

Resource Loss Moderates the Association Between Child Abuse and Current PTSD Symptoms Among Women in Primary-Care Settings

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Abstract

This study examined if abuse during childhood, rape in adulthood, and loss of resources predict a woman's probability of reporting symptoms of posttraumatic stress disorder (PTSD), and whether resource loss moderates the association between reporting childhood abuse and PTSD symptoms. The sample included 767 women and was collected in publicly funded primary-care settings. Women who reported having been abused during childhood also reported more resource loss, more acute PTSD symptoms, and having suffered more adult rape than those who reported no childhood abuse. Hierarchical logistic regression yielded a two-variable additive model in which child abuse and adult rape predict the probability of reporting or not any PTSD symptoms, explaining 59.7% of the variance. Women abused as children were 1 to 2 times more likely to report PTSD symptoms, with sexual abuse during childhood contributing most strongly to this result. Similarly, women reporting adult rape were almost twice as likely to report symptoms of PTSD as those not reporting it. Resource loss was

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unexpectedly not among the predictors but a moderation analysis showed that such loss moderated the association between child abuse and current PTSD symptoms, with resource loss increasing the number and severity of PTSD symptoms in women who also reported childhood abuse. The findings highlight the importance of early assessment and intervention in providing mental health care to abused, neglected, and impoverished women to help them prevent and reverse resource loss and revictimization.

Keywords

child abuse, sexual assault, PTSD, resource loss

Posttraumatic stress disorder (PTSD) is commonly diagnosed among women users of publicly funded primary-care clinics. These women tend to be low income and have histories of physical, emotional, and sexual abuse that start in childhood. Women are indeed more likely than men to be abused during childhood (Stoltenborgh, van IJzendoorn, Euser, & Bakermans-Kranenburg, 2011), and childhood abuse often has negative psychosocial effects that reverberate into adulthood. Numerous studies have associated such abuse with increased risk of mental health problems during adulthood, including PTSD (Gilbert et al., 2009; Oswald, Heil, & Goldbeck, 2010; Vranceanu, Hobfoll, & Johnson, 2007). Moreover, other studies show that victims of childhood trauma often go on to experience additional trauma such as adult rape (“revictimization”; Widom, Czaja, & Dutton, 2008), trauma that by itself can trigger and exacerbate PTSD symptoms (Nishith, Mechanic, & Resick, 2000; Schumm, Hobfoll, & Keogh, 2004). Events of resource loss may also worsen and even trigger PTSD symptoms (Walter, Horsey, Palmieri, & Hobfoll, 2010), and childhood trauma and adulthood victimization have also been associated with resource loss (Walter & Hobfoll, 2009). Therefore, childhood abuse as well as adulthood rape and resource loss during adulthood may increase the probability of PTSD among low-income women (Walter et al., 2010). However, little is known about the factors that may moderate the impact of abuse on PTSD in women. The current study addresses this gap in clinical knowledge and practice by studying resource loss as a potential moderating factor of the development of PTSD symptoms (Walter & Hobfoll, 2009; Walter et al., 2010). From a public health perspective, it is desirable to characterize the psychological profiles and life histories of women who develop PTSD symptoms because such knowledge can help improve early detection, treatment, and prevention of PTSD.

This study of a sample of women recruited in Portuguese public primary-care clinics focuses on whether childhood abuse, adulthood rape, and resource losses during adulthood predict PTSD symptoms and on whether resource loss weakens or compounds (interacts with or “moderates”) the association between child abuse and current PTSD symptoms.

Child Abuse Impact and Predictors of PTSD Symptoms Among Women in Primary-Care Settings

PTSD is a prevalent disorder that affects 2% to 5% of the general population (American Psychiatric Association [APA], 1994, 2013). Studies on the prevalence of PTSD among people seeking primary health care show that as many as one in five patients have significant mental health problems, including PTSD, and that the lifetime prevalence of PTSD is 6.8% (Slone, 2006). Among women, some experiences that qualify for *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*; APA, 1994) PTSD Criterion A (e.g., sexual abuse) also commonly lead to medical visits. These findings suggest that PTSD may be prevalent in primary health care settings. However, PTSD often goes undetected in primary health care. In fact, general population studies of PTSD in primary care report between 6.5% and 10.5% of current prevalence of PTSD and revealed higher rates in the female population (Taubman-Ben-Ari, Rabinowitz, Feldman, & Vaturi, 2001; Thulesius, Alveblom, & Hakansson, 2004).

It is important to understand the factors involved in the development and maintenance of PTSD among women in primary-care settings for prevention and intervention purposes (Spertus, Yehuda, Wong, Halligan, & Seremetis, 2003). Among possible factors explaining PTSD are child physical and emotional abuse (CPEA), and child sexual abuse (CSA), two traumatic experiences that are commonly reported by women (World Health Organization [WHO], 2014). During childhood, between 5% and 10% of girls and up to 5% of boys are exposed to penetrative sexual abuse, and up to 3 times this number are exposed to some type of sexual abuse (Gilbert et al., 2009). Several studies support the link between child abuse and adulthood PTSD, suggesting that women are at higher risk compared with men as they suffer more child abuse (Chen et al., 2010; Oswald et al., 2010; Springer, Sheridan, Kuo, & Carnes, 2007; Vranceanu et al., 2007; WHO, 2014; Young & Widom, 2014). Therefore, child abuse may contribute to the development of PTSD symptoms among women.

Child abuse is known to have a detrimental effect on women's mental health, subsequent victimization, and resource loss. Women who have experienced childhood abuse have higher rates of contact with public mental health services, higher rates of clinical disorders, and an increased risk of developing PTSD symptoms than do women who do not report such abuse (Cutajar et al., 2010). In addition, women who were physically and sexually abused in childhood are at increased risk of victimization in adulthood, including rape (Coid et al., 2001; Widom et al., 2008). Barnes, Noll, Putnam, and Trickett (2009) reported that abused females are almost twice as likely to have experienced sexual and physical revictimization, as compared with women who were not abused. Among all possible kinds of abuses, CSA is most predictive of revictimization and increases the victims' risk of developing PTSD symptoms later on (Arata, 2000; Noll, Horowitz, Bonanno, Trickett, & Putnam, 2003; Trickett, Noll, & Putnam, 2011). Furthermore, prior research with abused women also suggests that abuse often is associated with loss of resources (Walter & Hobfoll, 2009; Walter et al., 2010). According to the literature, it is expected that women who report a history of child abuse are also more likely to report loss of resources, PTSD symptoms, and more adult rape than women without a history of abuse.

Vranceanu et al. (2007) examined multiple forms of child abuse and neglect (child multi-type maltreatment; CMM) as predictors of PTSD and found them to be directly predictive of PTSD symptoms in adulthood. Particularly, sexual abuse and combined sexual and physical abuse have been linked to developing more acute PTSD symptoms (Hetzl & McCanne, 2005). Rape in adulthood also may contribute to explain PTSD symptoms in women as it is more strongly associated with PTSD than other traumatic events and it is predictive of PTSD (Schumm et al., 2004). Even when events' characteristics are controlled, having a rape history accounts for a unique part of the variance in PTSD risk (Ullman & Filipas, 2001).

Child Abuse, Resource Loss, and PTSD Symptoms

In addition to abuse during childhood and adulthood, a major factor that can exacerbate and sometimes trigger PTSD symptoms are events of resource loss (Hobfoll, 1989; Schumm et al., 2004; Walter & Hobfoll, 2009; Walter et al., 2010). Resources are defined as those personal characteristics, conditions, objects, or energies that are valued by the individual or that serve as a means to attain desirable personal characteristics, conditions, objects, or energies. Environmental circumstances, such as child abuse, often threaten or cause a depletion of people's resources, leading to resource loss (Hobfoll, 1991; Walter & Hobfoll, 2009; Walter et al., 2010). These losses may include

interpersonal resources such as assistance from friends, material resources such as food or shelter, energy resources such as time, or family resources such as help with tasks at home. Moreover, Hobfoll's (1989) Conservation of Resources (COR) theory posited that individuals who were abused have more difficulty in developing resources, and they may become more vulnerable to stress.

Child abuse affects children's ability to learn resource acquisition and maintenance processes, making them less able to acquire new resources and making resource loss more likely, as such abuse can interfere strongly with developmental and interpersonal processes necessary to acquire resources (Gringeri & Vogel-Ferguson, 2013). Child abuse is associated with subsequent resource loss because PTSD inhibits healthy emotional regulation and leads to avoidance of important resource networks (Walter et al., 2010). A connection between resource loss and adult rape has also been established in which psychological distress is followed by increased resource loss, with distress after rape as the underlying driver of resource loss (Monnier, Resnick, Kilpatrick, & Seals, 2002). Furthermore, isolated instances of sexual violence affect adult female survivors' employment (e.g., time off, diminished performance, job loss, and inability to work) and economic well-being, decreasing their income over the life course (Loya, 2015).

Hobfoll's (1991) theory sees PTSD as a disorder that develops and is maintained by a rapid loss of material and psychosocial resources. The literature suggests a potential cyclical nature of the association between resource losses and PTSD symptoms (Walter & Hobfoll, 2009), such that as losses rise, symptoms rise as well, and vice versa. For this reason, PTSD can be predictive of subsequent resource loss and such loss can be predictive of subsequent PTSD symptoms (Hobfoll, 1991; Johnson, Palmieri, Jackson, & Hobfoll, 2007; Walter & Hobfoll, 2009; Walter et al., 2010). Controlling resource loss has been related to alleviation of PTSD symptoms (Walter & Hobfoll, 2009). PTSD symptoms may also worsen when women have difficulties in acquiring and maintaining resources that would help them cope with stress. Therefore, resource loss is an important construct to consider when studying PTSD and may moderate in a strong manner the association between childhood abuse and PTSD symptoms, as abuse during childhood has a more detrimental effect on resource maintenance than adulthood rape does (Gringeri & Vogel-Ferguson, 2013; Walter et al., 2010).

In this context, the study of child abuse, adult rape, and resource loss is important because the literature shows that traumatic events such as child abuse and adult rape can lead to losses of resiliency resources that may contribute to women developing PTSD symptoms, which in turn may contribute to further resource loss, making women increasingly vulnerable to future

stressors (Hobfoll, 1989, 1991; Johnson et al., 2007). The conceptual understanding of the role of resource loss in increasing one's vulnerability to psychopathological outcomes should help design more effective interventions.

The long-term negative association between childhood abuse and resource losses, and the role of resource losses in the association between childhood abuse and PTSD symptoms has been less studied (Johnson et al., 2007; Schumm et al., 2004; Schumm, Stines, Hobfoll, & Jackson, 2005). Consistent with the COR perspective, this study examined if childhood abuse, adulthood rape, and resource losses during adulthood predict current PTSD symptoms, and whether resource loss moderates the association between child abuse and PTSD symptoms. Based on theory and previous empirical evidence, we hypothesized that women who reported having been abused as children would also report greater recent resource loss, higher current PTSD symptoms, and more adult rape than women not reporting such abuse; that those reporting abuse as children and those who were victims of rape in adulthood would be more likely to report PTSD symptoms; and that resource loss would moderate the association between childhood abuse and PTSD symptoms.

Method

Sample and Procedure

Women were individually approached and invited to participate in a study about women's health while they were waiting to receive a free family-planning and gynecological consultation. The inclusion criteria were being a female and having minimum skills of reading and writing. Participants were volunteers and they were not compensated economically for their participation. Approximately 90% of those approached agreed to participate and were interviewed by trained psychologists in a private room in the primary health care facility. All participants signed an informed consent form. Ethical approval for the study was given by the Northern Regional Health Administration of Portugal. Women who reported CSA, sexual assault, and PTSD were referred to the psychology service of the primary health care center.

Participants were 767 women recruited in public-funded primary health care settings in Northern Portugal. More than half reported a history of childhood abuse (62.6%). Participants were mostly Caucasian (99.6%), with an average age of 36.31 ($SD = 11.16$), ranging from 18 to 65. About one fifth attended high school (20.2%), nearly one third had a high school degree (32.2%), and almost one quarter had a college degree (22.3%). In terms of work status and marital status, 70.9% were employed, 52.3% were married, 30.6% were single, and the others cohabitated, were divorced, or were

widowed. Yearly income was low, with 66.8% earning below €6.000 per year and 23.5% earning between €6.000 and €12.000 per year. Most women had one or more children (62.2%; $M = 1$, $SD = 1.3$; range = 0-12). No significant demographic differences were found between abused and non-abused women (Table 1).

Table 1. Demographic Characteristics of the Sample ($N = 767$).

Variable	Childhood Abuse						p^a
	Cohort ($N = 767$)		Yes ($n = 480$; 62.6%)		No ($n = 287$; 37.4%)		
	n	%	n	%	n	%	
Age in years M (SD)	36.31	(11.16)	36.19	(11.03)	36.52	(11.40)	.127
Age in categories							
18-29	243	31.7	150	31.3	93	32.4	.626
30-39	235	30.6	153	31.9	82	28.6	
40-65	289	37.7	177	36.9	112	39	
Highest grade completed							
Primary school	75	9.8	41	8.5	34	11.8	.225
Eight grade or less	84	11	52	10.8	32	11.1	
Some high school	155	20.2	96	20	59	20.6	
High school graduate	248	32.3	149	31	99	34.5	
Some college	34	4.4	25	5.2	9	3.1	
College graduate	171	22.3	117	24.4	54	18.8	
Employment status							
Employed	544	70.9	340	70.8	204	71.1	.942
Unemployed	223	29.1	140	29.2	83	28.9	
Marital status							
Married	401	52.3	245	51	156	54.4	.618
Cohabiting	65	8.5	42	8.8	23	8	
Single	235	30.6	146	30.4	89	31	
Divorced	51	6.6	36	7.5	15	5.2	
Widowed	15	2	11	2.3	4	1.4	
Yearly income							
Less than €6.000	512	66.8	322	67.1	190	66.2	.586
€6.000-€12.000	180	23.5	108	22.5	72	25.1	
More than €12.000	75	9.8	50	10.4	25	8.7	
Number of children							
None	290	37.8	171	35.6	119	41.5	.107
One or more	477	62.2	309	64.4	168	58.5	

^aEstimated by t tests for differences in means and the Pearson χ^2 of independence.

Measures

Participants were administered several self-report questionnaires that had been previously adapted from the Women's Health Study (Hobfoll, Jackson, Lavin, Johnson, & Schroder, 2002) and validated for use in Portugal by Costa and McIntyre (2006).

Demographic information. Women reported their age, education, employment status, marital status, yearly income, and number of children.

Child abuse. An abbreviated 11-item version of the Childhood Trauma Questionnaire (CTQ; Bernstein et al., 1994) was used to assess CPEA and CSA prior to 16 years of age. The CPEA subscale included five items (e.g., "When I was 15 years old or younger, people in my family hit me so hard that it left me with bruises or marks"), and the CSA subscale included six items (e.g., "When I was 15 years old or younger, I believe that I was sexually abused"), and items were answered on a 5-point scale (*never true* = 0 to *always true* = 4). Previous studies support the structural composition of the CTQ and its internal reliability (Bernstein et al., 1994). In this study, internal reliabilities for the CPEA ($\alpha = .81$) and CSA ($\alpha = .94$) subscales were good and excellent, respectively.

Adulthood rape. Four items from the National Women's Study (Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993) were used to assess the occurrence of different forms of rape (e.g., vaginal) since the age of 16 (e.g., "Since you were 16 years old, has a man ever made you have sex by using force or threatening to harm you or someone close to you?" "How many times has this occurred?"). Resnick et al. (1993) validated this scale in a probability sample of U.S. women in which items showed strong predictive validity for PTSD. The total number of rape acts was computed by summing the total number of occurrences for all four items. Internal reliability for the total number of rapes was acceptable ($\alpha = .70$).

Recent resource loss. The 40-item version of the Conservation of Resources–Evaluation (COR-E; Hobfoll, 1998; Hobfoll & Lilly, 1993) was used to measure the extent to which women had experienced global resource loss (e.g., deterioration in social, health, time, financial, housing conditions, and work) during the previous 3 months (e.g., "How much loss or threat of loss have you experienced in the last 3 months regarding . . . for example, adequate income"). Items were answered on a 3-point scale (*no loss* = 0 to *a great deal of loss* = 2). The COR-E has excellent concurrent, divergent, and predictive

validity in both community-based and trauma-based samples (Hobfoll & Lilly, 1993; Ironson et al., 1997), and the internal reliability of the total scale in this study was excellent ($\alpha = .93$).

Abuse/assault-related PTSD. The PTSD Symptom Scale–Self Reported (PSS-SR; Foa, Riggs, Dancu, & Rothbaum, 1993) was used to measure severity of abuse and assault-related PTSD symptoms during the previous 2 weeks. To assess abuse-related PTSD, participants were first asked, “Have you ever been very emotionally upset because of sexual, physical, or any other abuse?” Participants who answered affirmatively were asked to respond to the 17 items that address diagnostic symptoms of PTSD in the *DSM-IV* (APA, 1994). To assess symptom severity, items were answered on a 4-point scale (*not at all to very much*). This scale has shown excellent internal reliability and concurrent, criterion validity in several trauma-based populations (Foa et al., 1993; Schumm et al., 2004; Schumm et al., 2005), and its internal reliability in the current study was excellent as well ($\alpha = .96$). According to previous research on PTSD severity levels (Foa et al., 1993; Nishith et al., 2000), results between 10 and 20 were considered moderate, and above 28, severe.

Data Analysis

Descriptive analyses of demographic, clinical, and psychosocial variables were performed. Mean and standard deviation were used to describe continuous variables. Categorical variables were described as absolute frequencies and relative frequencies. Furthermore, *t* tests (for continuous variables) and chi-square tests (for categorical variables) were conducted to compare demographic, clinical, and psychosocial variables of women with and without a history of childhood abuse. Independent *t* tests were used to establish differences in recent resource loss, adulthood rape, and current PTSD symptoms between women reporting child abuse (CSA and/or CPEA) versus those who did not. The dependent variables were recent resource loss, current PTSD symptoms, and adulthood rape. The groups were defined according to the CTQ. A variable was created containing the sum of all items, so that results equal to zero indicated absence of childhood abuse and results greater than zero revealed the presence of childhood abuse. To analyze the association between CPEA severity, CSA severity, recent resource loss, adulthood rape, and current PTSD symptoms, *Pearson's r correlation* coefficients were computed. All analyses but for the logistic regression were performed using a continuous dimensional measure of PTSD symptoms. For the logistic regression, the dependent variable

(PTSD symptom severity) was dichotomized to study the probability of having any PTSD symptoms versus not having any (*having symptoms* = 1, *none at all* = 0). The dichotomization tries to address the fact that in primary health care settings, individuals do not necessarily disclose (or complain about) common PTSD symptoms to their general practitioner, and therefore, it might be useful to consider a none versus any PTSD symptoms dichotomy, after confirming a trauma history, as a pre-screening procedure for patients who may need a referral for psychological treatment (National Collaborating Centre for Mental Health, 2005). Hierarchical logistic regression analyses were performed to test the effects of childhood abuse, recent resource loss, and adulthood rape in predicting current PTSD symptoms based on PSS-SR responses. Demographics were included in Step 1, followed by childhood traumatic experiences in Step 2, recent resource loss in Step 3, and adulthood rape in Step 4. This four-step strategy allowed us to test the contribution of each group of variables while controlling for the socio-demographic variables. Odds ratio (OR), 95% confidence intervals (CI), and *p* values are presented for each analysis. All analyses were performed with SPSS for Mac OSX version 22 software (SPSS, Inc., Chicago, IL). The moderation analysis was performed using the methodology proposed by Baron and Kenny (1986), using a continuous dimensional measure of PTSD.

Results

Descriptive Data

Sixty-two percent of women reported at least one form of abuse, the most common being CPEA which was reported by 61.8% of women. A 5% minority reported sexual abuse, and 4.4% reported having suffered both forms of abuse. Although high levels of abuse were found (especially CPEA), reports of rape in adulthood were less common. Two percent of the women reported suffering at least one rape since age 16. Based on these frequency patterns, child abuse was a significant risk factor for adult rape (OR = 1.09; 95% CI = [1.01, 1.16], *p* = .050), with CSA having a specially important contribution (OR = 1.15; 95% CI = [1.04, 1.26], *p* = .005). Recent resource loss was common. Eighty-seven percent of women had experienced at least some loss during the previous 3 months. Finally, PTSD symptoms were reported by 5% of women. The results also showed that 1.7% had moderate PTSD symptoms and that 0.5% had severe PTSD symptoms.

Differences Between Women With Versus Without Childhood Abuse

Women who reported having suffered childhood abuse also reported greater resource loss on average ($M = 14.683$, $SE = .542$) than did women not reporting such abuse ($M = 10.652$, $SE = .717$). An independent t test showed that the difference between conditions was statistically significant ($t = 4.510$, $p < .001$). In addition, women reporting childhood abuse also reported more PTSD symptoms ($M = 1.004$, $SE = .208$) than did women not reporting such abuse ($M = 0.150$, $SE = .104$), a difference that was significant ($t = 3.676$, $p < .001$). Finally, women who reported having suffered childhood abuse reported on average more instances of adult rape ($M = 0.177$, $SE = .072$) than did those not reporting childhood abuse ($M = 0.024$, $SE = .024$), a difference that was significant as well ($t = 2.001$, $p = .046$).

Relation Between Childhood Abuse (CSA and CPEA), Recent Resource Loss, Current PTSD Symptoms, and Adulthood Rape

The correlation between CPEA severity, CSA severity, recent resource loss, current PTSD symptoms, and adulthood rape is presented in Table 2. CPEA severity, CSA severity, adulthood rape, and recent resource loss were positively and significantly correlated with current PTSD symptoms (Table 2).

Childhood Abuse, Recent Resource Loss, and Adulthood Rape as Predictors of Risk for PTSD

The logistic regression equation examined the ability of our model to predict presence/absence of PTSD symptoms. Step 1 revealed no significant effects of demographic variables and added no significant amount of prediction to the null model (the constant-only model), as the Nagelkerke R^2 of this step was .025 (see Table 3). Step 2 revealed effects of childhood traumatic experiences, namely, that women reporting CPEA and CSA were 1 to 2 times more likely to report PTSD symptoms than women reporting no such abuse, with CSA showing a stronger effect. The inclusion of the second block of predictors allowed us to account for a significant amount of additional variance compared with both the null model and the first block model (Nagelkerke $R^2 = .508$). Step 3 revealed no significant effects of recent resource loss (Nagelkerke $R^2 = .513$). Step 4 revealed significant effects of rape in adulthood, namely, that women reporting having been raped in adulthood were

Table 2. Pearson's *r* Correlations and Descriptive Statistics for Scales Included in Logistic Regression.

Variable	1	2	3	4	5
1. CPEA severity	—				
2. CSA severity	.093**	—			
3. Recent resource loss	.131**	.095**	—		
4. Current PTSD symptoms severity	.148**	.598**	.127**	—	
5. Adulthood rape	.028	.138**	.042	.414**	—
<i>M</i> (<i>SD</i>)	2.65 (3.58)	0.37 (2.11)	13.17 (12.13)	0.68 (3.78)	0.12 (1.28)

Note. CPEA = child physical and emotional abuse; CSA = child sexual abuse; PTSD = posttraumatic stress disorder.

***p* < .01.

Table 3. Hierarchical Logistic Regression Equation Predicting PTSD Symptoms.

Step	Variable	Final Step OR	Final Step (95% CI)	Step χ^2 (<i>df</i>)	Model χ^2 (<i>df</i>)
1	Highest grade completed	1.06	[0.71, 1.58]	6.33 (4)	6.33 (4)
	Yearly income	1.71	[0.76, 3.86]		
	Employment status	0.68	[0.22, 2.11]		
	Number of children	0.54	[0.17, 1.70]		
2	Child physical and emotional abuse	1.13*	[1.01, 1.26]	132.50*** (2)	138.83*** (6)
	Child sexual abuse	2.31***	[1.76, 3.02]		
3	Recent resource loss	1.02	[0.99, 1.06]	1.41(1)	140.24*** (7)
4	Adulthood rape	1.88**	[1.21, 2.93]	25.61*** (1)	165.85*** (8)

Note. PTSD = posttraumatic stress disorder; CI = confidence interval; OR = odds ratio.

p* < .05. *p* < .01. ****p* < .001.

almost twice as likely to report PTSD symptoms than women reporting no such rape (Nagelkerke $R^2 = .597$; see Table 3).

A test with all significant univariate correlates against a constant-only model was significant, $\chi^2(8, N = 767) = 165.85, p < .001$, suggesting that the correlates, as a set, distinguished reliably between those who reported current PTSD symptoms and those who did not. The Hosmer–Lemeshow test of goodness of fit was not significant, $\chi^2(8, N = 767) = 5.475, p = .706$, suggesting an adjustment fit to the data. Overall, the full model correctly classified 97.5% of the participants, compared with the 95% correctly classified by the constant-only model. The full model explained more than half of the variance in current PTSD symptoms (Nagelkerke $R^2 = .597$).

The Moderator Role of Recent Resource Loss in the Association Between Childhood Abuse (CSA and CPEA) and Current PTSD Symptoms

The results of the moderation analysis showed that recent resource loss moderated the association between CPEA and current PTSD symptoms in the sample. Specifically, it showed that when recent resource loss was higher, women who reported CPEA were more likely to present current PTSD symptoms ($t = 4.79, p < .001$; see Figure 1).

The results also showed that recent resource loss moderated the association between CSA and current PTSD symptoms in the sample. Although



Figure 1. The moderator role of recent resource loss in the association between CPEA and current PTSD symptoms.

Note. CPEA = child physical and emotional abuse; PTSD = posttraumatic stress disorder.

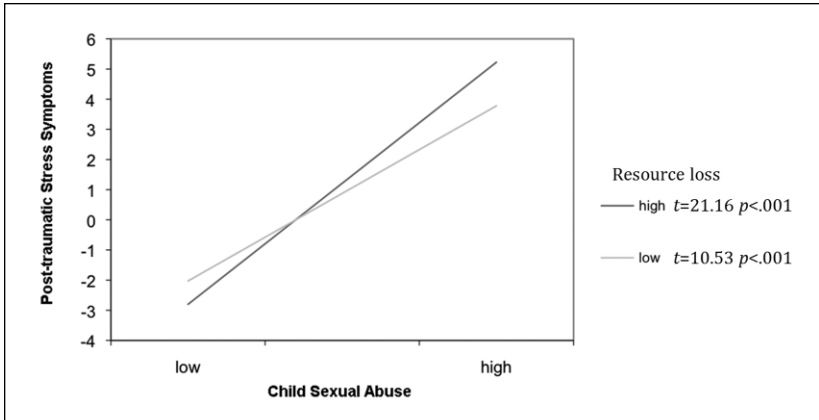


Figure 2. The moderator role of recent resource loss in the association between CSA and current PTSD symptoms.

Note. CSA = child sexual abuse; PTSD = posttraumatic stress disorder.

women who reported sexual abuse in childhood were likely to report current PTSD symptoms regardless of resource loss being higher or lower, they were more likely to report current PTSD symptoms when resource loss was greater ($t = 21.16, p < .001$; see Figure 2).

Discussion

Childhood abuse, adulthood rape, and resource loss during adulthood may increase the probability of PTSD among low-income women (Walter et al., 2010). Consistent with the COR perspective (Hobfoll, 1989, 1991), this study analyzed whether childhood abuse, adulthood rape, and resource loss during adulthood predict PTSD symptoms and whether resource loss moderates the association between child abuse and PTSD symptoms.

The present study highlights how child abuse affects women’s lives in terms of both PTSD symptoms and resource loss. Overall, our hypotheses were confirmed. We found that women who reported a history of childhood abuse reported also greater recent resource loss, more acute PTSD symptoms, and more rape in adulthood than did women who did not report having suffered childhood abuse. The results are consistent with other studies that found women sufferers of childhood abuse to show an increased risk of developing PTSD symptoms (Cutajar et al., 2010; Trickett et al., 2011), of being revictimized (Barnes et al., 2009; Trickett et al., 2011; Widom et al.,

2008), and of losing resources that help one cope with traumatic events (Hobfoll, 1991, 1998; Walter & Hobfoll, 2009; Walter et al., 2010).

In our sample, childhood abuse and adulthood rape are significantly associated with reporting PTSD symptoms, and childhood abuse is a significant risk factor for PTSD symptoms. Indeed, childhood abuse makes a woman 2 times more likely to suffer from PTSD symptoms later in life, with CSA contributing most strongly. This is consistent with other studies that showed childhood abuse both to be associated with developing PTSD symptoms or PTSD (Brown, Burnette, & Cerulli, 2015; Chen et al., 2010; Oswald et al., 2010; Springer et al., 2007; Young & Widom, 2014) and to be a predictor of such symptoms in adulthood (Vranceanu et al., 2007). Indeed, the literature shows that women abused as children have an increased risk of developing PTSD (Cutajar et al., 2010; Hetzel & McCanne, 2005). Particularly women victims of sexual abuse as children show deleterious sequelae across a host of biopsychosocial domains, including persistent PTSD (Trickett et al., 2011).

Adult rape too is significantly predictive of PTSD symptoms in our sample, again consistent with previous studies (Schumm et al., 2004; Ullman & Filipas, 2001). Women who reported adult rape were almost twice as likely to also report current PTSD symptoms than women not reporting such abuse. Our final overall model explains 59.7% of the variance in presence of PTSD symptoms, showing that childhood abuse and adulthood rape increases additively the probability of a woman showing PTSD symptoms in the sample.

The analysis showed that recent resource loss is positively correlated with reporting PTSD symptoms in the sample, consistent with studies that show such loss to increase the probability of PTSD symptoms (Schumm et al., 2004; Walter & Hobfoll, 2009; Walter et al., 2010). In addition, we found that resource loss is not a significant predictor of PTSD symptoms in the sample, contrary to previous studies that show resource loss to predict both new and chronic PTSD symptoms (Walter et al., 2010), and despite the fact that PTSD is often associated with loss of material and psychosocial resources (Hobfoll, 1991; Johnson et al., 2007; Walter et al., 2010). However, our moderation analysis showed that in our sample, resource loss shapes the association between abuse during childhood, be this physical, emotional, or sexual, and PTSD symptoms. Its moderating role is consistent with previous studies showing its association with impaired mental health in adult victims of childhood abuse (Walter & Hobfoll, 2009). The moderation analysis showed that when recent resource loss is higher, women who suffered childhood abuse are even more likely to present current PTSD symptoms than women who suffered such abuse but reported less or no resource loss. Therefore in our sample, resource loss exacerbates how childhood abuse increases the probability of such abuse being associated with impaired mental health, consistent with previous studies (Walter &

Hobfoll, 2009). This effect is possibly due to childhood abuse interfering with resource acquisition and maintenance (Walter et al., 2010). Lack of a resource pool makes it more difficult for abused women to cope with stressors and makes them likely to suffer both additional resource losses and increasing inability to cope with stressors, creating a vicious cycle of resource loss and worsening PTSD symptoms (Hobfoll, 1989; Hobfoll, 1991).

As expected, childhood abuse was shown to be a significant risk factor for revictimization. Indeed, women in the sample who reported childhood abuse were more likely to also report adulthood rape than those not reporting childhood abuse. Moreover, in our study, CSA is associated with adulthood rape and predicts it, a result also found by other researchers (Arata, 2000; Noll et al., 2003; Trickett et al., 2011). Both of the above are consistent with studies showing women who were physically and sexually abused in childhood to be at increased risk of revictimization in adulthood (Barnes et al., 2009; Coid et al., 2001; Widom et al., 2008).

The ~5% of women in our sample with any PTSD symptoms may at first seem a low percentage, compared, for example, with the percentage of women with clinically significant PTSD in other samples (Taubman-Ben-Ari et al., 2001; Thulesius et al., 2004). However, a presence of at least one PTSD symptom is not a diagnosis of clinically significant PTSD, and people with at least one PTSD symptom (5%) cannot meaningfully be compared with people with clinically significant PTSD diagnosis, for example, the 6.5% to 10.5% reported by Taubman-Ben-Ari et al. (2001) and Thulesius et al. (2004). But the percentage of people with any PTSD symptoms should be higher, and indeed, the percentage of women with an actual PTSD diagnosis in our sample is 2.2%. Furthermore, these low percentages are consistent with previous reports that the Portuguese adult population shows a lower prevalence of clinically significant PTSD than do non-Portuguese samples (Albuquerque, Soares, Jesus, & Alves, 2003). Although this is not the venue to speculate about what causes the low percentages in our sample specifically and in Portugal in general, we mention quickly that in Portugal, people generally report fewer trauma events like rape, CSA, assaults with weapons, and other events that can cause PTSD than do people in the United States and the United Kingdom (Albuquerque et al., 2003), so that PTSD in Portugal is expected to be rarer, and it is.

CPEA and CSA are the main factors explaining PTSD symptoms in our sample. Indeed, 62% of our women reported at least one form of childhood abuse, with CPEA being reported by 61.8% of women, a higher percentage than the 23% estimated by Taubman-Ben-Ari et al.'s (2001) study among primary-care users. However, we tallied emotional abuse together with physical abuse, which may have inflated the number of traumatic events

compared with other studies that focus on physical or sexual abuse but exclude emotional abuse. Childhood emotional abuse, however, can also affect mental health. Powers, Thomas, Ressler, and Bradley (2011) found that of emotional, physical, and sexual abuse, only emotional abuse predicted schizotypal personality disorder. In our sample, emotional abuse during childhood is the most common type, with it being reported by 60.9% of the women compared with the 21.4% who reported childhood physical abuse. Indeed, childhood emotional abuse accounts numerically for the relatively high rates of CPEA in our sample. Although less commonly reported by women, childhood sexual abuse plays an important role in the development and maintenance of PTSD among women users of publicly funded primary-care clinics. In our sample, 5% of women reported PTSD symptoms and another 5% reported childhood sexual abuse, consistent with results by other studies (5% to 10% of girls are exposed to penetrative sexual abuse during childhood; Gilbert et al., 2009). Women reporting multiple forms of child abuse were also present in our sample (4.4%), which according to Vranceanu et al. (2007) increased a woman's probability of developing PTSD symptoms. Finally, only 2% of women in our sample reported having been raped after age 16, which is lower than reported by U.K. women users of public primary-care clinics (8%; Coid et al., 2003). One may speculate that this result may be related to the type of traumatic situations normally encountered in the Portuguese context, which include sudden, violent death of family or friend, being robbed or assaulted, and witnessing accidents or deaths, in that order of frequency (Albuquerque et al., 2003), so that violent crimes like assault with weapon, rape, and CSA appears to be less common in Portugal than in the United States (Breslau, 2001).

The current study has a number of limitations, namely, the use of self-report questionnaires, a convenience sample not selected on the basis of injury or other trauma but recruited in waiting rooms at primary-care clinics, and its cross-sectional design. Future research should examine the predictors of PTSD using a longitudinal design. In addition, the low number of women reporting PTSD symptoms, CSA, and adult rape reduced statistical power to find additional significant results and samples with more such women should be used in future studies. Similarly, the non-assessment of intimate partner violence (IPV) limited the generalization of the results. Indeed, the conclusions of the current study are limited by the narrow set of experiences and related factors that were measured; for example, there was no assessment of other types of life stressors, adversity, and exposure to violence during childhood, adolescence, and adulthood that can lead to resource loss and PTSD symptoms and may help one to account for the high rates of recent resource loss in our sample (87%). Similarly, no assessment was made of whether

participants had received mental health treatment at any time, and no other measures of emotional distress were assessed. Our findings help one understand the unique experience of Portuguese Caucasian heterosexual women of low socio-economic status, but may not be pertinent to women of higher socio-economic status and different race, ethnic background, and sexual orientation. With respect to ethnic diversity, our participants were 99.6% Caucasian heterosexual women but other studies show that ethnic origin can affect results. For example, higher occurrence of child abuse and child neglect have been reported among Black, Hispanic, and Asian/Pacific Islander children (Hughes, 2006), and have been related to extra stress due to poverty, poor housing, unemployment, low income, immigration, language difficulties, cultural differences, mental health problems, and discrimination (London Safeguarding Children Board, 2011). Our study should therefore be replicated in other ethnic groups and also among people with different sexual orientation, as sexual-minority youths are more likely to experience sexual abuse, parental physical abuse, and peer victimization during childhood and adolescence (Friedman et al., 2011).

The above, however, should not mislead one into ignoring the strengths of our study. For instance, most studies of child abuse and adult rape have not included women users of public primary-care services. For this reason, this study adds to our understanding of the prevalence and predictors of PTSD symptoms in an under-researched group of women.

Our findings have several implications for public health policy making. First, this study stresses that women who suffered child abuse and adult rape are at high risk of developing PTSD symptoms. Both traumatic experiences are common among women, and therefore efforts to study and fight PTSD should seek out girls and women who have suffered childhood abuse and/or adult rape to prevent revictimization. Results from this study strongly suggest the need for an early assessment and intervention among abused and neglected women and their families as crucial elements in preventing (further) resource loss, revictimization, and mental health degradation.

Second, the fact that resource loss is a risk factor points to the desirability of interventions that aim to prevent and reverse such loss (especially loss of personal resources like self-esteem and interpersonal/social skills). Evidence-based strategies have been effective in either establishing or replenishing resources. They include correcting trauma-related cognitive distortions through trauma-focused cognitive-behavioral treatment (CBT; Drozdek, 2015) and training to enhance self-efficacy and relationship skills, to help these women prevent further resource loss (Vranceanu, Stines, Schumm, Lamoureux, & Hobfoll, 2011). Improved self-efficacy and relationship skills (e.g., when asking for help) may alleviate symptoms, help women negotiate challenging circumstances, and

protect them against the mental health damage ensuing from exposure violence. Future research should investigate intervention strategies that foster personal resources (such as self-esteem) and alleviate PTSD symptoms, for example, interventions that teach women how to mobilize resource networks. Primary health care venues need to provide psychosocial treatment for abused women with PTSD symptoms, particularly to those with poorer resources.

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References

- Albuquerque, A., Soares, C., Jesus, P. M., & Alves, C. (2003). The epidemiology of PTSD in the adult population in Portugal. *Acta Médica Portuguesa, 16*, 309-320.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Arata, C.M. (2000). From child victim to adult victim: A model for predicting sexual revictimization. *Child Maltreatment, 5*, 28-38. doi:10.1177/1077559500005001004
- Barnes, J. E., Noll, J. G., Putnam, F. W., & Trickett, P. K. (2009). Sexual and physical revictimization among victims of severe childhood sexual abuse. *Child Abuse & Neglect, 33*, 412-420. doi:10.1016/j.chiabu.2008.09.013
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182. doi:10.1037//0022-3514.51.6.1173
- Baronstein, D. P., Fink, L., Handelsman, L., Foote, J., Lovejoy, M., Wenzel, K., . . . Ruggiero, J. (1994). Initial reliability and validity of a new retrospective measure of child abuse and neglect. *American Journal of Psychiatry, 151*, 1132-1136.
- Breslau, N. (2001). The epidemiology of posttraumatic stress disorder: What is the extent of the problem? *Journal of Clinical Psychiatry, 62*(17), 16-22.

- Brown, J., Burnette, M. L., & Cerulli, C. (2015). Correlations between sexual abuse histories, perceived danger, and PTSD among intimate partner violence victims. *Journal of Interpersonal Violence, 30*, 2709-2725. doi:10.1177/0886260514553629
- Chen, L. P., Murad, M. H., Paras, M. L., Colbenson, K. M., Sattler, A. L., Goranson, E. N., . . . Zirakzadeh, A. (2010). Sexual abuse and lifetime diagnosis of psychiatric disorders: Systematic review and meta-analysis. *Mayo Clinic Proceedings, 85*, 618-629. doi:10.4065/mcp.2009.0583
- Coid, J., Petrukevitch, A., Chung, W., Richardson, J., Moorey, S., Cotter, S., & Feder, G. S. (2003). Sexual violence against adult women primary care attenders in east London. *British Journal of General Practice, 53*, 858-862.
- Coid, J., Petrukevitch, A., Feder, G., Chung, W., Richardson, J., & Moorey, S. (2001). Relation between childhood sexual and physical abuse and risk of revictimization in women: A cross-sectional survey. *The Lancet, 358*, 450-454. doi:10.1016/S0140-6736(01)05622-7
- Costa, E., & McIntyre, T. (2006). *Portuguese translation and adaptation of the questionnaires from the Women's Health Empowerment Project*. Unpublished manuscript, Department of Psychology, University of Minho, Braga, Portugal.
- Cutajar, M. C., Mullen, P. E., Ogloff, J. R. P., Thomas, S. D., Wells, D. L., & Spataro, J. (2010). Psychopathology in a large cohort of sexually abused children followed up to 43 years. *Child Abuse & Neglect, 34*, 813-822. doi:10.1016/j.chiabu.2010.04.004
- Drozdek, B. (2015). Challenges in treatment of posttraumatic stress disorder in refugees: Towards integration of evidence-based treatments with contextual and culture-sensitive perspectives. *European Journal of Psychotraumatology, 6*. doi:10.3402/ejpt.v6.24750
- Foa, E. B., Riggs, D. S., Dancu, C. V., & Rothbaum, B. O. (1993). Reliability and validity of a brief instrument for assessing post-traumatic stress disorder. *Journal of Traumatic Stress, 6*, 459-473. doi:10.1002/jts.2490060405
- Friedman, M. S., Marshal, M. P., Guadamuz, T. E., Wei, C., Wong, C. F., Saewyc, E. M., & Stall, R. (2011). A meta-analysis of disparities in childhood sexual abuse, parental physical abuse, and peer victimization among sexual minority and sexual nonminority individuals. *American Journal of Public Health, 101*, 1481-1494. doi:10.2105/AJPH.2009.190009
- Gilbert, R., Widom, C. S., Browne, K., Fergusson, D. M., Elspeth, W., & Janson, S. (2009). Child maltreatment 1: Burden and consequences of child maltreatment in high-income countries. *The Lancet, 373*, 68-81. doi:10.1016/S0140-6736(08)61706-7
- Gringeri, C., & Vogel-Ferguson, M. B. (2013). Childhood abuse and loss in the lives of low-income women. *Qualitative Social Work, 12*, 654-670. doi:10.1177/1473325012451481
- Hetzel, M. D., & McCanne, T. R. (2005). The roles of peritraumatic dissociation, child physical abuse, and child sexual abuse in the development of posttraumatic stress disorder and adult victimization. *Child Abuse & Neglect, 29*, 915-930. doi:10.1016/j.chiabu.2004.11.008

- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist, 44*, 513-524. doi:10.1037/0003-066X.44.3.513
- Hobfoll, S. E. (1991). Traumatic stress: A theory based on rapid loss of resources. *Anxiety Research, 4*, 187-197. doi:10.1080/08917779108248773
- Hobfoll, S. E. (1998). *Stress, culture, and community: The psychology and philosophy of stress*. New York, NY: Plenum Press.
- Hobfoll, S. E., Jackson, A. P., Lavin, J., Johnson, R. J., & Schroder, K. E. E. (2002). Effects and generalizability of communally oriented HIV-AIDS prevention versus general health promotion groups for single, inner-city women in urban clinics. *Journal of Consulting and Clinical Psychology, 70*, 950-960. doi:10.1037/0022-006X.70.4.950
- Hobfoll, S. E., & Lilly, R. S. (1993). Resource conservation as a strategy for community psychology. *Journal of Community Psychology, 21*, 128-148. doi:10.1002/1520-6629(199304)21:23.0.CO;2-5
- Hughes, T. (2006). The neglect of children and culture: Responding to child maltreatment with cultural competence and a review of child abuse and culture: Working with diverse families. *Family Court Review, 44*, 501-510.
- Ironson, G., Wynings, C., Schneiderman, N., Baum, A., Rodriguez, M., Greenwood, D., . . . Fletcher, M. (1997). Posttraumatic stress symptoms, intrusive thoughts, loss, and immune function after Hurricane Andrew. *Psychosomatic Medicine, 59*, 128-141. doi:10.1097/00006842-199703000-00003
- Johnson, D. M., Palmieri, P. A., Jackson, A. P., & Hobfoll, S. E. (2007). Emotional numbing weakens abused inner-city women's resiliency resources. *Journal of Traumatic Stress, 20*, 197-206. doi:10.1002/jts.20201
- London Safeguarding Children Board. (2011). *Practice guidance for safeguarding children in minority ethnic culture and faith (often socially excluded) communities, groups and families*. Available from <http://www.londonscb.gov.uk>
- Loya, R. M. (2015). Rape as an economic crime: The impact of sexual violence on survivors' employment and economic well-being. *Journal of Interpersonal Violence, 30*, 2793-2813. doi:10.1177/0886260514554291
- Monnier, J., Resnick, H. S., Kilpatrick, D. G., & Seals, B. (2002). The relationship between distress and resource loss following rape. *Violence and Victims, 17*, 85-91. doi:10.1891/vivi.17.1.85.33637
- National Collaborating Centre for Mental Health. (2005). *Post-traumatic stress disorder: The management of PTSD in adults and children in primary and secondary care* (National Clinical Practice Guideline No. 26). Retrieved from <http://www.ncbi.nlm.nih.gov/books/NBK56506/>
- Nishith, P., Mechanic, M. B., & Resick, P. A. (2000). Prior interpersonal trauma: The contribution to current PTSD symptoms in female rape victims. *Journal of Abnormal Psychology, 109*, 20-25. doi:10.1037//0021-843X.109.1.20
- Noll, J. G., Horowitz, L. A., Bonanno, G. A., Trickett, P. K., & Putnam, F. W. (2003). Revictimization and self-harm in females who experienced childhood sexual abuse: Results from a prospective study. *Journal of Interpersonal Violence, 18*, 1452-1471. doi:10.1177/0886260503258035

- Oswald, S. H., Heil, K., & Goldbeck, L. (2010). History of maltreatment and mental health problems in foster children: A review of the literature. *Journal of Pediatric Psychology, 35*, 462-472. doi:10.1093/jpepsy/jsp114
- Powers, A. D., Thomas, K. M., Ressler, K. J., & Bradley, B. (2011). The differential effects of child abuse and posttraumatic stress disorder on schizotypal personality disorder. *Comprehensive Psychiatry, 52*, 438-445. doi:10.1016/j.comp-psych.2010.08.001
- Resnick, H. S., Kilpatrick, D. G., Dansky, B. S., Saunders, B. E., & Best, C. L. (1993). Prevalence of civilian trauma and posttraumatic stress disorder in a representative national sample of women. *Journal of Consulting and Clinical Psychology, 61*, 984-991. doi:10.1037/0022-006X.61.6.984
- Schumm, J. A., Hobfoll, S. E., & Keogh, N. J. (2004). Revictimization and interpersonal resource loss predicts PTSD among women in substance-use treatment. *Journal of Traumatic Stress, 17*, 173-181. doi:10.1023/B:JOTS.0000022624.53181.21
- Schumm, J. A., Stines, L. R., Hobfoll, S. E., & Jackson, A. P. (2005). The double-barreled burden of child abuse and current stressful circumstances on adult women: The kindling effect of early traumatic experience. *Journal of Traumatic Stress, 18*, 467-476. doi:10.1002/jts.20054
- Slone, L.B. (2006, Spring). Prevalence of PTSD in primary care settings. *PTSD Research Quarterly, 17*(2). Retrieved from <http://www.ptsd.va.gov/professional/newsletters/research-quarterly/V17N2.pdf>
- Spertus, I. L., Yehuda, R., Wong, C. M., Halligan, S., & Seremetis, S. V. (2003). Childhood emotional abuse and neglect as predictors of psychological and physical symptoms in women presenting to a primary care practice. *Child Abuse & Neglect, 27*, 1247-1258. doi:10.1016/j.chiabu.2003.05.001
- Springer, K. W., Sheridan, J., Kuo, D., & Carnes, M. (2007). Long-term physical and mental health consequences of childhood physical abuse: Results from a large population-based sample of men and women. *Child Abuse & Neglect, 31*, 517-530. doi:10.1016/j.chiabu.2007.01.003
- Stoltenborgh, M., van IJzendoorn, M. H., Euser, E. M., & Bakermans-Kranenburg, M. J. (2011). A global perspective on child sexual abuse: Meta-analysis of prevalence around the world. *Child Maltreatment, 16*, 79-101. doi:10.1177/1077559511403920
- Taubman-Ben-Ari, O., Rabinowitz, J., Feldman, D., & Vaturi, R. (2001). Post-traumatic stress disorder in primary-care settings: Prevalence and physicians' detection. *Psychological Medicine, 31*, 555-560. doi:10.1017/S0033291701003658
- Thulesius, H., Alveblom, A. K., & Hakansson, A. (2004). Post-traumatic stress associated with low self-rated well-being in primary care attenders. *Nordic Journal of Psychiatry, 58*, 261-266. doi:10.1080/08039480410005765
- Trickett, P. K., Noll, J. G., & Putnam, F. W. (2011). The impact of sexual abuse on female development: Lessons from a multigenerational, longitudinal research study. *Development and Psychopathology, 23*, 453-476. doi:10.1017/S0954579411000174

- Ullman, S. A., & Filipas, H. H. (2001). Predictors of PTSD symptom severity and social reactions in sexual assault victims. *Journal of Traumatic Stress, 14*, 369-389. doi:10.1023/A:1011125220522
- Vranceanu, A. M., Hobfoll, S. E., & Johnson, R. J. (2007). Child multi-type maltreatment and associated depression and PTSD symptoms: The role of social support and stress. *Child Abuse & Neglect, 31*, 71-84. doi:10.1016/j.chiabu.2006.04.010
- Vranceanu, A. M., Stines, L. R., Schumm, J. A., Lamoureux, B. E., & Hobfoll, S. E. (2011). The long reach of trauma across the lifespan: Mechanisms for the signature of abuse. In D. L. Delahanty (Ed.), *The psychobiology of trauma and resilience across the lifespan* (pp. 99-118). New York, NY: Rowman & Littlefield.
- Walter, K. H., & Hobfoll, S. E. (2009). Resource Loss and naturalistic reduction of PTSD among inner-city women. *Journal of Interpersonal Violence, 24*, 482-498. doi:10.1177/0886260508317174
- Walter, K. H., Horsey, K. J., Palmieri, P. A., & Hobfoll, S. E. (2010). The role of protective self-cognitions in the relationship between childhood trauma and later resource loss. *Journal of Traumatic Stress, 23*, 264-273. doi:10.1002/jts.20504
- Widom, C. S., Czaja, S. J., & Dutton, M. A. (2008). Childhood victimization and lifetime revictimization. *Child Abuse & Neglect, 32*, 785-796. doi:10.1016/j.chiabu.2007.12.006
- World Health Organization. (2014, December). *Child maltreatment* (Fact Sheet N° 150). Retrieved from <http://www.who.int/mediacentre/factsheets/fs150/en/>
- Young, J. C., & Widom, C. S. (2014). Long-term effects of child abuse and neglect on emotion processing in adulthood. *Child Abuse & Neglect, 38*, 1369-1381. doi:10.1016/j.chiabu.2014.03.008

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