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Reliability and Factor Structure of the Psychological Maltreatment and Neglect Scales of the Computer Assisted Maltreatment Inventory (CAMI)

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Abstract

The primary objective of this study was to evaluate the psychometric properties of the Psychological Maltreatment (PM) and Neglect subscales of the Computer Assisted Maltreatment Inventory (CAMI; DiLillo et al., 2010). The CAMI is a retrospective self-report measure that assesses multiple forms of child maltreatment (i.e., sexual, physical, psychological, neglect, exposure to interparental violence) retrospectively from adults. The CAMI's PM and Neglect subscales were administered to a geographically diverse sample of 400 college students and a sample of 412 newlyweds. Exploratory factor analyses were conducted for each group separately by subscale. Represented in the PM factor structures were items that depict emotional responsiveness, terrorizing/spurning, demanding/rigid, corrupting, and isolating parental behaviors. The Neglect scale included items depicting basic needs, cleanliness, abandonment, monitoring and medical neglect factors. Revised versions of the CAMI PM and Neglect subscales based on the factor analysis are presented.

Keywords: assessment, child maltreatment, emotional abuse, emotional neglect, psychological aggression, psychological distress, psychometric properties

Approximately 70% of the 1 million annual cases of confirmed child maltreatment involve psychological maltreatment, neglect, or both (U.S. Department of Health and Human Services [DHHS], 2001). Yet, compared to other forms of maltreatment, considerably less research attention has focused on these types of maltreatment (Chaffin, 2006). This situation is concerning given that existing research suggests psychological maltreatment and neglect are associated with equally severe or even greater short- and long-term consequences than other forms of child maltreatment (see Claussen & Crittenden, 1991; Hart, Brassard, Binggeli, & Davidson, 2002). Despite these findings, there is a lack of consensus in the literature regarding the definition of these forms of maltreatment, which hinders the accurate estimation of prevalence rates and makes comparisons across studies very difficult (McGee & Wolfe, 1991; Perrin-Miller & Perrin, 2007). Long ago, Cicchetti (1991) advised that developing precise definitions and appropriate strategies for the measurement of psychological maltreatment and neglect would facilitate a better evaluation of how these two forms of child maltreatment relate to immediate and long-term development. One method of assessing maltreatment is through retrospective reports obtained from adults. This approach is useful for estimating overall prevalence and avoids some of the obstacles involved in a prospective, longitudinal study of children suffering abuse by their caregivers (Baker, 2009; Kendall-Tackett & Becker-Blease, 2004). Further, although retrospective measures of childhood maltreatment might, in part, reflect respondents' subjective perceptions of the early family environment, these perceptions might also be key mediators between negative childhood experiences and adult functioning (Walker, Holman, & Busby, 2009). Consistent with this notion, some data indicate that selfreport measures of maltreatment are more predictive of current functioning than the use of Child Protective Services (CPS) and court records to identify child maltreatment victims (McGee, Wolfe, Yuen, Wilson, & Carnochan, 1995).

As highlighted by Baker (2009), one challenge in studying psychological maltreatment is that the acts making up this form of abuse are difficult to define and measure. Baker highlighted the vast range of legal, conceptual, and operational definitions that are currently employed. In comparison with sexual and physical abuse, psychological maltreatment typically involves an ongoing pattern of caregiver behaviors, including the absence of needed action, which can be particularly difficult to operationalize. Perhaps stemming from these challenges in operationally defining psychological maltreatment, there have been challenges in developing psychometrically sound measurement strategies available to researchers in this area. Although several measures exist, researchers sometimes base measures on a narrowed conceptualization of psychological maltreatment (Baker, 2009).

Issues with the conceptualization and measurement of psychological maltreatment have been long recognized. As far back as 1991, a special issue of the journal *Development and Psychopathology* was devoted to the topic of defining psychological maltreatment. Many of the challenges highlighted in that issue still exist today; likewise, the recommendations arising from that discussion remain valid. These include (a) psychological maltreatment should be defined in such a way that it can be precisely measured; (b) for research purposes, these two forms of abuse are best defined in terms of parental behaviors

rather than indications of child outcomes; (c) factors such as severity, frequency, and context should be considered; and (d) because psychological maltreatment and neglect rarely occur in isolation, they should be measured in conjunction with all other forms of abuse to determine the differential impact of each abuse type (see Cicchetti, 1991; McGee & Wolfe, 1991). More recently, Baker (2009) echoed many of these concerns, particularly the definitional concerns and the disconnect between conceptual and operational definitions of abuse. Baker also criticized the breadth of some extant instruments, noting that the items on many measures focus disproportionately on one subtype of psychological maltreatment, namely spurning.

As noted earlier, attempts to quantify psychological maltreatment and neglect, and the correlates of each, are impacted by the way that researchers conceptualize and define these overlapping constructs. One prominent framework for conceptualizing psychological maltreatment is Hart et al.'s (2002) model (also see guidelines from the American Professional Society on the Abuse of Children, 1995), which divides psychological maltreatment by caregivers into the following six subtypes that can include acts of commission or omission: spurning (verbal and nonverbal caregiver acts that reject and degrade a child), terrorizing (caregiver behaviors that threaten or are likely to physically hurt, kill, abandon, or place the child or the child's loved ones or objects in recognizably dangerous situations), isolating (caregiver acts that consistently deny the child opportunities to meet his or her needs for interacting or communicating with peers or adults inside or outside the home), exploiting or corrupting (caregiver acts that encourage the child to develop inappropriate behaviors, such as self-destructive, antisocial, criminal, deviant, or other maladaptive behaviors), denial of emotional responsiveness (caregiver acts that ignore the child's attempts and needs to interact, such as failing to express affection, caring, and love for the child, and showing no emotion in interactions with the child), and mental health, medical, or educational neglect (unwarranted caregiver acts that ignore, refuse to allow, or fail to provide the necessary treatment for the mental health, medical, and educational problems or needs of the child).

This framework of psychological maltreatment is highly cited in the literature. However, some have pointed out that these categories are not mutually exclusive, meaning that the same caregiver behavior might belong to more than one subtype (Perrin-Miller & Perrin, 2007). For example, certain isolating behaviors (e.g., locking a 4-year-old in a dark closet) could also be terrorizing due to the extreme fear they would likely induce. Likewise, having parents who threaten to abandon a child could be considered spurning as well as terrorizing (Hart et al., 2002). Nevertheless, the importance of assessing subtypes of psychological maltreatment is highlighted by findings that specific forms are differentially associated with later clinical outcomes. Allen (2008), for example, found that experiencing terrorizing from caregivers was predictive of anxiety and somatic concerns in early adulthood, whereas caregiver ignoring predicted depression and features of borderline personality disorder, and degradation predicted only borderline personality disorder. These findings imply that different sequelae and intervention strategies should be expected depending on the subtype of maltreatment experienced, pointing to the need for measures that assess subtypes of psychological maltreatment.

Just as there is difficulty operationalizing psychological maltreatment, Zuravin (1991) pointed out that the lack of a standard definition has been a stumbling block in developing a sound knowledge base about child neglect. Again, neglect involves acts of omission, which are more difficult to measure than assessing observable and quantifiable acts of commission. Additionally, because child neglect is grounded in social norms about the minimum standard of care (Garbarino, 1991), the definitions of neglect evolve over time and context (McGee & Wolfe, 1991). Nevertheless, as with psychological maltreatment, neglect is commonly conceptualized as encompassing distinct subtypes. Although authors have proposed slightly different subtypes of neglect, there is some consensus among researchers (e.g., Perrin-Miller & Perrin, 2007; Trocmé, 1996; Zuravin & DiBlasio, 1996) that key aspects of neglect include not providing for safe and adequate housing, failure to provide physical and mental health care, lack of supervision, and inadequate nutrition, personal hygiene, or education. These areas converge with legal definitions of neglect, which emphasize threats to children's physical well-being and include a failure to provide adequate food, clothing, shelter, medical care, or supervision (U.S. DHHS, 2009).

In response to the need for psychometrically sound measures of psychological maltreatment and neglect, this study describes the development and factor structure of the Computer Assisted Maltreatment Inventory (CAMI) Psychological Maltreatment (PM) and Neglect scales. The CAMI is a Web-based instrument administered to adults, who report retrospectively about potential maltreatment experiences in childhood. Although the focus here is on the PM and Neglect scales, the CAMI also assesses other forms of maltreatment, including sexual abuse, physical abuse, and exposure to intimate partner violence (see DiLillo et al., 2010). The PM subscale includes acts of commission and omission and reflects the first five categories proposed by Hart et al. (2002): spurning, terrorizing, isolating, denying emotional responsiveness, and exploiting or corrupting. The CAMI Neglect scale was developed using the final Hart et al. (2002) categories (i.e., mental health, medical, and educational neglect), areas that are typically represented in state legal definitions of neglect (U.S. DHHS, 2009). Additional items were added that reflect other examples of failing to provide for the basic physical needs of a child. These items were based on reviews by Erickson and Egeland (2002) and Perrin-Miller and Perrin (2007) and relate to unsafe or unsanitary living conditions, inadequate shelter, poor personal hygiene, nutritional neglect, and abandonment or supervisory neglect.

In this study, separate factor analyses of the CAMI PM and Neglect items were conducted to determine whether coherent subtypes of psychological maltreatment and neglect would emerge. Although Hart et al.'s (2002) subtypes served as a guide during item generation, our aim was not to conduct a strict test of that model. Indeed, the Hart et al. categories reflect more of a compilation of caregiver behaviors that might be indicative of maltreatment rather than an underlying theory of psychological maltreatment (Glaser, 2002). This is evidenced in part by the theoretical overlap in content across categories noted earlier. Therefore rather than restrict analysis to the testing of a specific model—requiring a priori specification of each subscale item—the goal of this initial study was to investigate the underlying dimensions of the PM and Neglect scales through these exploratory factor analyses. In doing so, we used a geographically diverse sample of undergraduate students. It is important to examine these properties in university students who, perhaps due to their

accessibility, are among the most commonly studied population in the child maltreatment literature. The second sample, consisting of opposite-sex married couples recruited from the community, represents a demographically distinct yet significant subset of young adults who might be impacted by abuse. The relevance of PM and neglect for this population has been established in a number of recent studies linking these experiences to a range of adult intimate partner difficulties, including physical aggression (e.g., Dodge Reyome, 2010; Paradis & Boucher, 2010; Perry, DiLillo, & Peugh, 2007; Riggs & Kaminski, 2010; Zurbriggen, Gobin, & Freyd, 2010). The resulting models are expected to aid in the ongoing process of operationally defining these two constructs as well as establishing the CAMI PM and Neglect scales as psychometrically sound measures.

Method

Participants

Sample 1: Undergraduate Students

To achieve a sample of sufficient size for factor analysis, 400 cases were randomly selected from a larger data set of college students who completed the CAMI at three geographically diverse institutions: the University of Nebraska–Lincoln (UNL), Miami University (MU), and the University of Southern California (USC). Of the 400 selected cases, 140 (35%) attended UNL, 128 (32%) attended MU, and 132 (33%) attended USC. Table 1 provides the demographic data for this sample.

Sample 2: Newlywed Couples

A sample of 412 (206 men, 206 women) participants were recruited randomly through a review of county marriage license records. First-time newly married couples were sent letters inviting them to participate in a larger study examining associations between child maltreatment history and marital functioning (see table 1 for demographic data for this sample).

Table 1. Demographic Characteristics of College and Newlywed Samples

	College Sample[a]		Newlywed Sample[b]	
Variable	*n*	%	*n*	%
Mean age in years (*SD*)	20.81 (2.20)		26.26 (4.40)	
Range	18–44		19–50	
Gender				
Male	115	28.8	206	49.8
Female	285	71.3	208	50.2
Marital status				
Never married	384	96.0	14	3.3
Married	4	1.0	400	96.4
Cohabitating	10	2.5	0	0
Divorced or separated	2	0.5	0	0

Ethnicity				
European-American	314	78.5	390	93.3
African American	10	2.5	5	1.2
Hispanic/Latin American	12	3.0	7	1.7
Asian American	39	9.8	3	0.7
Native American	1	0.3	3	0.7
Other	24	6.1	10	2.4
Family income growing up				
Less than 40,000	71	17.8	141	33.7
41,000–80,000	155	38.9	188	45.0
81,000 and above	174	43.6	84	20.1

[a]$N = 400$. [b]$N = 414$.

Measures

The measures used in this study are the PM and Neglect scales of the CAMI (DiLillo et al., 2010). The CAMI was developed to assess five forms of child maltreatment (sexual abuse, physical abuse, exposure to domestic violence, psychological maltreatment, and neglect) using specific behavioral criteria. The CAMI has been shown to have good test-retest reliability and criterion-related validity compared to a standard measure of childhood maltreatment (DiLillo et al., 2010).

Item Development

An initial item pool for the PM and Neglect scales was generated by a team of researchers that included one doctoral-level child maltreatment expert and two student research assistants who completed extensive readings of the theoretical literature on psychological maltreatment and neglect. Each team member used a rational-intuitive method to independently write items, which were then compared, looking for similarities in content across the three authors' examples. Consensus was reached through group discussion and resulted in an initial pool of 57 items thought to represent the major domains of psychological maltreatment (i.e., spurning, terrorizing, isolating, exploiting or corrupting, and denying emotional responsiveness) and 38 items reflecting seven domains of physical neglect (unsafe or inadequate shelter, unsanitary conditions, health care neglect, personal hygiene, educational neglect, nutritional neglect, and supervisory neglect or abandonment).

Despite the importance of determining age, frequency, duration, and perpetrator when assessing maltreatment, this proves to be very difficult in the case of psychological maltreatment and neglect because both tend to be pervasive patterns of sometimes subtle behavior rather than discrete, single-event occurrences (Hamarman, Pope, & Czaja, 2002). Therefore, it seems unlikely that age of onset, frequency, or duration can be accurately captured through adult retrospective methods. However, there is evidence that as respondents evaluate a linear string of numbers, such as those used with Likert scales, they appear to be assessing quantity (DeVellis, 2003). Thus, each item on the CAMI PM and Neglect subscales was written as a declarative statement with response options falling on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Several of the

items are intended to be reverse scored; these items are marked with an R. Participants are instructed, "Please indicate by using the scale below how much you agree or disagree with each statement. By 'parents' we mean any parent, stepparent, foster parent, or other primary caregiver who took care of you as a child, even if they were not biologically related to you."

Procedure

Institutional review board approval was obtained at each institution where data collection occurred. Self-report, Web-based questionnaire data were collected. All participants logged onto the same secure Web site and were asked to complete the CAMI as well as several other instruments not included in this study. The computer program is designed so that all measures including the CAMI abuse subscales (i.e., Sexual Abuse, Physical Abuse, Exposure to Domestic Violence, PM, and Neglect) are administered in a random order. On average, the entire CAMI takes respondents 5 to 15 minutes to complete.

Data Analysis

A total of four factor analyses were run: PM in the college sample, PM in the newlywed sample, Neglect in the college sample, and Neglect in the newlywed sample. Prior to analyses, items on the PM and Neglect scales were examined for assumptions of normality (i.e., skewness and kurtosis). The data were then screened for indications of multicollinearity and singularity in each sample using Bartlett's test of sphericity and the Kaiser–Meye Olkin test. Based on these indicators, the data were deemed appropriate for exploratory factor analyses. Principle factor analysis (PFA) extraction models with principle axis factoring with a varimax orthogonal rotation were conducted separately for the PM and the Neglect scales for both the undergraduate and the newlywed samples. Based on the results of these PFAs, revised versions of the CAMI PM and Neglect scales were formed.

Results

The means were examined for each item across both scales. On the 5-point PM scale for the college sample, the means ranged from 1.11 (Item 20: I used illegal drugs with my parents before I was 18 years old) to 2.68 (Item 5: My parents seemed to live their lives through me). In the newlywed sample, item means ranged from 1.12 (Item 20: I used illegal drugs with my parents before I was 18 years old) to 2.54 (Item 6: My parents rarely criticized or insulted me [reverse scored]). On the Neglect scale, item means ranged from 1.17 (Item 19: I had enough to eat as a child [reverse scored]) to 2.00 (Item 10: Household cleaners and medications were stored out of the reach of children when I was growing up [reverse scored]) for the college sample and from 1.23 to 2.19 in the newlywed sample for the same items. Many items on both scales were positively skewed (i.e., ranging from 1.00–5.61). Items were transformed using logarithm and inverse procedures; however, the models did not differ substantially when the raw versus transformed data were used. Therefore, the original data were used.

In all analyses, internal reliability coefficients were high with overall coefficient alphas of .96 in both samples on the original pool of PM scale items and .93 for the college sample

on the Neglect scale and .94 in the newlywed sample on the Neglect scale. A complete listing of item means, standard deviations, and reliability coefficients can be obtained from the authors.

Exploratory Factor Analyses

The data were screened for indications of multicollinearity and singularity. Based on the lowest eigenvalues or .13 and .48 for PM and Neglect, respectively, and the highest squared multiple correlations (SMC) between variables of .79 for PM and .75 for Neglect, multicollinearity and singularity did not appear to be a problem. Bartlett's test of sphericity on the PM and Neglect scales supported the findings that multicollinearity and singularity were not a threat, with tests ranging from $\chi^2(1596, N = 414) = 1357.63$, $p = .001$ for the PA scale with the newlywed sample to $\chi^2(1596, N = 400) = 12286.65$, $p = .001$ for the PA scale with the college sample. Likewise, the Kaiser–Meye Olkin test values for the scales ranged from .94 to .95, revealing a strong relationship among the items on each scale. Based on these indicators, the data were deemed appropriate for exploratory factor analyses. For both factor analyses, a PFA extraction model with principle axis factoring with a varimax orthogonal rotation was selected (Tabachnick & Fidell, 1996).

Table 2 summarizes the total amount of variance explained by the extracted factors for each scale and sample. Tables 3 through 6 provide the factor loadings from the rotated factors structure matrices for the PM scale and the Neglect scale for both the college and the newlywed samples. Please note that the item wording on tables 3 and 6 has been condensed and does not exactly match the items as they appear on the CAMI scale.

PM Scale—College Sample

Four trial PFAs using principal axis factoring with varimax rotation were conducted for the PM scale. Based on these trials of a three- to six-factor solution, the four-factor solution appeared to provide the best model fit. Likewise, examination of the scree plot (as suggested by Gorsuch, 1983) also supported a four-factor solution. As can be seen in table 2, the first and second factors accounted for the largest percentage of the variance relative to the total variance in the items. Most factor loadings were very good (>.55) to excellent (>.71).

Forty-four of the original 57 items loaded above .40 on the four factors (see table 3), suggesting that most items could be considered a good to excellent measure of the construct being assessed (Comrey & Lee, 1992). The first three factors aligned with Hart et al.'s (2002) subtypes and were named accordingly: emotional responsiveness, terrorizing/spurning, and corrupting. Factor 2 included aspects of both terrorizing and spurning as defined by Hart et al. Factor 4 appeared to represent demanding and rigid behaviors and was thus named demanding/rigid. All SMCs of the factor scores were within acceptable limits (i.e., Factor 1 = .91, Factor 2 = .85, Factor 3 = .77, Factor 4 = .77) for PM, indicating stable solutions for the college sample. The correlations between the factors ranged from .29 to .70. The reliability estimates ranged from alpha coefficients of .72 to .94 with a total scale coefficient alpha of .95.

Table 2. Total Variance Explained by the Extracted Factors of the Computer Assisted Maltreatment Inventory Psychological Maltreatment and Neglect Scales

	Initial Eigenvalues			Rotation Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Psychological maltreatment: College sample						
1	18.637	32.696	32.696	9.184	16.112	16.112
2	3.153	5.531	38.227	6.914	12.136	28.249
3	2.745	4.816	43.043	3.523	6.180	34.429
4	1.899	3.332	46.374	3.237	5.678	40.107
Psychological maltreatment: Newlywed sample						
1	19.915	34.939	34.939	9.083	15.935	15.935
2	2.996	5.255	40.194	6.558	11.505	27.440
3	2.564	4.499	44.693	3.914	6.867	34.307
4	1.721	3.019	47.712	3.308	5.804	40.111
5	1.452	2.547	50.259	3.131	5.493	45.604
Neglect: College sample						
1	13.094	34.457	34.457	4.241	11.160	11.160
2	1.936	5.095	39.552	4.081	10.739	21.900
3	1.471	3.870	43.422	2.981	7.846	29.745
4	1.324	3.484	46.906	2.520	6.631	36.377
5	1.250	3.288	50.194	2.454	6.458	42.834
6	1.182	3.111	53.304			
Neglect: Newlywed sample						
1	13.536	35.620	35.620	5.906	15.542	15.542
2	1.953	5.141	40.761	3.362	8.848	24.390
3	1.550	4.078	44.839	3.179	8.365	32.755
4	1.326	3.489	48.327	2.665	7.014	39.769
5	1.219	3.209	51.536	1.730	4.552	44.321

PM Scale—Newlywed Sample

A PFA extraction with principal axis factoring and a varimax rotation was conducted in four trials, based on three to six possible factors for the PM scale with the newlywed sample. Overall, a five-factor solution appeared to best fit the data. As was the case with the college sample, the first two factors accounted for the largest percentage of variance as reflected in the rotated sum of squares loadings (SSLs; see table 2). In fact, when comparing the SSLs between the college sample and the newlywed sample, they are nearly equal (i.e., Factor 1 = 16.112 [college], Factor 1 = 15.935 [newlywed]; Factor 2 = 12.136 [college]; Factor 2 = 11.505 [newlywed]). Most of the factor loadings were very good (>.55) to excellent (>.71).

Table 3. College Sample Factor Loadings from the Rotated Factor Structure Matrix for the Computer Assisted Maltreatment Inventory Psychological Maltreatment (PM) Scale: Principal Axis Factoring with Varimax Rotation

	Factors			
PM Items	1	2	3	4
1. Emotional responsiveness				
My parents showed a lot of interest in me.	**.793**	.256	.124	.104
My parents liked spending time with me.	**.726**	.259	.120	.087
I felt loved by my parents.	**.700**	.310	.119	.116
My parents often told me they loved me.	**.692**	.196	.014	.082
My parents acknowledged my achievements.	**.686**	.128	.275	.039
I felt wanted.	**.679**	.216	.255	.122
My parents paid attention to me.	**.674**	.282	.178	.179
My parents often asked me about my day.	**.665**	.219	.200	.056
My parents paid attention to me when I talked.	**.646**	.281	.102	.282
My parents helped me with homework.	**.637**	.294	.178	.069
My parents attended school activities.	**.620**	.089	.088	.119
My parents liked it when I showed affection.	**.619**	.249	.023	.065
I felt accepted.	**.604**	.366	.052	.429
My parents only paid attention to me when they needed something.	**.571**	.263	.341	.087
My parents thought I would never amount to anything.	**.543**	.376	.147	.101
My parents allowed me to play outside.	**.443**	.020	.272	.212
2. Terrorizing/spurning				
My parents threatened to hit or physically hurt me.	.176	**.684**	.061	.099
My parents cursed or swore at me.	.096	**.664**	.194	.063
My parents made me feel like a bad person.	.435	**.604**	.107	.323
My parents often made me cry for no good reason.	.286	**.593**	.155	.270
My parents embarrassed me in front of friends.	.297	**.561**	.239	.208
My parents threatened to leave me somewhere.	.196	**.540**	.247	.013
My parents made me feel guilty for things that were not my fault.	.406	**.532**	.194	.366
My parents got angry and destroyed my things.	.201	**.524**	.309	.152
My parents criticized or insulted me.	.317	**.524**	–.006	.292
My parents confined me to my room for long periods of time.	.174	**.505**	.245	.066
My parents only punished me when I deserved it.	.369	**.495**	.127	.253
My parents sometimes gave me the silent treatment.	.191	**.482**	.147	.253
My parents put me in frightening situations.	.236	**.467**	.360	.307
My parents made fun of things that are important to me.	.406	**.463**	.074	.373
My parents threatened to leave me and never come back.	.264	**.452**	.261	.045
My parents punished me by confining me to small spaces.	.156	**.448**	.151	.034
3. Corrupting				
I saw my parents do illegal things.	.130	.241	**.575**	.004
My parents encouraged me to do illegal things.	.215	.176	**.546**	.156

I had to take care of my parents.	.172	.300	**.483**	.154
I used illegal drugs with my parents.	.100	.058	**.448**	–.095
My parents cared when I did something wrong.	.278	.071	**.444**	.133
My parents discouraged me from doing illegal things.	.209	.054	**.440**	.084
My parents allowed me to stay home from school without a reason.	.062	.041	**.421**	.063
4. Demanding/rigid				
Being second best was not good enough.	.121	.152	.083	**.690**
Only A's were good enough.	.122	.043	.023	**.643**
My parents were very controlling.	.212	.454	–.004	**.488**
My parents criticized the way I looked.	.323	.418	.000	**.446**
My parents used me to meet their emotional needs.	.264	.311	.208	**.413**

Note: Underlined values indicate a double loading on two factors. Loadings shown in bold indicate the factor on which the item was placed.

Like the college sample, three factors were named following the Hart et al. (2002) model of psychological abuse: emotional responsiveness, terrorizing/spurning, and corrupting. Like the college sample, the last factor was called demanding/rigid. The exploratory factor analyses with the newlywed sample scores resulted in one additional factor compared to the college sample. The factor was named isolating, as it appeared to reflect a purposeful effort on the part of the parent to deny the child access to the family.

All SMCs of the factor scores fell within the acceptable limit (i.e., Factor 1 = .89, Factor 2 = .81, Factor 3 = .74, Factor 4 = .77, Factor 5 = .77), suggesting that all factors are adequately defined by the items. The correlations between the subscales ranged from .17 to .74. The reliability estimates ranged from coefficient alphas of .68 to .95 with a total scale coefficient alpha of .86.

Comparison of PM Scales across Samples

To test the replicability of factors across samples, Gorsuch (1983) recommended that each factor of one sample be compared with all the factors of the other sample. Factors should be paired with the factor from the second sample with which it has the highest coefficient of congruence. Comparisons were made using the coefficient of congruence (r_c) and the root mean square coefficient (μ). In these comparisons, values for the coefficient of congruence varied from 0.71 to 0.85 suggesting that all of the factors were similar and some nearly equivalent (Koschat & Swayne, 1991). The values of μ were 0.53 for emotional responsiveness, 1.48 for terrorizing/spurning, 0.08 for corrupting, and 0.18 for demanding/rigid. The small values obtained for μ suggested that the factors were alike across the populations.

Table 4. Newlywed Sample Factor Loadings from the Rotated Factor Structure Matrix for the Computer Assisted Maltreatment Inventory Psychological Maltreatment (PM) Scale: Principal Axis Factoring with Varimax Rotation

	Factors				
PM Items	1	2	3	4	5
1. Emotional responsiveness					
My parents showed a lot of interest in me.	**.732**	.241	.246	.189	.101
My parents liked spending time with me.	**.705**	.398	.224	.144	.124
My parents paid attention to me.	**.699**	.306	.194	.155	.102
My parents paid attention to me when I talked.	**.696**	.269	.258	.165	.158
My parents often asked me about my day.	**.695**	.237	.075	.226	–.024
I felt loved by my parents.	**.691**	.394	.221	.163	.155
My parents acknowledged my achievements.	**.673**	.124	.177	.153	.080
My parents often told me they loved me.	**.661**	.209	–.019	.104	.082
I felt accepted.	**.652**	.400	.183	.056	.315
I felt wanted.	**.649**	.381	.355	.175	.081
My parents liked it when I showed affection.	**.631**	.191	.070	.161	.070
My parents helped me with homework.	**.609**	.276	.164	.288	.069
My parents attended school activities.	**.594**	.190	.134	.168	.044
My parents only paid attention to me when they needed something.	**.533**	.261	.294	.210	.183
My parents thought I would never amount to anything.	**.500**	.324	.294	.173	.194
2. Terrorizing/spurning					
My parents threatened to hit or physically hurt me.	.287	**.694**	.307	.263	.090
My parents did things that frightened me at times.	.226	**.694**	.037	.263	.192
My parents cursed or swore at me.	.318	**.666**	.025	.272	.132
My parents often made me cry for no good reason.	.330	**.590**	.218	.051	.163
My parents got angry and destroyed my things.	.267	**.561**	.328	.100	.149
My parents made me feel guilty for things that were not my fault.	.289	**.547**	.288	.112	.306
My parents made me feel like a bad person.	.417	**.527**	.370	.057	.293
My parents put me in frightening situations.	.181	**.51**	.288	.278	.236
My parents embarrassed me in front of friends.	.278	**.431**	.398	.096	.244
3. Isolating					
My parents threatened to leave me somewhere.	.265	.274	**.593**	.269	.063
My parents often sent me to bed without dinner.	.157	.247	**.588**	.240	.160
My parents threatened to leave me and never come back.	.251	.331	**.477**	.257	.132
My parents punished me by confining me to small places.	.124	.180	**.414**	.191	.065
4. Corrupting					
I saw my parents do illegal things.	.187	.121	.202	**.710**	.093

I used illegal drugs with my parents.	.118	.005	.228	**.611**	.094
I got drunk with my parents.	.115	.153	–.009	**.497**	.041
My parents encouraged me to do illegal things.	.222	.229	.404	**.427**	.041
My parents cared when I did something wrong.	.428	.086	.295	**.422**	–.006
My parents allowed me to stay home from school without a reason.	.248	.145	.182	**.411**	–.003
5. Demanding/rigid					
Only A's were good enough.	.072	.049	–.057	–.029	**.732**
Being second best was not good enough.	.122	.174	–.023	.069	**.632**
My parents were very controlling.	.155	.337	.194	–.034	**.490**
My parents used me to meet their emotional needs.	.118	.187	.286	.125	**.424**

Note: Underlined values indicate a double loading on two factors. Loadings shown in bold indicate the factor on which the item was placed.

Neglect Scale—College Sample

Three trial PFAs using principal axis factoring with varimax rotation were conducted for the Neglect scale for three- to five-factor solutions. The fivefactor solution was chosen due to ease of interpretation and its alignment with the described theoretical model. As can be seen in table 2, the first and second factors accounted for the largest percentage of the variance relative to the total variance in the items. Only 21 items loaded above .40 on the resulting factors, and approximately half of the item loadings were above good (30% overlap between the item and the factor) as defined by Comrey and Lee (1992). The factors were named following a theoretical model asserting that neglect consists of acts of omission that fall into distinct domains such as failure to provide basic needs, supervision, a safe environment, and educational and health care needs. Factor 3 was difficult to characterize within the confines of the previously described model of neglect and appeared to reflect children's need to attend school and be supervised.

Three SMCs of the factor scores fell within the acceptable limit of >.70 (i.e., Factor 1 = .72, Factor 2 = .71, Factor 3 = .76), but the fourth and fifth SMCs were slightly below (Factor 4 = .64, Factor 5 = .64), suggesting that these two factors might be more weakly defined by the items. The correlations between the subscales of the Neglect scale ranged from .39 to .69. The reliability estimates ranged from coefficient alphas of .68 to .80, with a total scale coefficient alpha of .88.

Neglect Scale—Newlywed Sample

Trial PFAs using principal axis factoring with varimax rotation were conducted. In this sample, a four-factor solution appeared to be the best fit. As seen in table 2, the rotated SSLs for Factors 1 and 2 accounted for the largest percentage of variance. Twenty-eight of the original 38 items loaded above .40 on the resulting factors. Approximately half of these item loadings were above good (30% overlap between the item and the factor). On three of the four factors, SMCs of the factor scores fell within the accepted limit (i.e., Factor 1 = .79, Factor 2 = .71, Factor 3 = .61, Factor 4 = .76), suggesting that internal consistency is adequate for all factors except Factor 3. The between-factor correlations between the subscales on

the Neglect scales ranged from .52 to .71. The reliability estimates ranged from alpha coefficients of .77 to .90, with a total scale coefficient alpha of .94. Because the factors were not consistent across the two samples, not only in terms of the variables that loaded on similarly named factors but also in terms of the percentage of variance accounted for by similarly named factors, comparison statistics between the samples were not calculated.

Table 5. College Sample Factor Loadings from the Rotated Factor Structure Matrix for the Computer Assisted Maltreatment Inventory Neglect Scale: Principal Axis Factoring with Varimax Rotation

	Factors				
Neglect Items	1	2	3	4	5
1. Basic needs					
I had enough to eat as a child. (R)	**.627**	.388	.267	.376	.055
Places I lived were dirty.	**.606**	.489	.101	.187	.134
My clothes and shoes didn't fit.	**.535**	.353	.186	.180	.328
Places I lived had fire hazards.	**.511**	.190	.151	.160	.173
I was left in unsafe situations.	**.478**	.183	.171	.280	.254
It was crowded in my house.	**.460**	.142	.068	.074	.250
2. Cleanliness					
Bedding and towels were washed regularly. (R)	.306	**.666**	.170	.125	.156
Dishes were washed daily. (R)	.147	**.636**	.105	.230	.052
Garbage was taken out regularly. (R)	.348	**.555**	.154	.278	.082
I wore clean clothes. (R)	.481	**.498**	.248	.219	.073
3. Monitoring					
My parents did not like it if I skipped school. (R)	.012	.198	**.743**	.044	.151
My parents didn't make me go to school.	.021	.078	**.632**	.033	.016
I had a curfew.	.127	.070	**.498**	.095	.018
I was expected to tell my parents what I was doing. (R)	.367	.073	**.458**	.228	.085
4. Abandonment					
My parents left me in the care of people I didn't know.	.229	.225	.142	**.506**	.224
My parents left me with babysitters for long periods of time.	.101	.131	.088	**.492**	.143
Sometimes my parents forgot about me when I stayed overnight with friends.	.190	.140	.283	**.465**	.105
5. Medical/educational					
My parents helped me with homework. (R)	.183	.364	.174	.212	**.586**
My parents were interested in my progress at school.	.257	.173	.324	.110	**.473**
My parents followed doctor's instructions.	.380	.291	.373	.196	**.469**

Note: Underlined values indicate a double loading on two factors. Loadings shown in bold indicate the factor on which the item was placed.

Table 6. Newlywed Factor Loadings from the Rotated Factor Structure Matrix for the Computer Assisted Maltreatment Inventory Neglect Scale: Principal Axis Factoring with Varimax Rotation

	Factors			
Neglect Items	1	2	3	4
1. Medical/educational				
My parents were interested in my progress at school. (R)	**.635**	.197	.292	.203
My parents made me bathe. (R)	**.628**	.375	–.017	.292
I was expected to tell my parents what I was doing. (R)	**.578**	.111	.201	.075
My parents did not like it if I skipped school. (R)	**.573**	.200	.199	.078
My parents helped me with homework. (R)	**.561**	.171	.316	.237
I had a curfew. (R)	**.554**	.104	.102	.126
My parents made sure I had all shots. (R)	**.537**	.062	.225	.196
My parents followed doctor's instructions. (R)	**.535**	.148	.325	.155
My parents took me to the doctor. (R)	**.528**	.168	.317	.245
I went to the dentist regularly. (R)	**.517**	.241	.185	.186
My parents insisted I brush my teeth. (R)	**.480**	.224	.079	.280
My parents knew where I was. (R)	**.474**	.120	.347	.224
I had enough to eat as a child. (R)	**.473**	.251	.361	.368
2. Basic needs				
Places I lived in were dirty.	.137	**.637**	.214	.334
Bugs and mice were in my home.	.172	**.561**	.175	.236
Places I lived had fire hazards.	.245	**.545**	.167	.241
Dangerous objects were stored out of reach.	.141	**.545**	.242	.096
I wore clean clothes. (R)	.401	**.512**	.109	.340
My clothes and shoes didn't fit.	.340	**.451**	.282	.196
3. Abandonment				
My parents left me with babysitters for long periods of time.	.110	.123	**.589**	.176
My parents left me home alone.	.341	.335	**.572**	.197
My parents left me in the care of people I didn't know.	.366	.234	**.533**	.164
I was left in unsafe situations.	.444	.415	**.511**	.099
My parents threw me out.	.349	.190	**.400**	.163
4. Cleanliness				
Dishes were washed daily. (R)	.098	.212	.039	**.732**
Garbage was taken out regularly. (R)	.330	.173	.174	**.686**
Bedding and towels were washed regularly. (R)	.279	.263	.174	**.581**
I ate balanced meals. (R)	.310	.161	.295	**.580**

Note: Underlined values indicate a double loading on two factors. Loadings shown in bold indicate the factor on which the item was placed.

Revised PM and Neglect Scales

Based on the results of the exploratory factor analyses already described, shortened, revised versions of the CAMI PM and Neglect Scales were created.

Revised PM Scale

For the PM scale, the four factors that were consistent across both samples were retained (emotional responsiveness, terrorizing/spurning, corrupting, and demanding/rigid), as was the isolating factor that was present only in the newlywed sample results. To determine the items to include for each factor, each item's eigenvalue from each sample was summed (e.g., "My parents showed a lot of interest in me" had an eigenvalue of .79 in the college sample and .73 in the newlywed sample, which resulted in a total of 1.52). The four to six items with the highest summed eigenvalues were then selected for each factor. In all cases, the selected items intuitively fit their selected factor (see appendix for the final 24 items).

To examine the internal consistency of the new subscales, Cronbach's alphas were run for the total revised scale as well as with each subscale. With the exception of the corrupting subscale, the alphas fell within acceptable limits (emotional responsiveness = .90, terrorizing/spurning = .83, isolating = .77, corrupting = .52, demanding/rigid = .72, and total revised psychological abuse = .91). Given the low internal consistency of the corrupting subscale, alternate combinations of items with factor loadings above .40 were tested. By substituting "Parents did not care when I did things that were wrong" for "My parents allowed me to stay home from school without a reason," the alpha increased to .67. Because the substitute item intuitively fit under the corrupting definition, this item was retained in the revised scale. Additionally, all items were intuitively consistent with their subscales and the overall definition of psychological maltreatment.

Revised Neglect Scale

As described earlier, the factor analysis of the Neglect scale was not as consistent across samples as was the PM scale. On examination of the factor loadings across each sample, the item groupings in the factor analysis of the college student data appeared to hold together better and be more consistent with theory. Therefore, the revised Neglect scale was based on the items with the highest factor loadings from the college sample for the first four factors (basic needs, cleanliness, abandonment, and monitoring). In the college sample, the last factor, medical or educational neglect, only included one medical neglect item and the two educationally focused items ("My parents helped me with homework" and "My parents were interested in my progress at school") and did not seem to be strong enough neglect items to form a factor. Therefore, items from the medical neglect factor from the newlywed sample were used to create a fifth subscale for the revised Neglect scale. The four items with the highest eigenvalues were selected for each new subscale, resulting in a 20-item Neglect scale. The appendix contains the selected subscales and items. The internal consistencies for the total revised Neglect scale and the five subscales were adequate (basic needs = .76, cleanliness = .78, abandonment = .64, monitoring = .65, medical neglect = .78, and total revised Neglect = .88). All selected items were intuitively consistent with the subscales and with the definition of neglect as acts of omission.

Discussion

The primary objective of this study was to examine the factor structures of the CAMI PM and Neglect scales across two samples. Based on a review of the theoretical and empirical literature, items were generated that were thought to represent behaviors that are indicative of psychological maltreatment and neglect. Data collected from three college campuses and a community sample of newlyweds were factor analyzed to establish whether latent constructs (i.e., subtypes of psychological abuse and neglect) could be identified. The resulting factor structures from the different samples were compared and revised versions of the CAMI PA and Neglect scales were proposed. Reliability analyses were also conducted on both scales for both samples.

Not surprisingly, most items on the scales were positively skewed, indicating that the majority of respondents endorsed low levels of potentially psychologically harmful and neglectful experiences. In fact, the means for all items were below 3 and most were below 2 on 5-point scales. This pattern is consistent with other studies of PM and neglect in college samples obtained with measures such as the Childhood Trauma Questionnaire (e.g., Paivio & Cramer, 2004; Sanders & Becker-Lausen, 1995). The reliability coefficients for the original 57-item PM scale and the 38-item Neglect scale were high for both samples, as were the alphas from the revised 24-item PM and the 20-item Neglect scales (.91 and .88, respectively). Likewise, the reliability coefficients were in the acceptable range for the subscales of both the PM (mean alphas = .78) and Neglect scales (mean alphas = .72). These results suggest that the items interrelate to each other in a consistent fashion.

Exploratory factor analyses results provided insight into the nature of the latent constructs being measured by the CAMI PM scale. These results support the hypothesis that the PM scale assesses subcategories of psychological maltreatment that align in a manner fairly consistent with Hart et al.'s (2002) theoretical model. With the exception that a four-factor solution appeared to best fit the college data, whereas a five-factor solution appeared to be a better fit for the newlywed data, the factor structures were consistent across the two samples, both in terms of the factors identified and the variance accounted for by each. This consistency across samples supports Hart et al.'s model and speaks to the potential of the CAMI PM subscales for assessing these aspects of psychological abuse. Now that initial findings indicate some degree of correspondence to recognized categories of psychological maltreatment and neglect, confirmatory factor analyses of these subscales are needed to explicitly evaluate the theoretical model. Part of such studies might also include ratings by additional professionals in the field to further confirm the face validity of the subscale items.

From the factor analysis, we developed a revised version of the PM scale. Corresponding with Hart et al.'s (2002) denying emotional responsiveness, the first factor was parental emotional responsiveness. This factor included items that reflect parental emotional support and willingness to be involved in the child's life. Elevated scores on this subscale could reflect neglect of a child's emotional needs. The second factor, terrorizing/spurning, included items that corresponded most closely to Hart et al.'s (2002) subtypes of terrorizing or spurning. These items reflect parental behaviors that either are degrading and hostilely

rejecting or are likely to cause fear in the child. The isolating factor includes items representing caregiver acts that convey to the child that he or she is unwanted, not important, and undeserving of being with the family. The next corresponding factor included items representing corrupting behavior as defined by Hart et al. (2002). This factor included items concerned with parents allowing a child to do things considered to be illegal or immoral. The final factor can be characterized by items that describe demanding/rigid expectations on the part of parents. These most closely match terrorizing behaviors as defined by Hart et al. (2002), whose model suggests that "setting rigid or unrealistic expectations with the threat of loss, harm or danger if they are not met" is representative of terrorizing behavior (p. 74). However, these items seem to represent a less severe form of terrorizing than the definition provided by Hart et al. because the items do not carry a severe or clearly defined threat.

The factors derived from analyses of the Neglect scale were named following the theoretical position that neglect is characterized by acts of omission that can be broken down into different subcategories. Several latent constructs or subtypes of neglect were identified, including basic needs such as food and clothing, cleanliness needs, abandonment, supervisory needs, and medical needs. The names assigned to each factor capture most of the items that loaded on that factor, but in some cases the factor included other items that are not represented by the label. Because of the inconsistencies in the factor structure of the Neglect scale across the two samples, the revised CAMI Neglect scale is based primarily on the factor result from the college sample. This sample was chosen because the factors more closely resemble theories of neglect seen in the literature. The one exception was that the medical neglect factor from the newlywed sample was used as the basis for this factor in the revised scale because of its strong loading in the newlywed sample and because of its intuitive similarity to theories of neglect.

In the revised CAMI Neglect scale, the first factor, basic needs, consists of items regarding basic needs such as food, clothing, and adequate shelter being unavailable to the child. The second factor was named cleanliness, which includes items in which the child was denied a clean living environment. The third factor, abandonment, includes items about the child being left or forgotten in places or about the child being thrown out of the house. Items regarding the parents paying attention to the child's actions made up the monitoring factor. The final factor, medical neglect, consisted of items about parents neglecting to get the child appropriate medical care.

The inconsistencies on the Neglect scale across samples might be due in part to there being too few items in the original 38-item scale to capture each subtype of neglect. Dubowitz et al. (2005) described similar problems in a recent study designed to provide empirical support for conceptual definitions of neglect. Unlike the items on the CAMI PM scale, which are primarily acts of commission, items on the Neglect scale depict things that fail to happen, such as medical care not being sought. Respondents might have a difficult time remembering and quantifying absences of such behavior. It is also possible that differences between the college students and the community sample, such as the college sample being younger and primarily female, might have contributed to the different factor structures seen across groups. Additional studies are needed to better understand the possible influence of these types of variables on the CAMI PM and Neglect scales.

This project represents a first step in establishing the psychometric properties of the CAMI PM and Neglect scales and, as an initial attempt, provides promising results. Nonetheless, the study has some important limitations. For example, the college sample, although recruited from three universities and ethnically diverse, was from a relatively high socioeconomic background compared to the general population. Neglect is typically associated with lower incomes (Hildyard & Wolfe, 2002); the applicability of these results might therefore be limited to samples similar to this one. Attempts should be made to administer these subscales to a wide range of individuals to broaden the generalizability of these findings to more diverse populations. Likewise, it will be important for future research to compare the results obtained from the PM and Neglect scales to other established measures of maltreatment such as the Childhood Trauma Questionnaire (Bernstein & Fink, 1998), which distinguishes among emotional abuse, emotional neglect, and physical neglect, rather than the subtypes identified here. Further, to maximize the generalizability and utility of these scales, it will be important to examine its psychometric properties in clinical populations, who might have more extensive psychological maltreatment and neglect histories.

Furthermore, because psychological maltreatment and neglect often consist of ongoing behavioral patterns that might not be remembered as discrete, memorable events, recall of these experiences will inevitably be filtered through the current perceptive lens of the respondent. As noted earlier, recent research highlights the importance of considering adult victims' perceptions of early abuse experiences in predicting outcomes such as current functioning (Walker et al., 2009). Nevertheless, it has been suggested that for some types of maltreatment the duration, frequency, nature of acts, and perpetrator information greatly impacts outcomes (Claussen & Crittenden, 1991; Futa, Nash, Hansen, & Garbin, 2003). Perhaps because of the challenges of retrospective recall, there have been few studies addressing these issues with regard to psychological maltreatment and neglect. Despite the fact that responses to Likert-type questions might provide some indication of frequency, future studies might attempt to validate questions asking about this dimension of abuse (e.g., "How often did this happen?").

Limitations notwithstanding, these findings provide some initial data addressing the psychometric properties of the CAMI PM and Neglect scales. As noted, future research should extend this work by examining their factor structure in clinical samples with high levels of maltreatment as well as through confirmatory factor analyses of both scales. This work, along with studies examining the validity of these scales compared to existing criterion measures, will help to establish appropriate cutoff scores for various levels of maltreatment. Given that the field has struggled to agree on consistent definitions and measures of psychological abuse and neglect, this study represents one step toward developing a valid, theoretically grounded measure of these challenging constructs.

References

Allen, B. (2008). An analysis of the impact of diverse forms of childhood psychological maltreatment on emotional adjustment in early adulthood. *Child Maltreatment*, *13*, 307–312.

American Professional Society on the Abuse of Children. (1995). *Psychosocial evaluation of suspected psychological maltreatment in children and adolescents: Practice guidelines*. Chicago: Author.

Baker, A. J. L. (2009). Adult recall of childhood psychological maltreatment: Definitional strategies and challenges. *Children and Youth Services Review*, *31*, 703–714.

Bernstein, D., & Fink, L. (1998). *Childhood Trauma Questionnaire: A retrospective self-report*. San Antonio, TX: Psychological Corporation.

Chaffin, M. (2006). The changing focus of child maltreatment research and practice within psychology. *Journal of Social Issues*, *62*, 663–684.

Cicchetti, D. (1991). Defining psychological maltreatment: Reflections and future directions. *Development and Psychopathology*, *3*, 1–2.

Claussen, A. I., & Crittenden, P. (1991). Physical and psychological maltreatment: Relations among types of maltreatment. *Child Abuse & Neglect*, *15*, 5–18.

Comrey, A. L., & Lee, H. B. (1992). *A first course in factor analysis* (2nd ed.). Hillsdale, NJ: Erlbaum.

DeVellis, R. F. (2003). *Scale development: Theory and application* (2nd ed.). Thousand Oaks, CA: Sage.

DiLillo, D., Hayes-Skelton, S. A., Fortier, M. A., Perry, A. R., Evans, S., Messman- Moore, T. L., et al. (2010). Development and initial psychometric properties of the Computer Assisted Maltreatment Inventory (CAMI): A comprehensive self-report measure of child maltreatment history. *Child Abuse and Neglect*, *34*, 305–317.

Dodge Reyome, N. (2010). Childhood emotional maltreatment and later intimate relationships: Themes from the empirical literature. *Journal of Aggression, Maltreatment, & Trauma*, *19*, 224–242.

Dubowitz, H., Newton, R. R., Litrownik, A. J., Lewis, T., Briggs, E. C., Thompson, R., et al. (2005). Examination of a conceptual model of child neglect. *Child Maltreatment*, *10*, 173–189.

Erickson, M. F., & Egeland, B. (2002). Child neglect. In J. Myers, L. Berliner, J. Briere, C. T. Hendrix, C. Jenny, & T. A. Reid (Eds.), *The APSAC handbook on child maltreatment* (pp. 3–20). Thousand Oaks, CA: Sage.

Futa, K. T., Nash, C. L., Hansen, D. J., & Garbin, C. P. (2003). Adult survivors of childhood abuse: An analysis of coping mechanisms used for stressful childhood memories and current stressors. *Journal of Family Violence*, *18*, 227–239.

Garbarino, J. (1991). The context of child abuse and neglect assessment. In J. C. Westman (Ed.), *Who speaks for the children? The handbook of individual and class child advocacy* (pp. 183–203). Sarasota, FL: Professional Resource Exchange.

Glaser, D. (2002). Emotional abuse and neglect (psychological maltreatment): A conceptual framework. *Child Abuse & Neglect*, *26*, 697–714.

Gorsuch, R. L. (1983). *Factor analysis* (2nd ed.). Hillsdale, NJ: Erlbaum.

Hamarman, S., Pope, K. H., & Czaja, S. J. (2002). Emotional abuse in children: Variations in legal definitions and rates across the United States. *Child Maltreatment*, *7*, 303–311.

Hart, S. N., Brassard, M., Binggeli, N., & Davidson, H. (2002). Psychological maltreatment. In J. Myers, L. Berliner, J. Briere, C. T. Hendrix, C. Jenny, & T. A. Reid (Eds.), *The APSAC handbook on child maltreatment* (pp. 79–103). Thousand Oaks, CA: Sage.

Hildyard, K. L., & Wolfe, D. A. (2002). Child neglect: Developmental issues and outcomes. *Child Abuse & Neglect*, *26*, 679–695.

Kendall-Tackett, K., & Becker-Blease, K. (2004). The importance of retrospective findings in child maltreatment research. *Child Abuse & Neglect*, *28*, 723–727.

Koschat, M. A., & Swayne, D. F. (1991). A weighted Procrustes criterion. *Psychometrika*, *56*, 229–239.

McGee, R. A., & Wolfe, D. A. (1991). Psychological maltreatment: Toward an operational definition. *Development and Psychopathology*, *3*, 3–18.

McGee, R. A., Wolfe, D. A., Yuen, S. A., Wilson, S. K., & Carnochan, J. (1995). The measurement of maltreatment: A comparison of approaches. *Child Abuse & Neglect*, *19*, 233–249.

Paivio, S. C., & Cramer, K. M. (2004). Factor structure and reliability of the Childhood Trauma Questionnaire in a Canadian undergraduate student sample. *Child Abuse & Neglect*, *28*, 889–904.

Paradis, A., & Boucher, S. (2010). Research on interpersonal problems and codependency: Child maltreatment history and interpersonal problems in adult couple relations. *Journal of Aggression, Maltreatment & Trauma*, *19*, 138–158.

Perrin-Miller, C. L., & Perrin, R. D. (2007). *Child maltreatment: An introduction* (2nd ed.). Thousand Oaks, CA: Sage.

Perry, A. R., DiLillo, D., & Peugh, J. (2007). Childhood psychological maltreatment and quality of marriage: The mediating role of psychological distress. *Journal of Emotional Abuse*, *7*(2), 117–142.

Riggs, S. A., & Kaminski, P. (2010). Childhood emotional abuse, Adult attachment, and depression as predictors of relational adjustment and psychological aggression, *Journal of Aggression, Maltreatment & Trauma*, *19*, 75–104.

Sanders, B., & Becker-Lausen, E. (1995). The measurement of psychological maltreatment: Early data on the Child Abuse and Trauma Scale. *Child Abuse & Neglect*, *19*, 315–323.

Tabachnick, B. G., & Fidell, L. S. (1996). *Using multivariate statistics* (3rd ed.). Northridge, CA: HarperCollins.

Trocmé, N. (1996). Development and preliminary evaluation of the Ontario Child Neglect Index. *Child Maltreatment*, *1*, 145–155.

U.S. Department of Health and Human Services. (2001). *12 years of reporting: Child maltreatment 2001*. Washington, DC: U.S. Government Printing Office.

U.S. Department of Health and Human Services, Administration on Children, Youth and Families, Children's Bureau. (2009). *Definitions of child abuse and neglect: Summary of state laws*. Washington, DC: Author. Retrieved from http://www. childwelfare.gov/systemwide/laws_policies/statutes/define.cfm

Walker, E. C., Holman, T. B., & Busby, D. M. (2009). Childhood sexual abuse, other childhood factors, and pathways to survivors' adult relationship quality. *Journal of Family Violence*, *24*, 397–406.

Zuravin, S. J. (1991). Research definitions of child physical abuse and neglect: Current problems. In R. H. Starr, Jr. & D. A. Wolfe (Eds.), *The effects of child abuse and neglect: Issues and research* (pp. 100–128). New York: Guilford.

Zuravin, S. J., & DiBlasio, F. A. (1996). The correlates of child physical abuse and neglect by adolescent mothers. *Journal of Family Violence*, *11*, 149–166.

Zurbriggen, E. L., Gobin, R. L., & Freyd, J. J. (2010). Childhood emotional abuse predicts late adolescent sexual aggression perpetration and victimization. *Journal of Aggression, Maltreatment & Trauma*, *19*, 204–223.

Appendix

Revised CAMI Psychological Maltreatment Subscales and Items

Emotional Responsiveness

1. My parents showed a lot of interest in me as a child.
2. My parents liked spending time with me.
3. As a child I felt loved by my parents.
4. My parents paid attention to me when I talked to them.
5. My parents often asked me about my day.
6. My childhood achievements were acknowledged by my parents.

Terrorizing/Spurning

7. My parents threatened to hit or physically hurt me when I was a child.
8. I was cursed or sworn at as a child by my parents.
9. My parents often made me cry for no good reason.
10. My parents sometimes got angry and destroyed things that were mine.
11. My parents purposefully embarrassed me in front of my friends.
12. My parents put me in situations that frightened me.

Isolating

13. My parents threatened to leave me somewhere so that I could never come home.
14. My parents often sent me to bed without dinner.
15. My parents threatened to leave me and never come back.
16. My parents punished me by confining me to a closet or other small place.

Corrupting

17. I saw my parents do illegal things like use drugs or steal.
18. I used illegal drugs with my parents before I was 18 years old.
19. My parents encouraged me to do things that some might consider illegal or immoral.
20. My parents didn't really care when I did things that were wrong.

Demanding/Rigid

21. When I was in school, only As were good enough for my parents.
22. Being second best was never good enough for my parents.
23. My parents were very controlling.
24. I felt like my parents used me to meet their own emotional needs.

Revised CAMI Neglect Subscales and Items

Basic Needs

1. I had enough to eat as a child.
2. As a child my clothes and shoes didn't fit me.

3. The places I lived in as a child contained fire hazards such as frayed wiring, objects too close to heat sources, or other things that could catch on fire.
4. As a child I was left in unsafe situations without supervision.

Cleanliness

5. Bedding and towels were washed regularly when I was a child.
6. Dishes were washed on a daily basis when I was growing up.
7. When I was growing up, the garbage was taken out regularly.
8. I wore clean clothes as a child.

Abandonment

9. As a child, my parents left me in the care of people I didn't know.
10. When I was a child, my parents left me with babysitters or at places like parks or swimming pools for long periods of time.
11. Sometimes my parents forgot about me when I stayed overnight with a friend or relative.
12. My parents sometimes threw me out of the house after disagreements.

Monitoring

13. My parents did not like it if I skipped school or was late to class.
14. My parents didn't make me go to school if I didn't want to.
15. I had a curfew when I was growing up.
16. As a child I was expected to tell my parents what I was doing when I wasn't home.

Medical Neglect

17. My parents followed doctors' instructions carefully when medication was prescribed to me.
18. My parents made sure I got all of my immunizations (shots) as a child.
19. My parents took me to the doctor when I needed to go.
20. I went to the dentist regularly as a child.