Validation and Test-Retest Reliability of Early Trauma Inventory in Spanish Postpartum Women

Anna Plaza, MD[*], **Anna Torres, BS**[*], **Rocío Martin-Santos, MD, PhD**[†,‡], **Estel Gelabert, BS**[‡], **Maria Luisa Imaz, MD**[*], **Purificacion Navarro, BS, PhD**[*], **James Douglas Bremner, MD, PhD**[§,¶,‖], **Manuel Valdes, MD, PhD**[†], and **Lluïsa Garcia-Esteve, MD, PhD**[*]

[*]Unit of Perinatal Psychiatry and Gender Research, Hospital Clinic Universitari of Barcelona, IDIBAPS, Barcelona, Spain

[†]Department of Psychiatry, Neurosciences Institute, Hospital Clínic Universitari of Barcelona, IDIBAPS, CIBERSAM, Barcelona, Spain

[‡]Neuropsychopharmacology Programe, Municipal Institute of Medical Research (IMIM), Hospital del Mar, Barcelona, Spain

[§]Department of Psychiatry, Emory University School of Medicine, Atlanta, GA

[¶]Department of Radiology, Emory University School of Medicine, Atlanta, GA

[‖]Center for Positron Emission Tomography, Emory University School of Medicine, Atlanta, GA

Abstract

The aims were to study the validity and test-retest reliability of the Early Trauma Inventory—Self Report (ETI-SR) and its short-form (ETI-SF), which retrospectively assess different childhood trauma, in a sample of Spanish postpartum women. A total of 227 healthy postpartum women completed the ETI-SR and ETI-SF. The longitudinal, expert, all data procedure was used as the external criterion for the assessment of childhood trauma. The ETI-SR and ETI-SF were also administered to a sample of 102 postpartum depressive women (DSM-IV) and the results were compared with those of the healthy postpartum sample. The area under the curve values of the ETI-SR and ETI-SF were 0.77 (95% confidence interval [CI], 0.71–0.84) and 0.78 (95% CI, 0.72–0.85), the internal consistencies of the 2 scales were 0.79 and 0.72, and the intraclass correlation coefficients were 0.92 (95% CI, 0.80–0.97) and 0.91 (95% CI, 0.78–0.96), all respectively. The ETI-SR and ETI-SF had higher test-retest reliability on all subscales. The ETI-SR and ETI-SF are shown to be valid and reliable instruments for assessing childhood trauma in postpartum women.

Keywords

Childhood trauma; external validation; test-retest reliability; postpartum women; postpartum depression

Despite the growing body of evidence on the significance of childhood trauma in a wide range of psychiatric outcomes in adulthood, little research has explored its implication to postpartum depression (Kendall-Tackett, 2007; Plaza et al., 2009; Buist and Barnett, 1995). However, recent evidence seems to suggest that childhood abuse is a predisposing factor for postpartum depression through posttraumatic stress (Lev-Wiesel et al., 2009) and genetic

expression (Sanjuan et al., 2008; Costas et al., 2009). On the other hand, maternal childhood abuse is associated with hypothalamic-pituitary-adrenal axis function in both the mother and the infant during the postpartum period (Brand et al., 2010), and indicates a strong potential for the intergenerational transmission of child abuse.

The perinatal period is an important time to retrospectively asses the presence of childhood trauma, as the events of pregnancy or childbirth can serve to bring these to surface. Identifying women with childhood trauma in this period and giving appropriate help may significantly reduce or consequently mitigate mother's postpartum depression, its short and long-term effects on their infants (Moses-Kolko and Roth, 2004), and other consequences of maternal childhood abuse on them.

A variety of instruments have been designed for the retrospective evaluation of childhood trauma (Roy and Perry, 2004). The Early Trauma Inventory—Self Report (ETI-SR) and its short-form (ETI-SF) (Bremner et al., 2007) have shown good psychometric properties when used to study the repercussions of childhood trauma for adult psychopathology and neurobiology (Jeon et al., 2009). This scale comprises a general trauma subscale, as well as subscales covering physical, emotional, and sexual abuse. The instrument was originally developed in the United States, but has also been validated in a Chinese population (Wang et al., 2008). To the best of our knowledge, there is no validated questionnaire that measures retrospective childhood trauma in postpartum women.

The purpose of this study was to validate and establish the test-retest reliability of the ETI-SR and its Short Form (ETI-SF) in Spanish postpartum women.

METHOD

The sample used for the validation study comprised 227 postpartum healthy women who were seen in a general teaching hospital between December 2004 and July 2005, always during the first 2 days after delivery. A second sample of 102 postpartum major depressive women (DSM-IV) who were seen at a perinatal psychiatric outpatients unit between the first and the sixth months after delivery were also included (between October 2002 and July 2004). The research was approved by the local research ethics committee. All women signed an informed consent form.

The ETI-SR (Bremner et al., 2007) is a self-report version (62 items) of the clinician-administered ETI (Bremner et al., 2000). The ETI-SR assesses the presence of general trauma (31 items) and physical (9 items), emotional (7 items), and sexual abuse (15 items) before the age of 18. Each domain is well defined in Bremner et al's study (Bremner et al., 2007). The inventory also evaluates frequency, age of onset, type of perpetrator, and past and current effects on the individual in the social, work, and emotional spheres. It takes about 30 minutes to fill the questionnaire.

The Early Trauma Inventor—Short Form (ETI-SF; Bremner et al., 2007) is a shortened version of the ETI-SR and is designed for use in settings where completion of a lengthy test battery would be difficult (Jeon et al., 2009). The ETI-SF (27 items) assesses general traumas (11 items) and physical (5 items), emotional (5 items), and sexual abuse (6 items). It takes 5 minutes to fill it. The ETI-SF shows good internal consistency and its psychometric properties have also been validated in a US population of adult cocaine abusers (Hyman et al., 2005), as well as in healthy, depressive, and substance-abuse Chinese populations (Wang et al., 2008).

The ETI-SR and ETI-SF were initially translated into Spanish with the consent of the author. The back-translated inventories produced versions that were almost identical to the original

ones. The definitive version of both questionnaires was accepted after carrying out a pilot interview with 20 mothers (mean age, 29.6; range, 19–37) recruited as convenience sample from the Perinatal Psychiatry Program. This pilot study showed an adequate comprehensibility of both questionnaires.

A sample of 227 postpartum healthy women completed the ETI-SR and ETI-SF and was also assessed, in a blind manner, for the presence or absence of childhood trauma before age 18 by an independent senior psychiatrist. The longitudinal, expert, all data procedure was used as the external criterion. The longitudinal, expert, all data diagnosis of the independent expert was based on clinical interviews and data provided by the patient's family, when possible, as well as on a semi-structured interview designed to enable a systematic exploration of early events and to evaluate trauma severity, such as trauma recurrence or chronicity, the number of perpetrators, and the subjective trauma effect at the time of the event and at present (Mullen et al., 1996). Finally, the expert had to complete a questionnaire regarding the global presence or absence of childhood trauma, as well as about general trauma and the domains of physical, emotional, and sexual abuse, evaluating in each case whether the trauma was one-off or recurrent, and also its intensity (light, moderate, severe).

From a continuous series of the 227 healthy women who participated in the study, 20 postpartum healthy women completed the ETI-SR and ETI-SF again, 3 months later.

A second sample of 102 postpartum depressive women (DSM-IV) completed the ETI-SR and ETI-SF to assess the scales' validity, this being based on their ability to discriminate between women who theoretically were more exposed to childhood traumas (postpartum depressed women) and postpartum healthy women.

Statistical Analysis

The total score and the scores for each domain were obtained by counting the number of endorsed items (Bremner et al., 2007). The internal consistency for each domain was calculated using Cronbach α coefficients (Cronback, 1951), as well as the correlations of each item with its corrected scale (Stewart and Ware, 1992). Test-retest reliability was assessed with the intraclass correlation coefficient (ICC). The validity of the ETI-SR and ETI-SF for detecting childhood traumas was analyzed using receiver operating characteristic (ROC) curves, and the area under the curve (AUC) was calculated with a 95% confidence interval (CI) (Zweig and Campbell, 1993). Sensitivity, specificity, and the number needed to diagnose were calculated for a range of cutoff scores against external criteria of childhood trauma. Differences between the groups' mean scores (healthy postpartum women vs. depressed) were analyzed by means of the Student t test. Cronbach α coefficients in postpartum depressive women were calculated. All data were analyzed using the Statistical Package for Social Sciences 16.0 (SPSS Inc., Chicago, IL) statistical package.

RESULTS

Characteristics of the Sample

A total of 97% of the postpartum healthy women were married, 40% had college-level education, and 70% worked during pregnancy; whereas 93% of the postpartum depressed women were married, 36% had college-level education, and 58% worked during pregnancy.

The postpartum depressive women were older (33.30 [22–43] vs. 31.99 [18–45] years; $t = -2.52$, $df = 326$, $p < 0.012$) and also obtained a higher mean ETI-SR total score (10.76 [7.29] vs. 5.85 [4.52]; $t = 6.28$, $df = 137.17$, $p < 0.001$) than did the postpartum healthy women. The same pattern was observed on all subscales—general subscale: 4.33 (2.89) versus 2.73

(2.13), $t = 4.97$, $df = 150.29$, $p < 0.001$; physical abuse subscale: 2.29 (2.05) versus 1.26 (1.35), $t = 4.57$, $df = 140.19$, $p < 0.001$; emotional abuse subscale: 2.98 (2.53) versus 1.26 (1.66), $t = 6.25$, $df = 139.88$, $p < 0.001$; and the sexual abuse subscale: 1.26 (2.13) versus 0.60 (1.07), $t = 2.98$, $df = 124.38$, $p < 0.001$. On the ETI-SF, the postpartum depressed women again obtained a higher mean total score than did the postpartum healthy women (6.12 [4.18] vs. 3.22 [2.82]; $t = -6.37$, $df = 143.68$, $p < 0.001$), and the same pattern appeared for the general subscale: 2.18 (1.63) versus 1.41 (1.37), $t = -4.39$, $df = 327$, $p < 0.001$; physical abuse subscale: 1.41 (1.23) versus 0.82 (0.80), $t = -4.42$, $df = 141.44$, $p < 0.001$; emotional abuse subscale: 1.89 (1.85) versus 0.75 (1.19), $t = -5.71$, $df = 139.72$, $p < 0.001$; and the sexual abuse subscale: 0.64 (1.22) versus 0.23 (0.70), $t = -3.14$, $df = 131.92$, $p = 0.002$.

Psychometric Properties of the ETI-SR

Internal Consistency—Table 1 gives the frequencies of each item and the correlation with its subscale. Table 2 shows a higher internal consistency for the global scale, with a Cronbach α coefficient of 0.79, whereas the Cronbach α coefficients of the subscales were between 0.58 and 0.76.

Validity—The AUC value for the global ETI-SR scale was 0.77 (95% CI, 0.71–0.84), indicating adequate validity for detecting childhood trauma. Optimum validity was shown for the ETI-SR abuse domain; the physical abuse subscale had an AUC value of 0.92 (95% CI, 0.86–0.98), the emotional abuse subscale a value of 0.94 (95% CI, 0.88–0.98), and the sexual abuse subscale a value of 0.91 (95% CI, 0.83–0.99). The AUC for the general trauma subscale was 0.73 (95% CI, 0.66–0.79). Table 3 shows the cutoff points that maximize the sensitivity and specificity of the global scale and the different subscales.

Test-Retest Reliability—The ETI-SR had higher test-retest reliability on all subscales. The ICC value was 0.92 (95% CI, 0.80–0.97) for the global scale, 0.93 (95% CI, 0.83–0.97) for the physical, 0.89 (95% CI, 0.72–0.96) for the emotional, and 0.95 (95% CI, 0.87–0.98) for the sexual abuse subscale. The lowest level of agreement was observed for the general trauma subscale, with an ICC value of 0.76 (95% CI, 0.38–0.90).

Psychometric Properties of the ETI-SF

Internal Consistency—Table 1 gives the frequencies of each item and the correlation with its subscale. Table 2 shows that for the global ETI-SF scale, the Cronbach α coefficient was 0.72, whereas values for the subscales ranged from 0.42 to 0.72.

Validity—The AUC value for the global ETI-SR scale was 0.78 (95% CI, 0.72–0.85), indicating adequate validity for detecting childhood trauma. Optimum validity was shown for the ETI-SR abuse domain; the physical abuse subscale had an AUC value of 0.85 (95% CI, 0.76–0.97), the emotional abuse subscale had a value of 0.92 (95% CI, 0.85–0.99), and the sexual abuse subscale had a value of 0.87 (95% CI, 0.76–0.97). The AUC for the general trauma subscale was 0.73 (95% CI, 0.66–0.80). Table 3 shows the cutoff points that maximize the sensitivity and specificity of the different subscales.

There were no statistically significant differences between the ROC curve analyses of the ETI-SR and ETI-SF global scales ($x^2 = 0.50$; $p = 0.47$), or between the general trauma ($x^2 = 0.03$; $p = 0.86$), emotional ($x^2 = 0.27$; $p = 0.60$), and sexual abuse subscales ($x^2 = 1.08$; $p = 0.29$). Only the ROC curve of the ETI-SR physical abuse subscale showed slightly higher values than did the ROC of the ETI-SF ($x^2 = 4.77$; $p = 0.02$).

Test-Retest Reliability—The ETI-SF had higher test-retest reliability on all subscales. The ICC value was 0.91 (95% CI, 0.78–0.96) for the global scale, 0.94 (95% CI, 0.85–0.98) for the physical, 0.84 (95% CI, 0.61–0.94) for the emotional, and 0.96 (95% CI, 0.90–0.98) for the sexual abuse subscale. The lowest level of agreement was observed for the general trauma subscale, with an ICC value of 0.79 (95% CI, 0.47–0.92).

Table 2 shows the comparison of the Cronbach α coefficients for the ETI-SR and ETI-SF between the healthy and depressive postpartum samples, being higher in the postpartum depressive sample than in the healthy postpartum sample.

DISCUSSION

The study findings provide initial support for the validity (measured against a gold standard external criterion), internal consistency, and test-retest reliability of the Spanish versions of the ETI-SR and ETI-SF when used to retrospectively detect childhood trauma in postpartum women.

In the present sample of healthy and depressed postpartum women, the mean total scores on the ETI-SR and ETI-SF were similar to those reported for the original inventory in healthy and depressed subjects (Bremner et al., 2007). Our results are also similar to those obtained in other studies using retrospective childhood trauma instruments in a healthy population (Sanders and Becker-Lausen, 1995; Kent and Waller, 1997). An acceptable internal consistency was obtained for the ETI-SR and ETI-SF scales in healthy and depressed postpartum women. However, the values were lower than those reported by Bremner et al. (2007). This may be explained by the fact that more than 50% of Bremner et al's patients were experiencing posttraumatic stress disorder with an increased presence of childhood traumas and a higher mean total score. Moreover, the small proportion of borderline personality patients in their study also showed a higher mean total score. At all events, it should be noted that the following 2 subscales in our sample yielded the weakest internal consistency: the general trauma subscales in both samples and the physical abuse subscale in the sample of healthy women. Regarding the general trauma subscale, this finding may be due to the fact that it measures more diverse and broader traumatic events, ranging from natural disaster to drug abuse in parents. As such, this subscale is not a measure of a single unified construct. Moreover, the experience of 1 event does not necessarily imply the experience of another. However, from the point of view of stress vulnerability research, it is interesting to include other childhood traumas, apart from those of the abuse domain, which may have an influence on the neurodevelopmental stress response and the presence of psychopathology in adulthood (Tyrka et al., 2008). With respect to the poor results for the physical abuse subscale of the ETI-SF in healthy women, it should be noted that this short version has eliminated some of the following items with a high prevalence in our healthy sample: spanked with a hand, 26%; hit or spanked with an object, 11%; tied up or locked in closet, 5.3%. Furthermore, it included the item "burned with a cigarette," the prevalence of which was 0%.

The overall good functioning of the ETI-SR and ETI-SF in terms of detecting childhood trauma was confirmed by the ROC analysis. This study included documentation of childhood abuse, an area that is very often neglected due to the inherent difficulties of obtaining reliable information. The AUC for the 2 questionnaires indicates that they both have good validity, although the ETI-SF is slightly weaker at detecting physical abuse. The cutoff point obtained can be used to identify the likely presence of trauma cases. To our knowledge, there is no published scale with a cutoff point that can retrospectively assess the presence of childhood trauma in Spanish populations.

The study does have some limitations. First, the focus on healthy postpartum women means that the results cannot be generalized, and it would be desirable to replicate the research using separate groups and both genders, as well as including other psychiatric disorders and nonreferred populations. Four items in the general subscale were absent for all women, and this is probably related to cultural factors. The observed differences may reflect the fact that the present sample was all female and within a limited (young) age range. The strength of the Spanish versions of the ETI-SR and ETI-SF lies in the high test-retest reliability obtained after 3 months, although it could not be applied to depressed postpartum women because they were already receiving psychopharmacologic or/and psychological treatment. In conclusion, the ETI-SF could offer a practical addition to clinical research. However, its use in population-based studies would require the inclusion of some of the eliminated ETI-SR items to improve the internal consistency in all domains.

Acknowledgments

REFERENCES

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. Revised 3rd Edition. American Association; Washington, DC: 1994.

Brand SR, Brennan PA, Newport DJ, Smith AK, Weiss T, Stowe ZN. The impact of maternal childhood abuse on maternal and infant HPA axis function in the postpartum period. Psychoneuroendocrinology. 2010; 35:686–693. [PubMed: 19931984]

Bremner JD, Bolus R, Mayer EA. Psychometric properties of the early trauma inventory-self report. J Nerv Ment Dis. 2007; 195:211–218. [PubMed: 17468680]

Bremner JD, Vermetten E, Mazure CM. Development and preliminary psychometric properties of an instrument for the measurement of childhood trauma: The early trauma inventory. Depress Anxiety. 2000; 12:1–12. [PubMed: 10999240]

Buist A, Barnett B. Childhood sexual abuse: a risk factor for postpartum depression?. Aust. N Z J. Psychiatry. 1995; 29:604–608. [PubMed: 8825822]

Costas J, Gratacòs M, Escaramís G, Martín-Santos R, de Diego Y, Baca-García E, Canellas F, Estivill X, Guillamat R, Guitart M, Gutiérrez-Zotes A, García-Esteve L, Mayoral F, Moltó MD, Phillips C, Roca M, Carracedo A, Vilella E, Sanjuán J. Association study of 44 candidate genes with depressive and anxiety symptoms in post-partum women. J Psychiatr Res. 2010; 44:717–724. doi: 10.1016/j.jpsychires.2009.12.012. [PubMed: 20092830]

Cronbach LJ. Coefficient alpha and the internal structure of tests. Psychometrika. 1951; 16:297–334.

Hyman SM, Garcia M, Kemp K, Mazure CM, Sinha R. A gender specific psychometric analysis of the early trauma inventory short form in cocaine dependent adults. Addict Behav. 2005; 30:847–852. [PubMed: 15833587]

Jeon HJ, Roh MS, Kim KH, Lee D, Yoon SC, Hahm BJ. Early trauma and lifetime suicidal behavior in a nationwide sample of Korean medical students. J Affect Disord. 2009; 119:210–214. [PubMed: 19324420]

Kendall-Tackett K. A new paradigm for depression in new mothers: the central role of inflammation and how breastfeeding and anti-inflammatory treatments protect maternal mental health. Int Breastfeed J. 2007; 32:6. [PubMed: 17397549]

Kent A, Waller G. The impact of childhood emotional abuse: An extension of the child abuse and trauma scale. Child Abuse Negl. 1998; 22:393–399. [PubMed: 9631251]

Lev-Wiesel R, Daphna-Tekoah S, Hallak M. Childhood sexual abuse as a predictor of birth-related posttraumatic stress and postpartum posttraumatic stress. Child Abuse Negl. 2009; 33:877–887. [PubMed: 19900704]

Moses-Kolko EL, Roth EK. Antepartum and postpartum depression: Healthy mom, healthy baby. J Am Med Womens Assoc. 2004; 59:181–191. [PubMed: 15354371]

Mullen PE, Martin JL, Anderson JC, Romans SE, Herbison GP. The long-term impact of the physical, emotional and sexual abuse of children: A community study. Child Abuse Negl. 1996; 20:7–21. [PubMed: 8640429]

Plaza A, Garcia-Esteve L, Ascaso C, Navarro P, Gelabert E, Halperin I, Valdés M, Martín-Santos R. Childhood sexual abuse and hypothalamus-pituitary-thyroid axis in postpartum major depression. J Affect Disord. 2010; 122:159–163. [PubMed: 19740549]

Roy CA, Perry JC. Instruments for the assessment of childhood trauma in adults. J Nerv Ment Dis. 2004; 192:343–351. [PubMed: 15126888]

Sanders B, Becker-Lausen E. The measurement of psychological maltreatment: Early data on the child abuse and trauma scale. Child Abuse Negl. 1995; 19:315–323. [PubMed: 9278731]

Sanjuan J, Martín-Santos R, Garcia-Esteve L, Carot JM, Guillamat R, Gutierrez-Zotes A, Gorneman I, Canellas F, Baca-Garcia E, Jover M, Navines R, Valles V, Vilella E, de Diego Y, Castro JA, Ivorra JL, Gelabert E, Guitart M, Labad A, Mayoral F, Roca M, Gratacos M, Costas J, van Os J, de Frutos R. Mood changes after delivery: Role of the serotonin transporter gene. Br J Psychiatry. 2008; 193:383–388. [PubMed: 18978318]

Stewart, AL.; Ware, JE. Measuring Functioning and Well-Being: The Medical Outcomes Study Approach. Duke University Press; Durham (NC): 1992.

Tyrka AR, Wier L, Price LH, Ross NS, Carpenter LL. Childhood parental loss and adult psychopathology: Effects of loss characteristics and contextual factors. Int J Psychiatry Med. 2008; 38:329–344. [PubMed: 19069576]

Wang ZI, Du J, Chen J. Reliability and validity of Chinese version of early trauma inventory-short form. Chin J Behav Med Sci. 2008; 17:956–958.

Zweig MH, Campbell G. Receiver-operating characteristic (ROC) plots: A fundamental evaluation tool in clinical medicine. Clin Chem. 1993; 39:561–577. [PubMed: 8472349]

TABLE 1

Psychometric Properties and Frequency of Each Item of the ETI-SR (*N* = 227) and ETI-SF (*N* = 227)

ETI-SR Item	N (%)	Corrected Item-Subscale Correlation	Cronbach *α* If Item Deleted
General trauma			
TG1: natural disaster	12 (5.3)	0.03	0.584
TG2: serious personal accident	24 (10.6)	0.238	0.563
TG3: serious personal injury	9 (4.0)	0.265	0.565
TG4: serious personal illness	25 (11.0)	0.126	0.577
TG5: death of parent	33 (14.5)	0.246	0.561
TG6: serious illness/injury of parent	53 (23.3)	0.206	0.567
TG7: separation of parents	27 (11.9)	0.244	0.562
TG8: raised in home other than parents'	13 (5.7)	0.201	0.569
TG9: death of sibling	7 (3.1)	0.094	0.579
TG10: serious illness/injury of sibling	30 (13.2)	0.084	0.583
TG11: death of friend	48 (21.1)	0.161	0.575
TG12: serious injury of friend	27 (11.9)	0.132	0.577
TG13: observed death/serious injury of others	112 (49.3)	0.246	0.562
TG14: divorce/separation of parents	27 (11.9)	0.327	0.551
TG15: witnessing violence	48 (21.1)	0.342	0.544
TG16: family mental illness	63 (27.8)	0.188	0.571
TG17: alcoholic parents	27 (11.9)	0.169	0.572
TG18: drug abuse in parents	3 (1.3)	0.237	0.573
TG19: victim of major theft	21 (9.3)	0.090	0.581
TG20: victim of armed robbery	18 (7.9)	0.239	0.564
TG21: victim of assault	16 (7)	0.094	0.580
TG22: victim of rape	0 (0)		
TG23: see someone murdered	1 (0.4)	−0.028	0.583
TG24: someone close to you murdered	3 (1.3)	0.018	0.583
TG25: someone close to you raped	8 (3.5)	0.141	0.575
TG26: work in stressful job	1 (0.4)	0.029	0.582
TG27: POW/hostage	0 (0)		
TG28: combat	0 (0)		
TG29: death of child	0 (0)		
TG30: miscarriage	16 (7)	0.210	0.568
TG31: death of husband	0 (0)		
Physical abuse			
TF1: spanked with a hand	59 (26)	0.502	0.597
TF2: slapped in the face	139 (61.2)	0.304	0.678
TF3: burned with cigarette	0 (0)		
TF4: punched or kicked	10 (4.4)	0.400	0.634
TF5: hit or spanked with object	25 (11.0)	0.553	0.587
TF6: hit with thrown object	6 (2.6)	0.480	0.631

ETI-SR Item	N (%)	Corrected Item-Subscale Correlation	Cronbach α If Item Deleted
TF7: choked	2 (0.9)	0.262	0.663
TF8: pushed or shoved	32 (14.1)	0.428	0.617
TF9: tied up or locked in closet	12 (5.3)	0.314	0.646
Emotional abuse			
TE1: often put down or ridiculed	33 (14.5)	0.530	0.718
TE2: often ignored or made to feel you did not count	20 (8.8)	0.415	0.742
TE3: often told you are no good	26 (11.5)	0.551	0.716
TE4: often shouted at or yelled at	67 (29.5)	0.550	0.713
TE5: most of time treated in cold or uncaring way	18 (7.9)	0.530	0.725
TE6: parents control areas of your life	47 (20.7)	0.337	0.761
TE7: parents fail to understand your needs	73 (32.2)	0.516	0.723
Sexual abuse			
TS1: exposed to inappropriate comments about sex	31 (13.7)	0.248	0.576
TS2: exposed to flashing	46 (20.3)	0.333	0.560
TS3: spy on you dressing/bathroom	5 (2.2)	0.180	0.573
TS4: forced to watch sexual acts	1 (0.4)	0.089	0.584
TS5: touched in intimate parts in way that was uncomfortable	25 (11)	0.520	0.475
TS6: someone rubbing genitals against you	13 (5.7)	0.492	0.500
TS7: forced to touch intimate parts	6 (2.6)	0.437	0.531
TS8: someone had genital sex against your will	3 (1.3)	0.197	0.573
TS9: forced to perform oral sex	1 (0.4)	0.026	0.588
TS10: someone performed oral sex on you against your will	0 (0)		
TS11: someone had anal sex with you against your will	0 (0)		
TS12: someone tried to have sex but didn't do so	0 (0)		
TS13: forced to pose for sexy photographs	0 (0)		
TS14: forced to perform sex acts for money	0 (0)		
TS15: forced to kiss someone in sexual way	4 (1.8)	0.287	0.560
General trauma			
TG1: natural disaster	12 (5.3)	−0.034	0.441
TG2: serious personal accident	24 (10.6)	0.246	0.364
TG3: serious personal injury	9 (4)	0.217	0.386
TG4: serious illness/injury of parent	53 (23.3)	0.086	0.429
TG5: separation of parents	27 (11.9)	0.105	0.411
TG6: serious illness/injury of sibling	30 (13.2)	0.106	0.412
TG7: serious injury of friend	27 (11.9)	0.073	0.422
TG8: witnessing violence	48 (21.1)	0.374	0.292
TG9: family mental illness	63 (27.8)	0.271	0.340
TG10: alcoholic /drug abuse parents	27 (11.9)	0.216	0.373
TG11: see someone murdered	1 (0.4)	−0.068	0.427
Physical abuse			
TF1: slapped in the face	139 (61.2)	0.249	0.438

ETI-SR Item	N (%)	Corrected Item-Subscale Correlation	Cronbach α If Item Deleted
TF2: burned with cigarette	0 (0)		
TF3: punched or kicked	10 (4.4)	0.338	0.322
TF4: hit with thrown object	6 (2.6)	0.304	0.361
TF5: pushed or shoved	32 (14.1)	0.330	0.273
Emotional abuse			
TE1: often put down or ridiculed	33 (14.5)	0.396	0.741
TE2: often ignored or made to feel you didn't count	20 (8.8)	0.565	0.640
TE3: often told you are no good	26 (11.5)	0.431	0.695
TE4: most of the time treated in cold or uncaring way	18 (7.9)	0.574	0.641
TE5: parents fail to understand your needs	73 (32.2)	0.543	0.662
Sexual abuse			
TS1: touched in intimate parts in way that was uncomfortable	25 (11)	0.602	0.598
TS2: someone rubbing genitals against you	13 (5.7)	0.679	0.528
TS3: forced to touch intimate parts	6 (2.6)	0.589	0.593
TS4: someone had genital sex against your will	3 (1.3)	0.252	0.687
TS5: forced to perform oral sex	1 (0.4)	0.372	0.680
TS6: forced to kiss someone in sexual way	4 (1.8)	0.210	0.695

*Several items had a frequency of 0 and were not included in the analyses of psychometric properties.

ETI-SR indicates Early Trauma Inventory—self-report; ETI-SF, Early Trauma Inventory—short-form; POW, prisoner of war.

TABLE 2

ETI-SR and ETI-SF Cronbach α in the Healthy Puerperal Sample ($N = 227$) and Postpartum Depressed Women ($N = 102$)

Cronbach α	Healthy Puerperal Women		Postpartum Depressed Women	
	ETI-SR	ETI-SF	ETI-SR	ETI-SF
General trauma subscale	0.58	0.42	0.64	0.44
Physical abuse subscale	0.66	0.42	0.76	0.64
Emotional abuse subscale	0.76	0.72	0.86	0.83
Sexual abuse subscale	0.58	0.68	0.84	0.76
Global scale	0.79	0.72	0.88	0.79

ETI-SR indicates Early Trauma Inventory—self-report; ETI-SF, Early Trauma Inventory—short-form.

TABLE 3

ETI-SR and ETI-SF Cutoff Points That Maximize Their Sensitivity and Specificity

	Cutoff	Sensitivity (95% CI)	Specificity (95% CI)	NND
ETI-SR				
General trauma subscale	3	0.77 (0.66–0.87)	0.60 (0.52–0.68)	2.71
Physical abuse subscale	3	0.81 (0.62–1.00)	0.94 (0.90–0.97)	1.34
Emotional abuse subscale	4	0.81 (0.62–1.00)	0.95 (0.91–0.98)	1.32
Sexual abuse subscale	2	0.82 (0.63–1.00)	0.91 (0.87–0.95)	1.37
Global scale	6	0.71 (0.61–0.82)	0.72 (0.64–0.79)	2.30
ETI-SF				
General trauma subscale	2	0.64 (0.53–0.76)	0.73 (0.66–0.80)	2.77
Physical abuse subscale	2	0.62 (0.39–0.85)	0.89 (0.85–0.94)	1.93
Emotional abuse subscale	3	0.76 (0.56–0.97)	0.96 (0.93–0.99)	1.38
Sexual abuse subscale	1	0.77 (0.57–0.97)	0.94 (0.91–0.98)	1.39
Global scale	4	0.69 (0.58–0.79)	0.78 (0.71–0.85)	2.13

ETI-SR indicates Early Trauma Inventory—self-report; ETI-SF, Early Trauma Inventory—short-form; CI, confidence interval; NND, number needed to diagnose.