure, community exposure, risk factors and other victimization were very similar and stable over two CEDV administrations. There was one exception. The test–retest scores on the “level of involvement” were significantly different in the paired *t*-test ($t = -2.154$, $p < .05$) while the data produced highly correlated answers. Despite checking for data errors we did not find a reason for these differences in outcomes. Overall, the Pearson correlation and paired *t*-test statistics showed that almost all of the CEDV subscales had relatively high test–retest reliability.

To assess convergent validity, scores for the CEDV and TISH, which are designed to measure the same construct, were compared. Pearson's correlation coefficients between two test scores are presented in Table 6 below. The correlation between the CEDV and TISH indicates that a statistically significant and positive correlation existed both at the level of home violence exposure ($r = .494$, $p < .001$) and community violence exposure ($r = .397$, $p < .001$).

4. Conclusion

Working with children exposed to domestic violence and evaluating interventions with them requires a more stable method of assessment and tracking change than is currently available. The CEDV has been shown in this study to be both a reliable measure and one that reflects face, content and convergent validity. It is a promising first step in developing tools for practitioners and researchers who are working with exposed children.

The instrument that resulted from our development process was able to measure conceptually relevant factors in a stable manner. There were two exceptions. The “other risk factors” subscale resulted in poor reliability during the first test administrations and the “involvement” subscale resulted in high test–retest correlations but produced a significant

Table 6
Comparison of CEDV and TISH

		<i>r</i>
CEDV vs. TISH	At home	.494**
	In community	.397**

** $p < .001$.

difference in the paired *t*-test. These subscales are conceptually important and will require further development, perhaps by expanding the number of items in each subscale.

There are two other weaknesses in this study that must also be acknowledged. First, we had hoped to administer the CEDV to more than the 69 children who participated. Our work with local domestic violence prevention organizations proved fruitful but child participation was lower than we expected. We focused for this first study on a narrow age range, depended on frequently changing program staff to recruit participants and administer the measures and, of course, required parent or guardian approvals that were sometimes difficult to obtain. Second, we attempted to develop empirically-generated subscales through factor analyses but no conceptually coherent factors resulted. Perhaps with a larger sample we could have found empirically-based factors that were conceptually consistent.

This study is based on the CEDV version that is published in Appendix A of this article. After completing the study and continuing to consult with measurement development experts we have decided to further revise the measure in several ways. First, a few questionnaires were excluded from the analysis when young respondents failed to complete the survey or skipped many items. Several items were deemed too lengthy and we have subsequently shortened some items and simplified them by bulleting examples.

Second, we also changed the rating scale from a three-point to a four-point scale to give children a greater range of possible answers. Now the scaling includes “Never”, “Sometimes”, “Often” and “Almost Always”. We hope this change will generate even more sensitive responses from children taking the CEDV. A copy of this revised version appears on the CEDV website at <http://www.mincava.umn.edu/cedv>.

Third, some questions required the child to skip to the next question if they answered “Never” or to check one or more boxes or “all that apply” if they answered “Sometimes” to “Almost Always”. This sequencing presented difficulties, especially for younger children. As a result we have developed and are seeking Institutional Review Board approval of for an online version of the CEDV that will automatically present the child with one item per screen and, depending on his or her answer, will take the child to the next set of items to answer. This modification should make the sequencing of CEDV questions easier for younger children to follow.

Fourth, as stated earlier we made a decision to focus questions on violence directed toward a child’s mother. We made this decision so as to simplify the measure. Perhaps an online version of this measure would be able to distinguish between perpetrators who are male partners, mothers or even other adults in a family by using a drop-down menu. Thus, children reporting abuse experiences could be automatically asked to identify the primary abuser on each item.

Finally, dominant measures in the field of domestic violence use a timeframe, such as the past 12 months, within which respondents answer questions about violent events. It might be helpful for children using the CEDV to also be given a similar timeframe however it could also confuse the child if he or she has difficulty placing events within a specific time period. Perhaps asking the child to identify a holiday or other calendar event and then asking them to refer to violence since that calendar point would resolve some potential confusion. Calendar-based interviewing techniques have been used in other domestic violence research (see *Yoshihama, Clum, Crampton & Gillespie, 2002*) and might be adapted for use with exposed children.

We have developed a number of online resources to support the use of the CEDV that are freely available at <http://www.mincava.umn.edu/cedv>. This website offers a print version of the CEDV, a lengthy User Manual and access to several papers written by the research team on the CEDV and assessment issues.

The CEDV is only a beginning of efforts to better assess children’s exposure to domestic violence. Children in this study were exposed to relatively serious levels of violence and many were recently or currently residing in a crisis shelter. The CEDV measures varying degrees and levels of child exposure to domestic violence. This scale should be useful not only to children exposed to severe levels of violence but also low levels but requires testing with a community-based sample. Similar measures will likely be produced and the CEDV will likely go through additional revisions. Certainly developing empirically-generated factors and attempting to gather a national sample on which to standardize the measure would be a logical next step. For now, the CEDV offers a reliable and valid response to a large gap in the available measures for assessing children exposed to domestic violence and evaluating the interventions that seek to help children’s lives change for the better.

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Appendix A. Child Exposure to Domestic Violence Scale (CEDV)

CHILD EXPOSURE TO DOMESTIC VIOLENCE SCALE (CEDV)



Original artwork by Ida Pearle. Artwork used with permission from the artist. Assessment of Child Violence Exposure to Domestic Violence

These directions are to be read aloud by the practitioner administering this measure.

This is a list of questions about your life and your family. It will probably take you about 30 minutes to fill out. If you have a question at any time while you're filling this out, please ask me [the person who gave it to you].

All your answers will be kept private. To make sure of this, please do NOT write your name anywhere. You may decide to stop answering the questions at any time.

Think for a moment about the people who live with you. There are lots of ways to describe the adults that kids live with. For example, some kids live with a stepparent, or a grandparent, or foster parents. Other kids live with one of their parents and that parent's girlfriend or boyfriend. The following questions are about the adults you normally live with. To make them easier to understand, we use the words "mom" and "mom's partner."

When you read the word "mom," think of the woman you have lived with and who has taken care of you, whoever she may be. For example, this person might be your mom, your stepmother, your grandmother, or your foster mom. When you read the words "mom's partner", think of who that is for your own situation. For example, it could be your dad, your step dad, your grandpa, or your mom's girlfriend or boyfriend.

Please read all the directions and circle your answers to each question.

Part One

There are two parts to each question.

⇒ First answer the question about how often something happened by circling your answer.

⇒ Then check off all the ways you knew about what happened.

⇒ If you answer “Never” in the first part, skip the second part and go on to the next question.



Never



Sometimes



A lot

Example:
How often have there been fights at your school?

Never Sometimes A lot

↓

Circle never, then go to the next question.

How did you know about it?

- = I saw the outcome (like someone was hurt, something was broken, or the police came).
- = I heard about it afterwards.
- = I heard it while it was happening.
- = I saw it from far away while it was happening.
- = I saw it and was near while it was happening.

1. How often do adults in your family disagree with one another?

Never Sometimes A lot

↓

Circle never, then go to the next question.

How did you know about it?

- = I saw the outcome (like someone was hurt, something was broken, or the police came).
- = I heard about it afterwards.
- = I heard it while it was happening.
- = I saw it from far away while it was happening.
- = I saw it and was near while it was happening.

2. Has your mom’s partner ever hurt your mom’s feelings by calling her names, swearing, yelling, threatening her, screaming at her, or things like that?

Never

Sometimes A lot

How did you know about it?

= I saw the outcome (like someone was hurt, something was broken, or the police came).

= I heard about it afterwards.

= I heard it while it was happening.

= I saw it from far away while it was happening.

= I saw it and was near while it was happening.

Circle never, then go to the next question.

3. How often has your mom’s partner stopped your mom from doing something she wanted to do or made it difficult for her to do something she wanted to do, like leave the house, go to the doctor, use the telephone, or visit her friends or relatives?

Never

Sometimes A lot

How did you know about it?

= I saw the outcome (like someone was hurt, something was broken, or the police came).

= I heard about it afterwards.

= I heard it while it was happening.

= I saw it from far away while it was happening.

= I saw it and was near while it was happening.

Circle never, then go to the next question.

4. How often has your mom’s partner stopped your mom from eating or sleeping, or made it difficult for her to eat or sleep?

Never

Sometimes A lot

How did you know about it?

= I saw the outcome (like someone was hurt, something was broken, or the police came).

= I heard about it afterwards.

= I heard it while it was happening.

= I saw it from far away while it was happening.

= I saw it and was near while it was happening.

Circle never, then go to the next question.

5. How often have your mom and her partner argued about you? *[It is important for you to know that it is not your fault if your mom and her partner argue about you.]*

Never

Sometimes A lot

How did you know about it?

- = I saw the outcome (like someone was hurt, something was broken, or the police came).
- = I heard about it afterwards.
- = I heard it while it was happening.
- = I saw it from far away while it was happening.
- = I saw it and was near while it was happening.

6. How often has your mom’s partner hurt, or tried to hurt, a pet in your home on purpose?

Never

Sometimes A lot

How did you know about it?

- = I saw the outcome (like someone was hurt, something was broken, or the police came).
- = I heard about it afterwards.
- = I heard it while it was happening.
- = I saw it from far away while it was happening.
- = I saw it and was near while it was happening.

7. How often has your mom’s partner ruined, broken or destroyed something on purpose, like punching a wall, ripping a phone cord out of the wall, smashing a picture, or things like that?

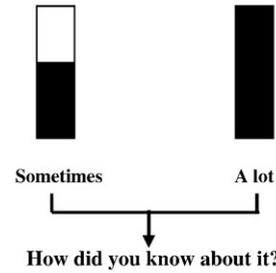
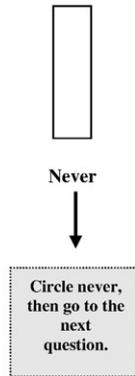
Never

Sometimes A lot

How did you know about it?

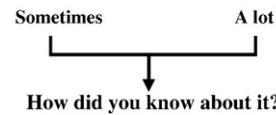
- = I saw the outcome (like someone was hurt, something was broken, or the police came).
- = I heard about it afterwards.
- = I heard it while it was happening.
- = I saw it from far away while it was happening.
- = I saw it and was near while it was happening.

8. How often has your mom's partner done something to hurt her body like hitting her, punching her, kicking her, choking her, shoving her, pulling her hair, or things like that?



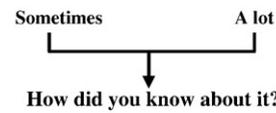
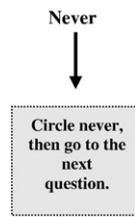
- = I saw the outcome (like someone was hurt, something was broken, or the police came).
- = I heard about it afterwards.
- = I heard it while it was happening.
- = I saw it from far away while it was happening.
- = I saw it and was near while it was happening.

9. How often has your mom's partner *threatened* to use a knife, gun, or other object to hurt your mom?



- = I saw the outcome (like someone was hurt, something was broken, or the police came).
- = I heard about it afterwards.
- = I heard it while it was happening.
- = I saw it from far away while it was happening.
- = I saw it and was near while it was happening.

10. How often has your mom's partner *actually* hurt your mom with a knife, gun, or other object?



- = I saw the outcome (like someone was hurt, something was broken, or the police came).
- = I heard about it afterwards.
- = I heard it while it was happening.
- = I saw it from far away while it was happening.
- = I saw it and was near while it was happening.

Part Two

It's hard to know what to do when you see someone getting hurt. In the questions on this page the word "hurt" means hurting your mom's feelings on purpose, threatening her, physically hurting her, or stopping her from doing things.

Choose the answer that best describes your situation and circle it. There are no right or wrong answers to these questions.



Never



Sometimes



A lot

- | | | | |
|---|-------|-----------|-------|
| 11. When your mom's partner hurts your mom, how often have you hollered or yelled something at them from a <i>different room</i> than where the fight was taking place? | Never | Sometimes | A lot |
| 12. When your mom's partner hurts your mom, how often have you hollered or yelled something at them in the <i>same room</i> where they are fighting? | Never | Sometimes | A lot |
| 13. When your mom's partner hurts your mom, how often have you called someone else for help, like calling someone on the phone or going next door? | Never | Sometimes | A lot |
| 14. When your mom's partner hurts your mom, how often have you gotten physically involved trying to stop the fighting? | Never | Sometimes | A lot |
| 15. When your mom's partner hurts your mom, how often has your mom's partner done something to you to hurt or scare your mom? | Never | Sometimes | A lot |
| 16. When your mom's partner hurts your mom, how often have you tried to get away from the fighting by hiding, leaving the house, locking yourself in a different room, or things like that? | Never | Sometimes | A lot |
| 17. How often has your mom's partner asked you to tell him about what your mom has been doing or saying? | Never | Sometimes | A lot |
| 18. How often do you worry about your mom's partner getting drunk or taking drugs? | Never | Sometimes | A lot |

			
	Never	Sometimes	A lot
19. How often do you worry about your mom getting drunk or taking drugs?	Never	Sometimes	A lot
20. How often does your mom seem sad, worried or upset?	Never	Sometimes	A lot
21. How often does it seem like you have dealt with big changes in your life? For example, moving homes, staying in the hospital, your parents getting a divorce, the death of someone you're close to, a parent going to jail, and other things like that?	Never	Sometimes	A lot
22. Sometimes people annoy or hurt each other such as making fun of someone or calling them names, and saying things to make them feel bad. How often have you heard a person do or say any of these things to someone else in your community or at your school?	Never	Sometimes	A lot
23. How often has someone from your community or at your school done or said any of these things to you to hurt you?	Never	Sometimes	A lot
24. How often do you hurt a person's feelings on purpose, like making fun of someone or calling them names?	Never	Sometimes	A lot
25. How often do you physically hurt a person on purpose, such as hitting, kicking or things like that?	Never	Sometimes	A lot
26. How often have you seen someone else in your community or at school get hurt by being grabbed, slapped, punched, kicked or being hurt by a knife or a gun?	Never	Sometimes	A lot
27. How often has someone at school or in your community hurt you by grabbing, slapping, punching, kicking or threatening you with a knife or gun?	Never	Sometimes	A lot
28. How often have you seen someone being hurt or killed on television or in a movie?	Never	Sometimes	A lot

			
	Never	Sometimes	A lot
29. How often have you seen someone being hurt or killed in a video game?	Never	Sometimes	A lot
30. How often has an adult in your family hurt your feelings by making fun of you, calling you names, threatening you, or saying things to make you feel bad?	Never	Sometimes	A lot
31. How often has an adult in your family done something to hurt your body, like hitting you, kicking you, beating you up, or things like that?	Never	Sometimes	A lot
32. How often has someone who is <u>not</u> in your family touched your private parts when you didn't want them to, made you touch their private parts, or forced you to have sex?	Never	Sometimes	A lot
33. How often has someone in your family touched your private parts when you didn't want them to, made you touch their private parts, or forced you to have sex?	Never	Sometimes	A lot

DO NOT WRITE YOUR NAME ON THIS PAPER.

Part Three

34. How old are you? _____

39. Where do you live? (Circle one answer.)

1. House
2. Apartment
3. Shelter
4. Other (Where?) _____

40. Who are the people you live with? Circle all that apply.

- | | | |
|----------------|-----------------------------------|-------------------------|
| 1. Mother | 6. Mother's boyfriend or partner | 11. Younger brother (s) |
| 2. Father | 7. Mother's girlfriend or partner | 12. Older brother (s) |
| 3. Step-Mother | 8. Father's boyfriend or partner | 13. Younger sister(s) |
| 4. Step-Father | 9. Father's girlfriend or partner | 14. Older sister(s) |
| 5. Grandmother | 10. Grandfather | 15. Other (Who?) _____ |

41. What race or ethnicity do you consider yourself? (Circle all that describe you.)

1. White/Caucasian/European American
2. Black/African American/African
3. American Indian/Native American
4. Asian or Pacific Islander
5. Multi-racial/No primary racial or ethnic identification
6. Other (What?) _____
7. I don't know
8. I don't want to answer this question

42. Are you male or female? (Circle one answer.)

1. Male
2. Female

43. If your mom and her partner fight, when did the fighting start? (Circle one answer.)

1. I don't remember them fighting.
2. They started fighting this year.
3. They started fighting 2-3 years ago.
4. They started fighting 4 or more years ago.
5. They've been fighting for as long as I can remember.

45. Do you think your family has enough money for the things it needs?

1. No, there are times when my family doesn't have enough money for food or rent or other things we need.
2. We seem to have enough money to pay for what we need.
3. We have enough money to buy extra things we don't really need.
4. I don't know.

This measure was created and produced by Jeff Edleson, Ph.D.,
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