

ABSTRACT

Title of Document: THE ROLE OF RESOURCE LOSS IN THE PSYCHOLOGICAL AND ECONOMIC WELL-BEING OF SURVIVORS OF INTIMATE PARTNER VIOLENCE

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This study advanced knowledge regarding the mechanisms through which intimate partner violence leads to psychological and financial distress. Data were collected from 141 female domestic violence survivors who were abused by a male partner within the past six months. Four hierarchical regression analyses revealed that psychological, physical, and economic abuse were predictive of posttraumatic stress, depression, and economic self-sufficiency among survivors. Guided by the Conservation of Resources Theory (Hobfoll, 1998), the loss of financial, work, and interpersonal resources also predicted these three outcomes, above and beyond abuse experiences. Specifically, psychological abuse, economically controlling behaviors, interpersonal resource loss and financial resource loss remained unique predictors after all of the other variables were entered into the models. Additionally, bootstrap mediation analyses showed that financial resource loss partially mediated the relationship between economic abuse and economic self-sufficiency. Together, these findings can be used to inform future interventions to promote the financial and psychological well-being of survivors.

THE ROLE OF RESOURCE LOSS IN THE PSYCHOLOGICAL AND
ECONOMIC WELL-BEING OF SURVIVORS OF INTIMATE PARTNER
VIOLENCE

By

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Chapter 1: Introduction

Intimate partner violence is related to a myriad of mental health concerns, including depression (Hedtke et al., 2008; Nixon, Resick, & Nishith, 2004) and posttraumatic stress disorder (Bargai, Ben-Shakhar, & Shalev, 2007; Hughes & Jones, 2000). Research also indicates that intimate partner violence is associated with job instability, financial and economic strain, and economic dependence (Adams, Tolman, Bybee, Sullivan, & Kennedy, 2013; Benson & Greer, 2004). This association is particularly concerning, as economic distress often plays a role in a victim's ability to leave an abusive relationship (Anderson & Saunders, 2003; Koepsell, Kernic, & Holt, 2006), become economically self-sufficient (Postmus, Plummer, McMahon, Murshid, & Kim, 2012), and obtain work-related advancements (Adams, Sullivan, Bybee, & Greeson, 2008; Chronister & McWhirter, 2003). While these relationships are well established in the literature, there is limited research delineating the possible mechanisms through which intimate partner violence impacts psychological health and economic well-being. The purposes of this study are (1) to examine the degree to which intimate partner violence (physical, psychological, and economic abuse) and resource loss (interpersonal, work, and financial resources) predict psychological distress and economic well-being, and (2) to test whether resource loss mediates the relationship between intimate partner violence and economic distress.

One theory that offers some insight regarding the mechanism through which intimate partner violence impacts psychological health and economic well-being is Conservation of Resources Theory (COR; Hobfoll, 1989, 2001). COR posits that

actual or threatened resource loss is a means through which traumatic events influence psychological health. Resources, or the things that we value, can include interpersonal support (e.g., close relationships with family members.), financial means (e.g., savings/money for emergencies), and work-related assets (e.g., stable employment). Resource loss following trauma has been shown to result in a variety of negative psychological outcomes including depression and PTSD (Hobfoll, Vinokur, Pierce, & Lewandowski-Romps, 2012; Johnson, Palmieri, Jackson, & Hobfoll, 2007). Hobfoll (1989, 2001) argued that the fewer resources a person has, the more vulnerable she is to loss, and the more difficult it is for her to invest and gain new resources. Psychological distress continues this resource loss cycle, as resources are depleted in trying to cope with the distress—loss leads to distress which leads to loss.

Previous research supports basic principles of COR theory, with resource loss being related to negative psychological outcomes among survivors of child abuse (Schumm, Briggs-Phillips, & Hobfoll, 2006), physical assault (Schumm, Hobfoll, & Keogh, 2004), and sexual violence (Walter & Hobfoll, 2009). Specifically, interpersonal losses were found to mediate the relationship between experiences of child abuse and subsequent depressive mood (Banou, Hobfoll, & Trochelman, 2009). Two recent studies suggest that a similar relationship may hold for survivors of intimate partner violence: Resource access and resource constraints mediated the relationships between abuse (physical and non-physical) and health outcomes (physical and psychological; Beeble, Bybee, & Sullivan, 2010; Ford-Gilboe, Wuest, Varcoe, Davies, Merritt-Gray, Campbell, & Wilk, 2009). Additional studies are needed to understand the specific mediating pathways in these relationships, as the

authors grouped all types of partner violence (physical and non-physical) and/or resources (personal, social, and economic) together in their models (Beeble et al., 2010, Ford-Gilboe et al., 2009).

COR theory also suggests that resource loss leads to stress in the family, work, and financial domains, although little is known about the relationship between resource loss and economic or employment outcomes. One study found that work-related losses (such as skills, social capital, and flexibility) were related to both role disengagement (e.g., not being able to concentrate on work) and work-family conflict (Chen & Powell, 2012). Hobfoll and his colleagues (2003) also found that material resource loss (e.g., employment and money for transportation) was related negatively to a sense of mastery among low-income women, such that the women felt less in control and less able to accomplish their goals (Hobfoll, Johnson, Ennis, & Jackson, 2003). This diminished sense of mastery has implications for abused women, who may feel less confident in their abilities to seek employment, manage their finances, and provide for themselves and their children after experiencing economic abuse or leaving their partners (Postmus et al., 2012).

Survivors of intimate partner violence, who often experience prolonged abuse, may be especially vulnerable to resource loss. Abusers can use tactics to disconnect survivors from their work and financial resources, such as harassing them at their place of employment, withholding their earnings, and purposely accruing credit card debt (Adams et al., 2008). Survivors also may experience isolation, threats, and intimidation at the hands of their abusers, which can prevent women from obtaining material resources (e.g., income, health care), interpersonal resources (e.g., social

support from co-workers), and diminish their intrapersonal resources (e.g., self-esteem; Adams et al., 2008; Moe & Bell, 2004; Swanberg & Logan, 2005; Weinbaum, Stratton, Chavez, Motylewski-Link, Barrera, & Courtney, 2001), preventing them from obtaining economic self-sufficiency (Moe & Bell, 2004). Even if women are able to leave the abusive relationship, survivors often continue to experience resource loss. Women reported that they lost support from some friends and family members for leaving, while others described lost financial help from their partners in supporting their children. Others lost their homes, their jobs, and their possessions, as they had to leave their positions and belongings behind for their safety (Wuest, Ford-Gilboe, Merritt-Gray, & Berman, 2003). Consequently, the COR framework suggests that intimate partner violence may lead to resource loss, and in turn, impact psychological distress and economic well-being.

This study contributes to the literature in several ways. First, despite a rich understanding of physical and psychological abuse, much less is known about economic abuse. Economic abuse includes “behaviors that control a woman's ability to acquire, use, and maintain economic resources” (Adams et al., 2008, p. 564). Abusers might insist their partners quit their jobs, keep financial information from their partners, or intentionally build up debt in their partners’ names (Adams et al., 2008; Brush, 2002). Historically, economic abuse has been assessed within measures of psychological abuse or using a single item indicating its absence or presence (e.g., Huang, Postmus, Vikse, & Wang, 2013; Postmus, Huang, & Mathisen-Stylianou, 2012). These assessments are problematic as they fail to capture the depth and range of economically abusive behaviors. Riger et al. (2000) created the Work/School

Abuse Scale (W/SAS) to address this problem, but the scale only focused on work interference behaviors. A recently developed measure, the Scale of Economic Abuse (SEA; Adams et al., 2008), addresses economic abuse more comprehensively. An exploratory factor analysis of the Scale of Economic Abuse found that the items captured economic control (e.g., hides financial information) and economic exploitation (e.g., intentionally builds up debt) in addition to employment interference behaviors (e.g., threaten you to make you leave work; Postmus et al., 2012). In this study, the Scale of Economic Abuse was used to more adequately reflect the range of behaviors used by abusers and to more precisely capture differences in the consequences of economic abuse.

Additionally, there is a need to explore how economic abuse may contribute to the psychological well being of survivors, beyond physical and emotional abuse. One study found that mothers who experienced economic abuse were 1.9 times more likely to experience depression than mothers who did not experience economic abuse. While psychological and physical abuse also contributed to the prediction of depression in the first year of the study, only economic abuse continued to predict depressive symptoms over time (from year one to year three; Postmus, Huang, & Mathisen-Stylianou, 2012). Consequently, one aim of this study was to better understand how physical, psychological, and economic abuse contributed to the prediction of survivors' mental health, specifically depression and posttraumatic stress.

While the literature suggested that intimate partner violence leads to a variety of negative outcomes, further research is needed to understand the mechanism

through which abuse experiences lead to psychological and economic distress. Previous studies suggested that physical and sexual assault lead to interpersonal resource loss (e.g., loss of social support/networks), which subsequently contribute to both depression and posttraumatic stress symptomology (Banou et al., 2009; Slobodin et al., 2011). Given research linking economic abuse experiences with economic dependency (Postmus et al., 2012; Anderson & Saunders, 2003), this study explored resource loss as the mechanism through which economic abuse influences both economic self-sufficiency and financial self-efficacy.

Thus, the purpose of this study was to test the role of resource loss in the relationship between intimate partner violence and psychological and economic outcomes with a sample of abused women. It was hypothesized that intimate partner violence (physical, psychological, and economic abuse) and resource loss (interpersonal resource loss) would uniquely contribute to the prediction of PTSD and depressive symptomology, with high levels of each variable associated with high levels of PTSD and depression. In addition, intimate partner violence (physical, psychological, and economic abuse) and resource loss (financial and work losses) were expected to uniquely contribute to the prediction of economic self-sufficiency and financial self-efficacy, with high levels of each variable associated with low levels of self-sufficiency and self-efficacy.

To advance understanding regarding the mechanism by which financial and work related resource loss explains the relationship between economic abuse and economic outcomes, we also hypothesized the following four pathways: (1) financial resource loss would mediate the relationship between economic abuse and economic

self-sufficiency; (2) financial resource loss would mediate the relationship between economic abuse and financial self-efficacy; (3) work-related resource loss would mediate the relationship between economic abuse and economic self-sufficiency; and (4) work-related resource loss would mediate the relationship between economic abuse and financial self-efficacy.

If the hypotheses were supported, resource loss may be implicated as a critical point of intervention for domestic violence service providers. A survey of domestic violence survivors found a discrepancy between the services being used by survivors and the services being rated as most helpful—women mostly received psychological and emotional help, but wanted more tangible resources (Postmus, Severson, Berry, & Yoo, 2009). Thus, while efforts to end abuse altogether remain futile, service providers may be able to intervene more effectively by targeting resource loss cycles and helping women gain access to additional financial and interpersonal resources.

Chapter 2: Method

Procedure

Data were collected in two ways. First, domestic violence emergency shelters, advocacy/support centers, and other agencies providing services to survivors in the Mid-Atlantic region of the United States were contacted to request an appointment at their agency to explain the opportunity to their clients. During this time, five out of the 11 service providers agreed to assist with data collection. After receiving approval, a member of the research team made an appointment at the site to explain the study to potential participants using a standardized script. Survivors who chose to participate were compensated \$10 for their time and given the number for the National Domestic Violence Hotline and a link to a free financial literacy course.

Second, participants were recruited online through personal contacts, blogs (e.g., HuffPost), online support groups (e.g. Pandora's Project), domestic violence resource sites (e.g., TheHotline.org) and social networking sites (e.g., Facebook and YouTube) to reach women with more diverse experiences (e.g., those still living with their partners, women from different socioeconomic backgrounds). The online announcement informed female survivors of an opportunity to have their voices heard about their experiences with abuse. Those who were eligible to participate and gave their consent were directed to a questionnaire on Qualtrics, an online survey provider. Participants who completed the survey could enter a lottery for the chance to win one of four \$50 gift cards. All participants were given the number for the national crisis hotline and a link to a free financial literacy course.

Participants

The online survey was accessed by 384 people, 111 of which met the inclusion criteria and gave their consent to participate. Additionally, approximately 95 women were offered the chance to participate in-person, 80 of whom met the inclusion criteria and completed the survey. This totaled 191 survivors who started the questionnaire. Thirty-five participants failed to answer at least one of the validity check items correctly and were removed from the analyses. Last, participants who failed to complete at least 85% of the items on the survey were eliminated ($n = 15$), leaving 141 women in the final sample. All 141 women met the criteria for participation: identified as female, were at least 18 years of age, and had been abused by their current or former partners within six months of taking the survey.

Participants ranged in age from 18 to 64 years old ($M = 37.71$, $SD = 11.62$). In terms of racial identity/ethnicity, 32.6% of sample identified themselves as Black/African-American, 48.2% as White/European-American, 5.7% as Hispanic/Latina, 1.4% as Asian/Asian-American, 3.5% as Biracial or Multiracial and 4.3% as "Other." The majority of sample identified as heterosexual (86.5%), while others identified as bisexual (8.5%). Most of the women were currently single (40.4%), while others were dating (16.3%), married (15.6%), separated (10.6%), divorced (11.3%), and widowed (1.4%). Seventy-two percent of the women were no longer with their abusive partners, with some leaving days before completing the survey and others leaving over two years prior. However, all participants stated their current or former partner had hurt them within six months of taking the survey. The majority of participants were mothers, with one child (19.1%), two children (23.4%),

three children (12.1%), or more than three children (14.9%). Around 24% of the women did not have any children.

The survivors in this sample showed a range of educational experiences: 5% did not complete high school, 22% were high school graduates, 35.5% attended at least some college, 24.8% completed college, and 8.5% pursued graduate degrees. About half of the sample was unemployed (51.1%). Of those currently employed, occupations listed included business analyst, cosmetologist, customer service representative, manager, registered nurse, personal care aid, and sales associate. The annual personal income of the participants ranged from 61.7% below \$20,000, 20.6% between \$20,000-\$39,999, 6.4% between \$40,000-\$69,999, 2.8% between \$70,000-\$100,00, to 2.1% over \$100,000. When asked to what degree concerns about their financial future impacted their decisions about staying or leaving their abusive partners, 41.1% of the participants endorsed “a great degree,” 12.1% a “considerable degree,” 11.3% a “moderate degree,” 12.8% a “small degree,” and 17% not at all.

Measures

Physical and Psychological Abuse. Physical and psychological abuse was measured using the Abusive Behavior Inventory (ABI; Shepard & Campbell, 1992). The ABI is a 30-item measure with a physical abuse subscale (10 items) and a psychological abuse subscale (20 items). Example items ask how often a partner or former partner “pushed, grabbed, or shoved you” and “called you a name and/or criticized you.” Participants rated the frequency of abusive behaviors on a 5-point Likert scale, ranging from 1 (*never*) to 5 (*very often*). Scores for each subscale were averaged, with high scores relating to high levels of abuse. Both subscales

demonstrated internal consistency (psychological, $\alpha = .91$; physical, $\alpha = .86$; Zink, Kleges, Levin, & Putnam, 2007). Support also was found for convergent validity, as the psychological and physical subscales of the ABI correlated in the expected direction with the verbal and physical aggression subscales of the revised Conflict Tactics Scale (Zink et al., 2007). The Cronbach alphas for this sample were .93 for the psychological subscale and .92 for the physical subscale.

Economic Abuse. The Scale of Economic Abuse-12 (SEA-12; Postmus, Plummer, McMahon, Murshid, & Kim, 2012) was used to assess economic abuse. The SEA includes three subscales: economic exploitation (3 items, e.g., spend the money you needed for rent or other bills), economic control (5 items, e.g., demand to know how money was spent), and employment sabotage (4 items, e.g., threaten you to make you leave work). Participants indicated how often their partners used financially abusive behaviors on a 5-point Likert scale from 1 (*never*) to 5 (*quite often*). An overall total score and scores for each of the three subscales were averaged, with high scores relating to high levels of economic abuse. The revised scale showed adequate internal consistency (Postmus et al., 2012). Postmus and her colleagues (2012) also found support for convergent validity, with measures of physical abuse and psychological abuse being positively related to the exploitation, control, and sabotage subscales. In this sample, the Cronbach alphas were .92 for the full scale, .82 for the exploitation subscale, .88 for the control subscale, and .91 for the employment sabotage subscale.

Resource Loss. Three subscales of the Conservation of Resources-Evaluation (COR-E; Hobfoll & Lilly, 1993) were used to measure loss of resources. Participants

rated the extent to which they lost a given resource over the past 6 months on a scale from 0 (*not at all*) to 4 (*to a great deal*). Scores were obtained by summing the scores for each subscale, with high scores relating to high levels of loss. The original measure included a list of 74 resources, although this study only used the interpersonal (9 items; “intimacy with a spouse or partner”), financial (9 items; “money for extras”), and work (7 items; “stable employment”) loss subscales (Banou, Hobfoll, Trochelman, 2009). The interpersonal, financial, and work subscales had Cronbach’s alphas of .88, .95, and .90 in this study.

Posttraumatic Stress. PTSD symptomology was evaluated using the civilian version of the PTSD Checklist (PCL-C; Weathers, Litz, Herman, Huska, & Keane, 1993). The PCL-C is a 17-item self-report instrument that parallels PTSD diagnostic criteria in the *DSM-IV*. Participants indicated how much a symptom has bothered them over the past month. Responses fall on a scale between 1 (*not at all*) and 5 (*extremely*). For this study, a total severity score was calculated by summing all of the items, with high scores relating to more severe PTSD symptomology. An example item includes “how much have you been bothered by repeated, disturbing dreams of a stressful experience from the past.” The measure showed adequate internal consistency among a sample of 392 college students ($\alpha > .85$; Ruggiero, Ben, Scotti, & Rabalais, 2003) and in the current study ($\alpha = .92$). Support also was found for convergent validity, through significant relationships with two other established measures of PTSD (Ruggiero, et al., 2003).

Depression. The Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) was used to measure depressive symptoms. The CES-D consists of 20

items and is rated on a 4-point scale from 0 (*none of the time*) to 3 (*most or all of the time*). A total severity score was calculated by summing the items, with high scores relating to depressive symptomology. Items include, “I could not get going” and “I did not like myself.” Support for internal consistency was found in a previous sample of domestic violence survivors ($\alpha = .78$; Suvak, Taft, Goodman, Dutton, 2013) and in the current sample ($\alpha = .92$). High scores on the CES-D were related to low scores on measures of social support and perceived health, as well as high scores on stressful life event checklists, providing support for construct validity (Li & Hicks, 2010). Lewinsohn and colleagues (1997) found that the clinical utility of the measure did not change across age, gender, health, or disability status (Lewinsohn, Seeley, Roberts, & Allen, 1997).

Economic Self-Sufficiency. Economic self-sufficiency was measured using the Economic Self-Sufficiency Scale (ESS; Gowdy & Pearlmutter, 1993). The 15-item scale measures how often participants have been able to accomplish their financial tasks and goals. Answers range from 1 (*no, not at all*) to 5 (*yes, all of the time*). Responses on the scale were averaged, with high means relating to high levels of economic self-sufficiency. An example item states, “my current financial situation allows me to pay my own way without borrowing from family or friends.” Adequate reliability was shown among another sample of domestic violence survivors ($\alpha = .93$, Postmus, Plummer, McMahon, & Zurlo, 2013), in addition to the current sample ($\alpha = .93$). The scale was moderately correlated with measures of economic empowerment and economic self-efficacy, providing support for convergent validity (Postmus et al., 2013).

Financial Self-Efficacy. A subscale of the Domestic Violence-Related Financial Issues Scale (DV-FI; Weaver, Sanders, Campbell, & Schnabel, 2009) was used to assess financial self-efficacy. The subscale contains 5 items to assess participants' confidence in handling financial tasks, including "I am confident that I can meet my goals for becoming financially secure." Items correspond to a 7-point Likert scale, from 1 (*not at all confident*) to 7 (*completely confident*). Scores on each item were summed, with high scores relating to high self-efficacy. Support for internal consistency was found in a sample of predominately low-income women ($\alpha = .86$; Weaver et al., 2009) and among domestic violence survivors ($\alpha = .75$; Postmus et al., 2013). The Cronbach's alpha for this sample was .91. The financial self-efficacy subscale was correlated positively with scores on a measure of family resources, suggesting support for convergent validity (Weaver et al., 2009).

Demographics. Data were collected regarding gender, age, race/ethnicity, income, employment status, occupation, educational attainment, relationship status, number of children, and domestic violence service utilization. Participants also were asked to what extent their worries about their financial futures impacted their decisions about staying or leaving their partners.

Data Analyses

Data were entered into SPSS 21. Missing data were addressed first using Expectation Maximization. Afterward, descriptive statistics and Pearson's r correlations were calculated. Four MANOVAs were conducted to test for differences between the participants recruited online and those recruited in-person on the four groups of variables of interest for this study (i.e., abuse experiences, resource loss,

psychological distress, financial well-being). Hierarchical regression analyses were conducted for each of the four outcome variables (PTSD, depression, economic self-sufficiency, and financial self-efficacy), with intimate partner violence entered into the first step (physical, psychological, and economic abuse) and resource loss entered into the second step (interpersonal, financial, and/or work related loss). This tested the degree to which resource loss predicted the indices of distress above and beyond direct experiences with abuse, as the relationship between intimate partner violence and negative outcomes was established in the literature (e.g., Adams et al., 2013; Hedtke et al., 2008). To test the mediation hypotheses, bootstrap analyses were conducted. Bootstrap methods involve repeated random sampling with replacement from the data set and calculations of the path coefficient for each resulting sample (Mallinckrodt, Abraham, Wei & Russell, 2006; Shrout & Bolger, 2002). Shrout and Bolger (2002) recommend setting an alpha of .05 and drawing 1,000 samples from the original data set. If the 95% confidence interval for the mean indirect effect across samples did not include zero, it was statistically significant, suggesting mediation.

Chapter 3: Results

Missing data was addressed using Expectation Maximization (Schlomer, Bauman, & Card, 2010). Participants who did not complete at least 85% of the items were eliminated from analysis (Hair, Toma, Hult, Ringle, & Sarstedt, 2013). Little's MCAR Test then was conducted to see if the data were missing completely at random. The chi-square values associated with Little's MCAR were not significant for the measures of resource loss, economic self-sufficiency, financial self-efficacy, and PTSD (suggesting that the data were missing at random). However, these values were significant for the abuse and depression measures, indicating non-random missing data. As these missing values only accounted for 1.26% of the dataset, Expectation Maximization procedures were utilized despite the assumption violation.

No differences were found between women recruited online and in-person with regard to resource loss (i.e., interpersonal, financial and work: $F(3,137) = 2.58, p = .06$). However, there were differences between women recruited online and in-person with regard to the abuse ($F(5,135) = 2.42, p = .04$), psychological health ($F(2,138) = 4.81, p = .01$) and financial well-being ($F(2,138) = 12.54, p = .00$) variables. Specifically, women recruited online ($M = 2.42, SD = 1.14$) experienced less physical abuse than women recruited in-person ($M = 2.86, SD = 1.18$), were more depressed ($M = 39.58, SD = 14.42$) than women recruited in-person ($M = 34.88, SD = 11.72$), and had lower scores on financial self-efficacy ($M = 17.97, SD = 8.63$) compared to women in-person ($M = 23.50, SD = 9.39$). As there were no differences on seven of the ten variables of interest across recruitment methods, the two groups of women were combined for the subsequent analyses.

Before conducting the regression analyses, the four assumptions of multiple regression were checked: normality, linearity, reliability, and homoscedasticity. Homoscedasticity and linearity were evaluated using plots of the standardized residuals. Cronbach's alpha was calculated for each variable to address reliability, and the skew and kurtosis of each variable helped assess normality. All assumptions were met, allowing the data to be analyzed using regressions.

Descriptive Statistics and Correlations

The means, standard deviations, reliabilities, and ranges among the measures are reported in Table 1. The intercorrelations between measures are reported in Table 2. On average, the women reported between “rare” and “occasional” experiences with physical abuse and between “occasional” and “frequent” experiences of psychological abuse in the past 6 months. These survivors also indicated “hardly ever” to “sometimes” experiencing economically exploitive behaviors and economic sabotage, while “sometimes” to “often” experiencing economically controlling behaviors in the past 6 months. More specifically, 95% of the sample endorsed at least one experience with economic abuse (i.e., selected above a zero on at least one Likert item). Approximately 79% of survivors experienced some form of economic exploitation, 93% some form of economic control, and 66% some form of employment sabotage.

Furthermore, the women reported moderate levels of interpersonal, financial, and work-related resource loss. Their average scores on the CES-D and the PCL-C were higher than the commonly used cut-off scores (16 and 30, respectively; Radloff, 1977; Walker, Newman, Dobie, Ciechanowski, & Katon, 2002), thus suggesting high

levels of posttraumatic stress and depressive symptomology in the sample. The women seemed moderately confident in their ability to handle future financial tasks (self-efficacy), but only occasionally were able to meet their financial needs and goals (self-sufficiency).

Regression Analyses

Hierarchical regression analyses were conducted for each of the four outcome variables (PTSD, depression, economic self-sufficiency, and financial self-efficacy). The first regression investigated the degree to which abuse (psychological, physical, and economic) and interpersonal resource loss were predictive of PTSD symptoms (see Table 3). Collectively, the variables accounted for 44% of the variance in PTSD symptomology, with the abuse experiences explaining 32% and the resource loss variables accounting for an additional 12% of the variance. When all of the variables were entered in the regression equation, psychological abuse, economic abuse (the control subscale) and interpersonal resource loss accounted for variance in PTSD symptomology, and all related positively to posttraumatic stress symptoms.

The second regression investigated the degree to which abuse (psychological, physical, and economic) and interpersonal resource loss were predictive of depressive symptoms (see Table 4). Collectively, the variables accounted for 38% of the variance in depressive symptomology, with the abuse experiences explaining 20% and the resource loss variables accounting for an additional 18% of the variance. When all of the variables were entered in the regression equation, only interpersonal resource loss accounted for variance in depressive symptomology, with resource loss relating positively to depression.

The third regression tested the degree to which abuse (psychological, physical, and economic) and resource loss (financial loss and work loss) were predictive of economic self-sufficiency (see Table 5). Collectively, the variables accounted for 24% of the variance in economic self-sufficiency, with the abuse experiences explaining 21% and the resource loss variables accounting for an additional 3% of the variance. When all of the variables were entered in the regression equation, the control subscale of economic abuse and financial resource loss accounted for variance in self-sufficiency, with both variables relating negatively to economic self-sufficiency.

The final regression tested the degree to which abuse (psychological, physical, and economic) and resource loss (financial loss and work loss) were predictive of financial self-efficacy (see Table 6). These variables did not account for variance in the prediction of financial self-efficacy.

Mediation Analyses

The non-significant zero-order correlations between economic abuse, work resource loss, and the financial health variables suggested that three of the four mediation hypotheses were not supported. Thus, only the hypothesis that financial resource loss would mediate the relationship between economic abuse and economic self-sufficiency was tested. Using the PROCESS macro for SPSS (Hayes, 2013), estimates of the total effect (c), the direct effect (c'), and the bootstrapped bias-corrected 95% confidence intervals of the indirect effect (ab) were calculated. A confidence interval that does not contain zero suggests an indirect effect (e.g., mediation).

Results of the analysis are summarized in Figure 1. The total effect of economic abuse on economic self-sufficiency was significant ($b = -.36$, $SE = .07$, $t = -5.02$, $p = .00$, $CI (95) [-.50 - -.22]$). Economic abuse was associated with financial resource loss ($b = 6.17$, $SE = .74$, $t = 8.38$, $p = .00$, $CI (95) [4.71 - 7.62]$) and financial resource loss was associated with economic self-sufficiency ($b = -.02$, $SE = .01$, $t = -2.38$, $p = .02$, $CI (95) [-.035 - -.00]$). The direct effect of economic abuse on economic self-sufficiency remained significant when accounting for financial resource loss ($b = -.24$, $SE = .09$, $t = -2.78$, $p = .01$, $CI (95) [-.41 - -.07]$). Additionally, a significant indirect effect emerged for the relationship between economic abuse and economic self-sufficiency through financial resource loss ($b = -.12$, $SE = .06$, $CI (95) [-.24 - -.01]$).

Chapter 4: Discussion

This study advanced knowledge regarding the mechanisms through which abuse leads to psychological and financial distress. We first replicated previous findings in the literature, showing that psychological, physical, and economic abuse were predictive of posttraumatic stress, depression, and economic self-sufficiency among survivors. Second, we investigated the utility of Conservation of Resources Theory (Hobfoll, 1998) to explain the contributions of resource loss to psychological functioning and economic self-sufficiency for survivors of intimate partner violence. As hypothesized by this theory, the loss of resources also predicted these three outcomes, above and beyond abuse experiences. Contrary to our expectations, only psychological abuse (e.g., name calling), economically controlling behaviors (e.g., demanding to know how money was spent), interpersonal resource loss (e.g., family stability), and financial resource loss (e.g., Savings or emergency money) remained unique predictors after all of the other variables were entered into the models. Finally, we found that financial resource loss partially mediated the relationship between economic abuse and economic self-sufficiency, such that higher levels of economic abuse were associated with higher levels of financial resource loss, which in turn, was associated with lower levels of economic self-sufficiency. Together, these are interesting findings with potential applications for interventions with survivors.

Similar to previous research, the majority of survivors in this sample experienced at least some form of economic abuse (Postmus et al., 2012). Most commonly, survivors indicated that their partners would financially control them, such as demanding receipts or change when money was spent. All three subscales of

economic abuse were related to each index of resource loss, psychological health, and financial well being, with the exception of financial self-efficacy. Women whose partners' used more economically abusive behaviors reported more symptoms of depression and PTSD, lost more interpersonal, financial, and work-related resources, and were less economically self-sufficient compared to women whose partners did not employ these tactics. While the majority of survivors in this sample were able to leave their violent relationships, these findings illustrate how cycles of abuse and poverty may operate together to make it difficult for victims to leave and recover. However, given the correlational nature of this study, it also is possible that economic dependence, the loss of resources, and poor psychological health make women vulnerable to economic abuse. Abusers might feel frustrated with their partners' lack of resources and engage in economic abuse as a way to feel more in control of the household.

It was hypothesized that the abuse variables and interpersonal resource loss would collectively contribute to the prediction of both PTSD and depression. These hypotheses were supported, with interpersonal resource loss accounting for a robust amount of variance in both PTSD and depression. This was consistent with Conservation of Resources Theory, as interpersonal resource loss could exacerbate psychological distress by decreasing the social support available to survivors that they otherwise may have used in the healing process (Beeble et al., 2010; Schumm et al., 2004). Social support, or lack thereof, has an established relationship with mental health difficulties among victims of interpersonal violence (Schumm et al., 2006). Conversely, Conservation of Resources Theory also posits that psychological distress

leads to further resource depletion in the coping process, trapping individuals in a spiral of loss (Schumm et al., 2004). It has been shown that domestic violence survivors are vulnerable to these resource loss spirals, with abuse-related PTSD symptoms (i.e., emotional numbing) related to resource loss 6 months after their diagnoses (Johnson, Palmieri, Jackson, & Hobfoll, 2007). Thus, it is possible that PTSD or depressive symptomatology is facilitating the loss of interpersonal resources. Additional research is needed to investigate the directionality of this relationship, as causation cannot be inferred from this study given its cross-sectional design. Regardless, if survivors are experiencing continued resource loss and distress, then resource loss should be implicated as a critical point of intervention for policymakers and service providers.

Economic control also contributed unique variance to the prediction of PTSD, but not depression, with high levels of experiencing economic control from the abuser related to high levels of posttraumatic stress symptoms. Given that a desire for control and power over the victim is a core aspect of domestic violence, any type of control experience (physical, psychological or economic) could contribute to PTSD symptoms over time. Individuals whose finances were controlled by their partner may have experienced trauma like having to file for bankruptcy or destroying credit scores or losing one's home. It is understandable that fiscally controlling experiences could lead to avoidance of related stimuli or nightmares. The finding that economic abuse was not related to depression is inconsistent with prior research in which economic abuse predicted depressive symptoms over the course of three years among a sample of mothers (Postmus, Huang, & Mathisen-Stylianou, 2012). Given the high

correlation between economic abuse and psychological abuse in this study, it may be that psychological abuse took up more of the variance in the relationship with depression than economic abuse, which is more distally related. Future research is needed to delineate the role of economic abuse in salient outcomes for survivors of intimate partner violence.

It also was hypothesized that the abuse variables and resource loss (financial and work-related) would collectively contribute to the prediction of economic self-sufficiency and financial self-efficacy. This was partially supported. While each of the variables accounted for variance in predicting economic self-sufficiency, only economic control and financial resource loss emerged as unique predictors. The relationship between economic abuse and self-sufficiency was expected, as economic abuse is used to make victims financially dependent in their relationships (Adams et al., 2008). Postmus and her colleagues (2012) found this link between economic control and economic self-sufficiency as well, reiterating the importance of connecting survivors with resources to gain back financial independence. Unique to the current study, financial resource loss also was found to predict economic self-sufficiency. For example, survivors who choose to leave their partners may lose financial help from their abusers, which in turn makes it more difficult to support their children. Others might be forced to leave their jobs when seeking safety from their partners, thus losing a stable salary (Wuest et al., 2003). Although it contributed a small amount of variance, minimizing financial resource loss could be key in helping survivors maintain financial freedom. Contrary to our hypotheses, however, work resource loss was not a unique predictor of economic self-sufficiency. One

possible explanation could be construct overlap between economic abuse and work resource loss. For example, a common tactic among abusers is preventing victims from working—this may be capturing the loss of employment and consequently sharing variance with work resource loss.

Given the results of the regression predicting economic self-sufficiency, financial resource loss was tested as a mediator between economic abuse and economic self-sufficiency. Financial resource loss partially mediated the relationship, such that higher levels of economic abuse related to higher levels of financial resource loss, which in turn, was associated with lower levels of economic self-sufficiency. Even with the small effect size, the partial mediation is consistent with Hobfoll's (1989, 2001) Conservation of Resources Theory, which proposes that people experience stress when their resources are lost or threatened with loss after a traumatic event. Previous research supports the idea that traumatic experiences (e.g., child abuse, intimate partner violence) lead to resource loss, which then contributes to psychological distress (Banou et al., 2009; Beeble et al., 2010; Ford-Gilboe et al., 2009). Yet this study was the first to explore how financial distress (e.g., lack of economic self-sufficiency) was related to resource loss from the aftermath of trauma. While this finding must be replicated using longitudinal data to infer true mediation, financial resources, such as money for emergencies or savings for educational advancement, appear to play a key role in the financial independence and flexibility of survivors.

When predicting financial self-efficacy, however, neither abuse nor resource loss accounted for variance. This is similar to findings from the original measure

development study, in which financial self-efficacy was unrelated to multiple measures of abuse (Weaver et al., 2009). One possibility is that self-efficacy is too distally related to abuse or loss for a relationship to exist—efficacy is a future oriented construct, whereas this sample’s abuse and loss experiences were recent. Moreover, it might be that this sample did not accurately estimate their confidence about their financial futures, especially given their generally high levels of psychological distress and low levels of economic self-sufficiency. For example, about 60% of sample indicated feeling at least moderately confident about becoming financially secure, yet 43% were currently dependent upon government support for financial help. For some participants, their experiences with poverty and mental health difficulties may have acted as a motivator to change their situation and created overly hopeful expectations about their ability to improve their finances. On the other hand, it is plausible that some of the financial self-efficacy items (e.g., “I am confident that I can meet my goals for improving my credit rating”) were not applicable to this generally low-income sample. A review of low-income individuals indicated that they are less likely to have bank accounts, to save their money, and to invest their money compared to those with higher incomes (Zhan, Anderson, & Scott, 2006). Without these experiences, their financial self-efficacy ratings may have been misinformed. This would suggest a great need for financial literacy programs for women who have been abused. While two empirically supported financial literacy programs for domestic violence survivors have been developed, their delivery and availability to survivors remain unknown (Postmus, 2010).

Limitations

Several limitations should be considered when interpreting the findings of this study. Of importance is the use of retrospective self-report questionnaires. The women in this sample reported on past experiences with abuse, resource loss, psychological difficulties, and financial concerns from up to six months prior to data collection. Consequently, their responses on the questionnaires may have been affected by memory. As these women, on average, reported high rates of depressive and posttraumatic stress symptoms, it also is possible that their mental health difficulties negatively influenced their responses. If a participant was depressed, she may have perceived her current financial situation less favorably than reflected objectively.

The cross-sectional design of this study additionally prevents any causal conclusions from being made about the highlighted relationships between variables. It cannot be known if women's experiences with abuse preceded their resource loss or vice versa, for example. A promising study following survivors over the course of two years found that changes in resource constraints over time fully mediated the relationship between changes in psychological abuse and changes in psychological well being over time (Beeble et al., 2010). According to recommendations by Fritz and MacKinnon (2007), it should also be noted that the mediation analysis in this study was underpowered given our sample size—they suggest at least 148 participants for 80% power and a small effect. While a small effect was found for financial resource loss as a mediator between economic abuse and economic self-sufficiency, it is possible that other effects were not detected. Future research should both broaden recruiting efforts to maximize sample size and employ longitudinal

techniques to establish temporal precedence in the specific relationships between abuse, resource loss, psychological distress, and financial well-being.

A final limitation relates to the sample characteristics. The majority of survivors in this study were low-income women and had left their male abusive partners. Given the homogeneity of the sample in this regard, the findings may not be generalization to other groups of survivors. It cannot be assumed, for example, that these women share experiences with male survivors, victims still in violent relationships, and highly educated or resource-rich survivors. Lastly, it was decided to analyze the experiences of women surveyed in-person and online collectively. While these differences were small (the mean differences were less than half of a standard deviation apart from one another), it may be argued that the differences in these women's levels of physical abuse, depression, and financial self-efficacy warrant separate investigation. Women recruited in-person were accessing support from community agencies, whereas the women online may have been more isolated. It is possible that those using services may have felt more confident about their financial futures and less depressed than those recruited online. It also follows that women recruited in person reported higher levels of physical abuse than those recruited online—emergency shelters often have criteria that require survivors to be in imminent danger (e.g., threat of physical harm) in order to qualify for housing. Despite experiencing other forms of abuse, it may be that women recruited online have not been threatened as much physically compared to those needing to use shelter.

Implications

Despite being a relatively new construct, economic abuse has a growing body of literature to support its role in the psychological health and economic self-sufficiency of domestic violence survivors. This should encourage counselors, social workers, lawyers, police officers, and advocates to educate others about economic abuse tactics, especially economic control. Psycho-education around economic abuse might be particularly powerful for young people entering dating relationships for the first time. Early intervention could help them identify warning signs, such as partners who do not want them to engage in non-relationship activities, like going to work. Interventions around economic abuse also are needed at a policy-level. As research shows the continued occurrence of economic abuse, laws should be amended or written to include economic abuse as unacceptable behavior (Postmus et al., 2012). On a broader level, policies aimed at reducing the wage gap and facilitating equal pay would benefit female survivors as well. State and federal funding also could be directed to the development or expansion of financial resources and support programs for domestic violence survivors.

This study also implicated financial and interpersonal resource loss in the psychological and financial distress of domestic violence survivors. To better address financial resource acquisition, emergency shelters could develop partnerships with community businesses to connect survivors with stable employment and consistent salaries. Service providers might also collaborate with community leaders and businesses to create scholarships or emergency funds to assist survivors when unexpected expenses arise. Advocates could push even more for access to job-training, career-counseling, and financial literacy courses to help protect women from

future economic abuse.

Moreover, the role of interpersonal resource loss on mental health reiterates that clinicians and caseworkers should focus on expanding survivors' circles of social support. This might mean developing support groups, or even educating victims' family and friends about self-care so they can continue to support the person being abused. Early intervention with young people again seems critical here, as educators might help teens see partners who isolate them from their support systems as a warning sign of abuse. The importance of maintaining friendships and familial relationships outside of their romantic connections could also be emphasized.

Finally, vocational psychologists might focus on connecting women with financial literacy courses and career counseling in the aftermath of abuse to minimize their financial distress. Economic abuse is happening, so interventions are needed to help increase survivors' financial knowledge, self-efficacy, and self-sufficiency in the aftermath. For example, the All-State Foundation and the National Network to End Domestic Violence partnered to create a free, empirically-supported financial literacy program, entitled *Moving Ahead Through Financial Management* (Postmus & Plummer, 2010). Yet, for it to truly be effective, programs such as this need to be readily known and available to those affected by domestic violence.

Economic abuse poses a real threat to abused women. Given its frequency among this sample, economic abuse needs to be recognized by those at risk for violence and those working to help survivors in the aftermath of violence. This study suggests that economic control is particularly harmful, as it predicted PTSD symptomology and (a lack of) economic self-sufficiency. Additionally, as framed by

Conservation of Resource Theory, interpersonal resource loss and financial resource loss were found to be key predictors of psychological and financial distress, with financial resource loss acting as a possible mediator between economic abuse and economic self-sufficiency. In line with previous studies of domestic violence survivors (Beeble et al., 2010; Ford-Gilboe et al., 2009), resource loss appears to help explain the relationship between interpersonal violence and distress. While the continued loss experienced by survivors is devastating, this finding may provide hope. As psychologists, we may not be able to stop violence from happening, but we can intervene earlier in the resource loss—distress cycle to potentially minimize the negative psychological and financial outcomes experienced by too many domestic violence survivors.

Appendix A

In this study, we examined the degree to which intimate partner violence and resource loss are predictive of psychological distress and economic well-being. We added to the literature by testing various forms of resource loss as a mediator in the relationship between intimate partner violence and both psychological and economic distress. In the following sections, research on intimate partner violence, resource loss, posttraumatic stress, depression, economic self-sufficiency, and financial self-efficacy are reviewed.

Intimate Partner Violence

Intimate partner violence refers to a pattern of physical, sexual, psychological and/or economic abuse within the context of a romantic relationship (Centers for Disease Control and Prevention, 2012). The CDC estimates that one in four women have experienced intimate partner violence in their lifetime (Black et al., 2011), costing the United States an estimated \$8.3 billion dollars in medical care, mental health services, and lost work productivity a year (Max, Rice, Finkelstein, Bardwell, & Leadbetter, 2004).

Physical Abuse. Physical abuse refers to the threat or actual use of force against a partner with the intention to cause harm, injury or death (Saltzman, Fanslow, McMahon, & Shelley, 2002). Physical violence includes a range of behaviors, such as pushing, scratching, choking, shaking, biting, slapping, burning, and threatening or using a weapon (Saltzman et al., 2002). Among the myriad of predictors of violence, women with partners who were unemployed and/or abused

substances were found to be at increased risk for physical and sexual violence (Coker, Smith, McKeown, & King, 2000). Similarly, women who were unemployed themselves and/or witnessed intimate partner violence growing up also were at an increased risk for violence (Coker, Smith, McKeown, & King, 2000). Survivors have experienced many negative psychological and physical health outcomes associated with physical abuse, such as depression (Pico-Alfonso, Garcia-Linares, Celda-Navarro, Blasco-Ros, Echeburua, & Martinez, 2006), PTSD (Avant, Swopes, David, & Elhai, 2011),

Psychological Abuse. Psychological or emotional abuse used by abusers to maintain control over their partners, without causing physical harm (Saltzman et al., 2002). Examples include name calling, denying access to basic resources, intentionally isolating someone from their support networks, and making someone do something humiliating or degrading (Saltzman et al., 2002). Psychological abuse also is related to poorer psychological and physical health. One study of 102 adolescent survivors of intimate partner violence found that emotional/verbal abuse victimization predicted depression more strongly than threats and physical abuse victimization (Teitelman, Ratcliffe, McDonald, Brawner, & Sullivan, 2011). Psychological abuse also predicted PTSD symptomology (Dutton, Goodman, & Bennett, 2001) beyond the impact of physical violence.

Economic Abuse. While physical and psychological IPV are widely researched, less is known about the consequences of economic abuse. Historically, economic abuse was included within definitions of psychological abuse, however a recent study suggests that economic abuse is a separate but related construct to other

forms of intimate partner violence (Stylianou, Postmus, & McMahon, 2013). Economic abuse, which is defined as “behaviors that control a woman's ability to acquire, use, and maintain economic resources, thus threatening her economic security and potential for self-sufficiency” (Adams et al., 2008, p. 564), includes a range of controlling and exploitative behaviors. Abusers may take advantage of their partners’ economic resources (e.g., spend money they needed for rent/bills on other things), exercise control over all financial decisions (e.g., create an allowance for their partners and demand they get receipts for all purchases), and sabotage employment and education opportunities (e.g., insist that they quit their jobs or leave early; Adams et al., 2008; Brush, 2002).

Research on economic abuse has focused primarily on abusers’ work interference behaviors, such as stealing car keys and refusing to help with childcare (Brush, 2002; Riger, Ahrens, & Blickenstaff, 2000). These behaviors lessen the amount of hours women are able to work (Tolman & Wang, 2005), make it difficult to concentrate on the job (Swanberg, Macke, & Logan, 2006), and decrease their motivation to search for a job if lost due to the abuse (Alexander, 2011). Women who experienced work related abuse were likely to disclose about their abuse to co-workers and supervisors (Swanberg et al., 2006) and indicated wanting help from their employers (Perrin, Yragui, Hanson, & Glass, 2011), highlighting the importance of social support and resources for economic abuse survivors.

Along with preventing women from maintaining employment, researchers also have indicated that abusers will prevent women from using their financial resources. This can involve withholding access to banks accounts and credit cards,

taking their paychecks, and putting them on an allowance (Adams et al., 2008; Brewster, 2003). These behaviors encompass both economic control (e.g., partner hides financial information) and economic exploitation (e.g., partner intentionally builds up debt; Postmus et al., 2012). While evaluating economic control, exploitation, and interference, one study found that 94% of women (N = 120) had experienced some form of economic abuse. Even when controlling for education, age, and income, economic abuse was a predictor of economic self-sufficiency, with high levels of economic abuse related to low levels of economic self-sufficiency (Postmus et al., 2012). Yet a study of union formation (i.e., relationship status), economic abuse, and physical violence in a group of 4,000 mothers over 5 years found that mothers who experienced economic abuse had lower odds of marrying or cohabiting with their children's fathers compared to mothers who did not experience economic abuse (Huang, Postmus, Vikse, & Wang, 2013). This contradicts previous research that suggested that economic abuse prevents women from leaving. It may be that these women had access to other resources (e.g., community agencies, support from family and friends) that allowed them to leave despite their partners' economic control.

Economic abuse also may have unique mental health consequences for survivors of intimate partner violence. Thus far, one longitudinal study found that mothers who experienced economic abuse were 1.9 times more likely to experience depression than mothers who did not experience economic abuse. Although psychological, physical, and economic abuse contributed to the prediction of depression in the first year of the study, only economic abuse continued to predict

depressive symptoms over time (from year one to year three; Postmus, Huang, & Mathisen-Stylianou, 2012). This study suggests a need to continue to investigate how economic abuse, beyond physical and psychological abuse, may contribute to various mental health outcomes.

Conservation of Resources Theory and Resource Loss

Overview of COR. Conservation of Resources Theory (COR; Hobfoll, 1989, 2001) posits that individuals want to obtain and protect the things that they value—their resources. Hobfoll and Lilly (1993) classify resources into four categories: objects, the physical things that meet survival needs (e.g., transportation or shelter); conditions, resources that help accomplish goals or are goals themselves (e.g., seniority, a good marriage); personal characteristics/qualities (e.g., positive self-esteem, a sense of mastery); and energies, resources that enhance access to the other three types of resources and can be exchanged (e.g., money, knowledge).

Because resources are valuable, Hobfoll (1989, 2001) proposed that people experience stress when their resources are lost or threatened with loss. Acute traumatic events (e.g., a natural disaster) and chronic traumatic experiences (e.g., child abuse, intimate partner violence) often result in resource loss, offering a mechanism through which trauma may lead to psychological distress (Hobfoll, 2001). This tenant of COR theory has been tested in several populations, with resource loss relating to negative psychological outcomes among survivors of child abuse and rape (Schumm et al., 2006; Walter & Hobfoll, 2009), natural disasters (Ehrlich, Ziong, Buekens, Pridjian, & Elkind-Hirsch, 2010), mass shootings (Littleton, Axsom, & Grills-Taquechel, 2009), and terrorist attacks (Hobfoll, Tracy, & Galea, 2006).

Resource loss is devastating as there is a bidirectional, downward relationship between loss and distress—the loss of resources contributes to the development of psychological distress (e.g., PTSD), which then leads to further resource depletion in the coping process (Schumm et al., 2004). Survivors of intimate partner violence are particularly vulnerable to these resource loss spirals, with abuse related emotional numbing PTSD symptoms contributing to resource loss 6 months after the diagnoses (Johnson, Palmieri, Jackson, & Hobfoll, 2007).

Resource Loss and Intimate Partner Violence. Survivors of domestic violence experience resource loss across multiple domains. Abusers use a variety of violent, coercive, and dominating behaviors to exert control over their partners' lives (Beeble, Bybee, & Sullivan, 2010). These psychologically, physically, and economically abusive behaviors (as outlined previously) hinder women's access to internal and external resources. For instance, work interference behaviors can prevent women from obtaining material resources (e.g., income, health care), interpersonal resources (e.g., social support from co-workers), and diminish their intrapersonal resources (e.g., self-esteem; Adams et al., 2008; Moe & Bell, 2004; Swanberg & Logan, 2005; Weinbaum, Stratton, Chavez, Motylewski-Link, Barrera, & Courtney, 2001). This can interfere with a woman's ability to become self-sufficient (Moe & Bell, 2004).

Even if separated from the abusive relationship, survivors may continue to experience resource loss. Women reported that they lost support from some friends and family members for leaving, while others described lost financial help from their partners in supporting their children. Others lost their homes, their jobs, and their

possessions, as they had to leave their positions and belongings behind for their safety (Wuest, Ford-Gilboe, Merritt-Gray, & Berman, 2003). Other survivors reported resource loss related to legal fees from custody battles and security measures (Varcoe & Irwin, 2004).

As intimate partner violence contributes to resource loss, resource loss also puts women at an increased risk for re-victimization. Women with fewer financial resources (Goodman, Dutton, Vankos, & Weinfurt, 2005), lower quality of life (Bybee & Sullivan, 2002), and less social support (Bybee & Sullivan, 2002; Goodman et al., 2005) are at an increased risk for violence at a later time. A key point of intervention for survivors of intimate partner violence may involve resource building. Postmus, Severson, Berry, and Yoo (2009) surveyed partner violence survivors to understand their needs post-victimization. They found a discrepancy between the services being used by survivors and the services being rated as most helpful; women mostly were receiving psychological and emotional help, but they indicated wanting and rating tangible resources as the most helpful, such as subsidized housing, job training, and welfare benefits. While research continues to provide support for importance of resource acquisition and maintenance for survivors, the services available to women are not always matching those needs (Postmus et al., 2009).

COR and Intimate Partner Violence. The literature surrounding the role of resources in the relationship between interpersonal violence and psychological distress is mixed. Schumm and colleagues (2004) examined the relationship between victimization experiences, resource loss, and posttraumatic stress symptomology

among a sample of 105 women receiving treatment for substance abuse. The women were interviewed about their experiences with child sexual abuse, child physical abuse, sexual assault in adulthood, and physical abuse by a romantic partner. They also were asked about recent interpersonal resource losses (e.g., losing friends) and PTSD symptoms. Using path analysis, the authors tested a mediation model, hypothesizing that interpersonal resource loss and adult victimization experiences would mediate the relationship between child victimization experiences and current PTSD severity. Analyses revealed that child abuse victimization, adult physical assault, and interpersonal resource loss all independently contributed to the prediction of PTSD severity. Yet only adulthood rape, not resource loss, partially mediated the impact of child abuse on PTSD, possibly because they were not able to assess resource loss at the time of the actual traumatic event (Schumm et al., 2004).

This is inconsistent with other studies on trauma and distress, which found that interpersonal and intrapersonal resource loss mediated the relationship between traumatizing events and PTSD symptomology (Banou, Hobfoll, & Trochelman, 2009; Hobfoll, Vinokur, Pierce, & Lewandowski-Romps, 2012; Slobodin et al., 2011). Among domestic violence survivors, two studies illustrate resources as a mediator between the abuse—distress relationship (Beeble, Bybee, & Sullivan, 2010; Ford-Gilboe, Wuest, Varcoe, Davies, Merritt-Gray, Campbell, & Wilk, 2009). Using data from 309 intimate partner survivors, one study used structural equation modeling to test personal, social, and economic resources as mediators between intimate partner violence severity and health outcomes, both physical and mental. Analyses indicated a strong fit between the hypothesized model and the data, with past violence severity

directly contributing to negative health outcomes as well as indirectly contributing to negative health outcomes through resource access.

Similarly, Beeble, Bybee, and Sullivan (2010) examined resource constraint as the mechanism through which intimate partner violence influenced well-being in a longitudinal study of 160 survivors. The participants were asked about their experiences with psychological and physical abuse, depression, overall quality of life, and the degree of difficulty they have experienced in obtaining resources. They found that changes in resource constraints over time fully mediated the relationship between changes in psychological abuse and changes in psychological well being over time (Beeble et al., 2010). Additional studies are needed to understand the specific mediating pathways in these relationships, as the authors grouped all types of partner violence (physical and non-physical) and resource access (personal, social, and economic) together in their model (Ford-Gilboe et al., 2009).

COR theory also suggests that resource loss leads to stress in the family, work, and financial domains, although little is known about these relationships in the context of trauma. One study found the relationship between intimate partner violence and both objective and anticipated material hardship (e.g., food insufficiency) was partially mediated by job instability (Adams et al., 2013). Women with recent abuse experiences struggled to maintain employment, which then contributed to difficulty paying bills, securing housing, and affording food. These results suggested that material resources, such as employment, play a key role in economic and physical well being of survivors (Adams et al., 2013). Given the dearth of studies exploring other forms of economic distress related to resource loss, more research is needed to

see if COR theory extends beyond psychological distress for survivors of intimate partner violence.

Posttraumatic Stress

Posttraumatic Stress Disorder (PTSD) is an anxiety disorder that occurs after a person has been exposed to a traumatic event, such as intimate partner violence, sexual assault, combat, and natural disasters. The DSM-V describes four clusters of symptoms associated with PTSD: 1) re-experiencing of the event through dreams and flashbacks, 2) negative cognitions and mood, 3) avoidance of memories, thoughts, feelings, and other triggers associated with the event, and 4) arousal, which include hyper vigilance, difficulty sleeping, and irritable or rash behaviors (American Psychiatric Association, 2013). It is one of the most frequently diagnosed mental health concerns among survivors of domestic violence (Hughes & Jones, 2000), with prevalence estimates between 40% and 84% among shelter populations (Gleason, 1993).

Survivors of domestic violence who are particularly vulnerable to PTSD symptomology are those who have been victimized multiple times, such as those who were abused as children (Wilson, Samuelson, Zenteno, & Soroli, 2012). Matlow and DePrince (2012) studied the victimization and PTSD histories of 236 survivors of domestic violence, distinguishing between survivors who have been victimized by multiple perpetrators and those who had been re-victimized by the same perpetrator. Analyses revealed that a history of victimization by several perpetrators explained unique variance in passive avoidance and arousal PTSD symptomology, while a history of chronic victimization by the same perpetrator explained unique variance in

active avoidance PTSD symptomology.

It also has been suggested that the relationship between victimization and PTSD symptomology varies depending on the type of abuse (Norwood & Murphy, 2012). For example, women who experienced sexual violence and/or coercion had a greater rate of PTSD diagnoses than women who had not experienced sexual violence. Yet when the researchers controlled for psychological and physical violence, this difference became non-significant. These findings contrast with another study that found that sexual violence uniquely predicted PTSD severity after accounting for physical violence (Bennice, Resick, Mechanic, & Astin, 2003). Moreover, in a regression predicting the four clusters of PTSD symptomology in the DSM, only psychological abuse, and not physical or sexual abuse, was related to PTSD (Norwood & Murphy, 2012). Given these inconclusive findings, additional research is needed to clarify relationship of various forms of abuse with PTSD.

Resource gain and loss may be one way in which intimate partner violence relates to PTSD (Bargai et al., 2007). One study interviewed 101 abused women during their time in shelter about their history with violence, PTSD and depression symptomology, and experiences with learned helplessness. Using path analysis, they found that violence severity directly predicted learned helplessness, which then predicted both PTSD and depression. It is possible that bolstered interpersonal resources (e.g., access to community agencies) and intrapersonal resources (e.g., self esteem) could lessen learned helplessness and buffer the effect of violence on posttraumatic stress symptomology. For instance, a longitudinal investigation of 59 survivors from abused women's shelters found that a fewer number of women

maintained PTSD diagnoses at Time 2 compared to Time 1—the women who continued to struggle with PTSD reported lower levels of social support compared to their peers without a PTSD diagnoses (Mertin & Mohr, 2001).

Another study on residents of a battered women's shelter examined the link between abuse and PTSD with regard to resource gain and personal empowerment (Perez, Johnson, & Wright, 2012). The authors defined empowerment as helping women best use the skills and resources already available to them and encompasses intrapersonal resources such as self-esteem, self-efficacy, self-care, and problem solving skills. They hypothesized that empowerment may be a protective factor in the relationship between abuse and PTSD, beyond traditional objective resource gains (e.g., shelter, childcare, financial support). A regression analysis revealed that both violence severity and resource gains contributed to the prediction of PTSD symptomology. However, when empowerment was entered into the regression, resource gains lost significance and empowerment gained significance in predicting PTSD. This highlights the continued need for shelters to provide survivors with resources, including intrapersonal resources/empowerment, to buffer women from PTSD-related difficulties (Perez, Johnson, & Wright, 2012).

Depression

Clinical depression refers to a mood disorder commonly characterized by low mood, a loss of interest or pleasure in everyday activities, and feelings of worthlessness (American Psychiatric Association, 2013). Prevalence rates range from 15% to 83% in samples of abused women, with the highest rates of depression among women in domestic violence shelters (Golding, 1999). A meta-analysis of 18 studies

indicates that intimate partner violence and depression exhibit a dose-response relationship, with the rate and severity of depression increasing with the duration and severity of violence (Golding, 1999). A more recent longitudinal study of 4,008 women highlighted this relationship: women with multiple victimization experiences were five to eight times more likely to have a depressive episode than women who had not been victimized (Hedtke et al., 2008).

Among survivors of intimate partner violence, PTSD and depression show high rates of co-morbidity (Nixon et al., 2004). Among one sample of 142 survivors, 75% of the sample reported a PTSD diagnosis and 54% of the sample reported major depression, with PTSD severity significantly predicting depressive symptomology (Nixon et al., 2004). The authors posit that this relationship occurs because negative cognitions related to a specific trauma are more powerful and contribute to survivors' depressive symptoms more heavily than a general negative cognitive style. The other predictor of depression in this sample was psychological aggression, a relationship that is well established in the literature (Carlson, McNutt, Choi, & Rose, 2002; Nixon et al., 2004). For example, among a sample of 182 women, psychologically abused women and both physically and psychologically abused women had higher rates of depression, anxiety, and PTSD symptomology compared to non-abused women (Pico-Alfonso et al., 2006). Moreover, women who also experienced sexual abuse reported even higher levels of depression compared to those who were not sexually abused (Pico-Alfonso et al., 2006).

Women continue to cope with negative mental health consequences of partner abuse, even after they have left their partners or sought help from shelters.

Researchers followed a group of 94 women for two years after their exit from a domestic violence shelter (Anderson, Saunders, Yoshihama, Bybee, & Sullivan, 2003). Participants were interviewed over six time points and answered questions about violence-related stressors and secondary stressors from leaving shelter and their relationships. Secondary stressors included feelings of loss related to leaving their romantic partner, family responsibilities, and income loss. They also reported on their available resources, including social support, material assets, and self-efficacy.

Results from growth curve analyses revealed that women exposed to the least amount of violence and secondary stressors experienced a decline in their levels of depression over time, even when controlling for social support, self-efficacy, and financial/material resources. Conversely, women who encountered the most stressors became more depressed over time. Of the measured resources, only social support was related negatively to depression over time.

In addition to social support, other resources appear to protect survivors of intimate partner violence from depression. Carlson and colleagues (2002) investigated the role of self-esteem, social support, education, employment, health, and economic hardship among a group of 557 women in a primary care facility. Women with depression or anxiety reported less partner support, less social support from family and friends, lower self-esteem, worse health, lower educational attainment, greater economic hardship and more difficulties with employment compared to women without mental health disorders. When divided into groups based on their lifetime experiences with intimate partner violence (none, low, medium, and high), women with high levels of each protective factor reported less depression and anxiety than

women with low levels of each protective factor across groups. Even when controlling for frequency of the abuse, social support also has been shown to reduce the risk of depression, suicide ideation, anxiety, and PTSD symptomology (Coker, Smith, Thompson, McKeown, Bethea, & Davis, 2002). These results lend support to the idea that intrapersonal, interpersonal, financial, and work related resources play a protective role against depression and anxiety among abused women, although causal conclusions cannot be drawn due to the cross-sectional nature of the study (Carlson et al., 2002).

Economic Self-Sufficiency

Traditionally, economic self-sufficiency is defined the ability to provide basic needs (e.g., food, shelter, medical care) for themselves and their dependent family members without help from social welfare programs (Gowdy & Pearlmutter, 1993). Yet this definition classifies economic self-sufficiency as a dichotomous condition, limiting its scope. Gowdy and Pearlmutter (1993) proposed that economic self-sufficiency is more subjective and encompasses four aspects: 1) personal freedom, a person's sense of control of their lives financially; 2) financial responsibility, a person's ability to meet their financial obligations; 3) family and self well-being, a person's ability to provide health care needs for themselves and their dependents; and 4) basic assets for community living, a person's ability to secure basic needs such as housing and transportation without using government assistance.

Economic self-sufficiency is vital in helping abused women leave their partners. Generally, women are protected from negative financial outcomes after the end of a relationship if they have access to intrapersonal resources (e.g., self-efficacy,

positive coping skills), interpersonal resources (social support from family, friends, employers), and structural resources (employment, community agencies, government support) (Amato, 2000). This holds true for abused women--a systematic review of the literature showed that a woman's income, employment status, and economic well-being were cited as the most consistent and powerful predictors of a woman's choice to leave or stay, even when controlling for other variables (Anderson & Saunders, 2003). Women who had their own source of income, who were employed, and who had regular access to child care and other sources of social support had the most agency to leave (Anderson & Saunders, 2003). These objective resources, such as employment and child care, are more strongly related to a woman's decision to leave than more subjective perceptions of economic dependency (Bornstein, 2006), highlighting the importance of resource access for survivor's economic self-sufficiency.

Yet these protections are harder to secure for survivors of intimate partner violence, who may experience physical, psychological, and economic abuse that keep them dependent on their partners and limit their access to these resources (Adams et al., 2008; Warrenner et al., 2013; Weaver et al., 2009). In a study of 120 survivors of intimate partner violence, 79% of participants indicated that they had experienced some form of economic control (Postmus et al., 2012). This included perpetrator behaviors like demanding to know how money was spent, keeping financial information secret, and demanding receipts/change for any purchases made. These abuse experiences were a predictor of economic self-sufficiency, with high levels of economic control associated with decreases in economic self-sufficiency.

The difficulty of leaving an abusive relationship without economic resources is amplified further for low-income women and women on welfare. For example, a qualitative study of 26 abused women revealed that given the time limits and work requirements associated with welfare reform, many women would go back to their partners for instrumental support and direct financial assistance, despite their history of violence (Scott, London, & Myers, 2002). Even with government resources available to them, their economic situations required additional help from their partners that outweighed their safety needs (Scott, London, & Myers, 2002). Thus, the relationship between economic dependency and abuse appears bidirectional: abuse breeds economic dependency, and economic dependency may keep women in situations where they have to continue to tolerate the abuse (Bornstein, 2006).

Despite these outlined difficulties, financial literacy courses may help abused women establish economic self-sufficiency. In an exploratory study of 120 survivors of domestic violence, Postmus and her colleagues (2013) found that while women had moderate levels of financial literacy, particularly regarding community resources available to them, many did not understand aspects of long-term financial planning. Those women with high levels of financial literacy also indicated high levels of economic self-sufficiency, suggesting financial education may be a pathway to greater economic independence. Additionally, a study evaluating the Allstate Foundation's financial literacy program interviewed survivors of intimate partner violence enrolled in the program three times over the course of a year (Postmus & Plummer, 2010). The researchers found that in addition to the increase of certain positive financial behaviors (setting goals, creating a budget, paying off debts),

survivors also showed increased economic self-efficacy compared to the start of the program. While promising, this study lacked a control group and was considered exploratory by the authors. Further research is needed to both understand the mechanisms through which economy dependency is manifested and through which economic self-sufficiency can be obtained.

Financial Self-Efficacy

Financial or economic self-efficacy refers to one's confidence in her ability to be financially successful or sufficient (Gowdy & Pearlmutter, 1993). Perceptions of self-efficacy in a certain domain are related to behavior changes in that domain (Bandura, 1982). For example, in a sample of over 4,000 adolescents, participants' financial self-efficacy increased after their participation in a financial literacy program. These advancements also related to actual changes in financial behaviors, such as tracking expenses, using a budget, and paying debts on time (Danes, Huddleston-Casas, & Boyce, 1999).

Financial self-efficacy has serious implications for survivors of intimate partner violence, as greater self-efficacy may lead to economic self-sufficiency and the ability to leave a dangerous relationship. However, abuse experiences and consequential resource loss may hinder confidence in financial matters. Weaver, Sanders, Campbell, and Schnabel (2009) evaluated financial self-efficacy with abused women across several domains, including debt, employment, education, and financial security. They found that financial self-efficacy was correlated moderately with survivors' objective resource adequacy (e.g., food, shelter, health care), with low levels of resource adequacy related to low levels of financial self-efficacy. Therefore,

resource access was associated with confidence in managing finances (Weaver et al., 2009).

Using the same measure, another study examined the relationship between financial literacy, self-efficacy, and self-sufficiency among a group of domestic violence survivors in a financial literacy program (Postmus, Plummer, McMahon, & Zurlo, 2013). They found that financial self-efficacy was related positively to economic self-sufficiency and economic literacy, although it was not related to economic abuse. It may be that financial self-efficacy is indirectly influenced by economic abuse through resource loss (Postmus et al., 2013; Weaver et al., 2009). A study of divorced women also found that financial self-efficacy predicted economic self-sufficiency, demonstrating support for the idea that perceived confidence in one's financial abilities are related to actual economic behaviors and abilities (Warrener, Koivunen, & Postmus, 2013).

Furthermore, among domestic violence survivors, those who did not receive any financial literacy education showed decreases in financial self-efficacy over their time in shelter (Sanders, Weaver, & Schnabel, 2007). Women who participated in a financial literacy program while in shelter, however, experienced an increase in their financial self-efficacy over time. While this indicates a promising point of intervention, additional research is needed to understand what contributes to survivors' financial self-efficacy (Sanders, Weaver, & Schnabel, 2007).

Summary Statement

Intimate partner violence encompasses a wide range of abusive behaviors, including physical, psychological/emotional, and economic abuse. While there is a

plethora of research on the occurrence and consequences of physical and psychological abuse, less is known about economic abuse (Adams et al., 2008; Weaver et al., 2009). Preliminary research suggested that relationships exist between economic abuse and resource loss (Adams et al., 2008; Brush, 2002; Riger, Ahrens, & Blickenstaff, 2000), psychological distress (Huang et al., 2012), and economic well being (Postmus et al., 2012). The first aim of this study was to extend the limited research on economic abuse by examining the differential contributions of physical, psychological, and economic abuse on outcomes salient to survivors of intimate partner violence.

Moreover, while we understand that intimate partner violence is related to negative mental health (Anderson et al., 2003; Bargai et al., 2007; Gustafsson et al., 2012) and economic outcomes (Alexander, 2011; Swanberg et al., 2006; Tolman & Wang, 2005), the mechanism through which this occurs remains unclear. COR theory and the literature on resource loss offer one possible explanation. Based on a small number of previous studies with survivors of domestic violence (Beeble et al., 2010; Ford-Gilboe et al., 2009), it has been suggested that resource loss mediates the relationship between traumatic experiences and negative mental health outcomes. The second aim of this study was to further test this tenant of COR theory to understand how psychological, physical, and economic abuse differentially contribute to both resource loss and distress. While previous studies have focused on psychological distress as an outcome, we hoped to add to the literature by also measuring economic distress given the critical role of economic factors in the safety and agency of domestic violence survivors.

Research Hypotheses 1. Collectively, intimate partner violence and resource loss would account for variance in the prediction of PTSD symptomology.

- i. High levels of physical abuse would be associated with high levels of PTSD.
- ii. High levels of psychological abuse would be associated with high levels of PTSD.
- iii. High levels of economic abuse would be associated with high levels of PTSD.
- iv. High levels of interpersonal resource loss would be associated with high levels of PTSD.

2. Collectively, intimate partner violence and resource loss would account for variance in the prediction of depression.

- i. High levels of physical abuse would be associated with high levels of depression.
- ii. High levels of psychological abuse would be associated with high levels of depression.
- iii. High levels of economic abuse would be associated with high levels of depression.
- iv. High levels of interpersonal resource loss would be associated with high levels of depression.

3. Collectively, intimate partner violence and resource loss would account for variance in the prediction of economic self-sufficiency

- i. High levels of physical abuse would be associated with low levels of economic self-sufficiency.
- ii. High levels of psychological abuse would be associated with low levels of economic self-sufficiency.
- iii. High levels of economic abuse would be associated with low levels of economic self-sufficiency.
- iv. High levels of financial resource loss would be associated with low levels of economic self-sufficiency.
- v. High levels of work related resource loss would be associated with low levels of economic self-sufficiency.

4. Collectively, intimate partner violence and resource loss would account for variance in the prediction of financial self-efficacy.

- i. High levels of physical abuse would be associated with low levels of financial self-efficacy.
- ii. High levels of psychological abuse would be associated with low levels of financial self-efficacy.
- iii. High levels of economic abuse would be associated with low levels of financial self-efficacy.
- iv. High levels of financial resource loss would be associated with low levels of financial self-efficacy.
- v. High levels of work related resource loss would be associated with low levels of financial self-efficacy.

5a. Financial resource loss would mediate the relationship between economic abuse

and economic self-sufficiency.

5b. Financial resource loss would mediate the relationship between economic abuse and financial self-efficacy.

6a. Work related resource loss would mediate the relationship between economic abuse and economic self-sufficiency.

6b. Work related resource loss would mediate the relationship between economic abuse and financial self-efficacy.

Appendix B

The Abusive Behavior Inventory (ABI; Shepard & Campbell, 1992)

Here is a list of behaviors that many women report have been used by their partners or former partners. Mark the number below to show your closest estimate of how often it happened in your relationship with your partner or former partner during *the last six months*.

	Never (1)	Rarely (2)	Occasionally (3)	Frequently (4)	Very Frequently (5)
1. Called you a name and/or criticized you.	<input type="checkbox"/>				
2. Tried to keep you from doing something you wanted to do (example: going out with friends, going to meetings)	<input type="checkbox"/>				
3. Gave you angry stares or looks.	<input type="checkbox"/>				
4. Prevented you from having money for your own use.	<input type="checkbox"/>				
5. Ended a discussion with you and made the decision himself.	<input type="checkbox"/>				
6. Threatened to hit or throw something at you.	<input type="checkbox"/>				
7. Pushed, grabbed, or shoved you.	<input type="checkbox"/>				
8. Put down	<input type="checkbox"/>				

your family or friends.					
9. Accused you of paying too much attention to someone or something else.	<input type="checkbox"/>				
10. Put you on an allowance.	<input type="checkbox"/>				
11. Used your children to threaten you (examples: said he would leave town with the children or gain custody).	<input type="checkbox"/>				
12. Became very upset with you because dinner, housework, or laundry was not ready when he wanted it or done the way he thought it should be.	<input type="checkbox"/>				
13. Said things to scare you (examples: said something "bad" would happen, threatened to commit suicide).	<input type="checkbox"/>				
14. Slapped, hit, or punched you.	<input type="checkbox"/>				
15. Made you do something humiliating or degrading (examples: begging for his forgiveness,	<input type="checkbox"/>				

having to ask his permission to use the car or do something).					
16. Checked up on you (examples: listened to phone calls, checked car mileage, called repeatedly at work).	<input type="checkbox"/>				
17. Drove recklessly when you were in the car.	<input type="checkbox"/>				
18. Pressured you to have sex in a way that you didn't like or want.	<input type="checkbox"/>				
19. Refused to do housework or childcare.	<input type="checkbox"/>				
20. Threatened you with a knife, gun, or other weapon.	<input type="checkbox"/>				
21. Spanked you.	<input type="checkbox"/>				
22. Told you that you were a bad parent.	<input type="checkbox"/>				
23. Stopped you or tried to stop you from going to work or school.	<input type="checkbox"/>				
24. Threw, hit, kicked, or smashed something.	<input type="checkbox"/>				
25. Kicked you.	<input type="checkbox"/>				
26. Physically forced you to	<input type="checkbox"/>				

have sex.					
27. Threw you around.	<input type="checkbox"/>				
28. Physically attacked the sexual parts of your body.	<input type="checkbox"/>				
29. Choked or strangled you.	<input type="checkbox"/>				
30. Used a knife, gun, or other weapon against you.	<input type="checkbox"/>				

Psychological items: 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 15, 16, 17, 19, 20, 22, 23, 24
Physical items: 7, 14, 18, 21, 25, 26, 27, 28, 29, 30

Appendix C

Scale of Economic Abuse (SEA-12; Postmus, Plummer, McMahon, Murshid, & Kim; 2012)

The following is a list of things some people do to hurt their partner or ex-partner financially. Please indicate, to the best of your recollection, how frequently your partner or ex-partner has done any of the following things *in the last six months*:

	Never (0)	Hardly Ever (1)	Sometimes (2)	Often (3)	Quite Often (4)	Not Applicable (5)
1. Pay bills late or not pay bills that were in your name or in both your names.	<input type="checkbox"/>					
2. Spend the money you needed for rent or other bills.	<input type="checkbox"/>					
3. Build up debt under your name by doing things like use your credit card or run up the phone bill.	<input type="checkbox"/>					
4. Demand to know how money was spent.	<input type="checkbox"/>					
5. Make important financial decisions without talking with you about it first.	<input type="checkbox"/>					
6. Keep financial information from you.	<input type="checkbox"/>					
7. Make you ask him for money.	<input type="checkbox"/>					
8. Demand that you give him receipts and/or change when you spent money.	<input type="checkbox"/>					
9. Do things to keep you from going to your job.	<input type="checkbox"/>					
10. Demand that you quit your job.	<input type="checkbox"/>					

11. Threaten you to make you leave work.	<input type="checkbox"/>					
12. Beat you up if you said you needed to go to work.	<input type="checkbox"/>					

Exploitation items: 1, 2, 3

Control items: 4, 5, 6, 7, 8

Sabotage items: 9, 10, 11, 12

Appendix D

Conservation of Resources—Evaluation (Hobfoll & Lilly, 1993)

We are interested the extent to which you have experienced loss in any of the list of resources listed below *in the last six months*. Loss of resources occurs when the resource has decreased in availability to you (e.g., loss of personal health or actual loss of intimacy with spouse or partner).

If you have experienced loss in any of the resources *in the last six months*, you would rate that loss from 1 to 4 (1 = actual loss to a small degree, to 4 = actual loss to a great degree). If the availability of the resource has not changed, or the resource is not applicable, you would select 0 (zero = not at all / not applicable).

Please note: DO NOT rate the availability of the resource to you. We are only interested in the CHANGE in the availability of the resource (i.e., actually losing the resource).

To what extent have you experienced loss during *the last six months*?

Resources	Not at all / Not applicable (0)	To a small degree (1)	To a moderate degree (2)	To a considerable degree (3)	To a great degree (4)
1. Necessary tools for work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Money for extras.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Savings or emergency money.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Adequate income.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Financial assets.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Money for transportation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Money for advancement or self-improvement. (Education, savings)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Financial help if needed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Feeling valuable to others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Family stability.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Close personal relationships with one or more family members.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Intimacy with	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

spouse or partner.					
13. Close personal relationships with at least one friend.	<input type="checkbox"/>				
14. Understanding from my boss.	<input type="checkbox"/>				
15. Support from co-workers.	<input type="checkbox"/>				
16. Companionship.	<input type="checkbox"/>				
17. Affection from others.	<input type="checkbox"/>				
18. Help with tasks at work.	<input type="checkbox"/>				
19. Loyalty of friends.	<input type="checkbox"/>				
20. Good relationships with my children.	<input type="checkbox"/>				
21. Time for work.	<input type="checkbox"/>				
22. Adequate financial credit.	<input type="checkbox"/>				
23. Status at work.	<input type="checkbox"/>				
24. Stable employment.	<input type="checkbox"/>				
25. Financial stability.	<input type="checkbox"/>				

Interpersonal items: 9, 10, 11, 12, 13, 16, 17, 19, 20

Financial items: 2, 3, 4, 5, 6, 7, 8, 22, 25

Work items: 1, 14, 15, 18, 21, 23, 24

Appendix E

PTSD Checklist- Civilian Version (PCL-C; Weathers, Litz, Herman, Huska, & Keane, 1993)

Below is a list of problems and complaints that people sometimes have in response to stressful life experiences. Please read each one carefully, put an “X” in the box to indicate how much you have been bothered by that problem *in the last month*.

	Not at all (1)	A little bit (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
1. Repeated, disturbing <i>memories, thoughts, or images</i> of a stressful experience from the past?	<input type="checkbox"/>				
2. Repeated, disturbing <i>dreams</i> of a stressful experience from the past?	<input type="checkbox"/>				
3. Suddenly <i>acting or feeling</i> as if a stressful experience were <i>happening again</i> (as if you were reliving it)?	<input type="checkbox"/>				
4. Feeling <i>very upset</i> when <i>something reminded</i> you of a stressful experience from the past?	<input type="checkbox"/>				
5. Having <i>physical reactions</i> (e.g., heart pounding, trouble breathing, or sweating) when <i>something reminded</i> you of a stressful experience?	<input type="checkbox"/>				
6. Avoid <i>thinking about or talking about</i> a stressful experience from the past or avoid <i>having feelings</i> related to it?	<input type="checkbox"/>				

7. Avoid <i>activities or situations</i> because they <i>remind you</i> of a stressful experience from the past?	<input type="checkbox"/>				
8. Trouble <i>remembering important parts</i> of a stressful experience from the past?	<input type="checkbox"/>				
9. Loss of <i>interest in things that you used to enjoy</i> ?	<input type="checkbox"/>				
10. Feeling <i>distant or cut off</i> from other people?	<input type="checkbox"/>				
11. Feeling <i>emotionally numb</i> or being unable to have loving feelings for those close to you?	<input type="checkbox"/>				
12. Feeling as if your <i>future</i> will somehow be cut short?	<input type="checkbox"/>				
13. Trouble <i>falling or staying</i> asleep?	<input type="checkbox"/>				
14. Having <i>irritable</i> or having <i>angry</i> outbursts?	<input type="checkbox"/>				
15. Having <i>difficulty concentrating</i> ?	<input type="checkbox"/>				
16. Being “ <i>super alert</i> ” or watchful on guard?	<input type="checkbox"/>				
17. Feeling <i>jumpy</i> or easily startled?	<input type="checkbox"/>				

Appendix F

The Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977)

Below is a list of ways you might have felt or behaved. Please indicate how often you have felt this way **during the past week** by marking the appropriate space. Please only provide one answer to each question.

	Rarely or none of the time (less than 1 day)	Some or a little of the time (1-2 days)	Occasionally or a moderate amount of time (3-4 days)	Most or all of the time (5-7 days)
1. I was bothered by things that usually don't bother me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I did not feel like eating; my appetite was poor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I felt that I could not shake off the blues even with help from my family or friends.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I felt that I was just as good as other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I had trouble keeping my mind on what I was doing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I felt depressed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I felt that everything I did was an effort.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I felt hopeful about the future.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I thought my life had been a failure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I felt fearful.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. My sleep was restless.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I was happy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I talked less than usual.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. I felt lonely.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. People were unfriendly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. I enjoyed life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. I had crying spells.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. I felt sad.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. I felt that people dislike me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. I could not get "going."	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix G

The Economic Self-Sufficiency Survey (ESS; Gowdy & Pearlmutter, 1994)

Think about your PERSONAL economic situation over *the last six months*. For each of the following items circle the number that most clearly indicates where you rate yourself, using this scale:

My current financial situation allows me to:

	No, not at all (1)	Occasionally (2)	Sometimes (3)	Most of the time (4)	Yes, all of the time (5)
1. Meet my obligations	<input type="checkbox"/>				
2. Do what I want to do, when I want to do it	<input type="checkbox"/>				
3. Be free from government programs like TANF, SNAP, etc..	<input type="checkbox"/>				
4. Pay my own way without borrowing from family or friends	<input type="checkbox"/>				
5. Afford to have a reliable car	<input type="checkbox"/>				
6. Afford to have decent housing	<input type="checkbox"/>				
7. Buy the kind and amount of food I like	<input type="checkbox"/>				
8. Afford to take trips	<input type="checkbox"/>				
9. Buy “extras” for my family and myself	<input type="checkbox"/>				
10. Pursue my own interests and goals	<input type="checkbox"/>				
11. Get health care for myself and my family when I need it	<input type="checkbox"/>				
12. Put money in a savings account	<input type="checkbox"/>				
13. Stay on a budget	<input type="checkbox"/>				
14. Make payments on my debts	<input type="checkbox"/>				
15. Afford decent child care (leave blank if you	<input type="checkbox"/>				

do not have children)					
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Appendix H

Financial Self-Efficacy (DV-FI; Weaver, Sanders, Campbell, & Schnabel, 2009)

For each of the following questions, indicate how confident you are that you could meet your goals within each of the following areas.

	1 Not at all confident	2	3	4 Moderately confident	5	6	7 Completely confident
1. I am confident that I can meet my goals for <u>becoming financially secure.</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I am confident that I can meet my goals for <u>eliminating credit card debt.</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I am confident that I can meet my goals for <u>improving my credit rating.</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I am confident that I can meet my goals for <u>obtaining adequate employment.</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I am confident that I can meet my goals for <u>accessing educational opportunities.</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix I

Demographic Questionnaire

1. Age: _____

2. Gender: _____

3. Sexual Orientation:

- Straight
- Bisexual
- Lesbian, gay, homosexual
- Other _____

4. Race/ Ethnicity:

- Single
- Together, never married
- Married
- Separated
- Divorced
- Widowed

5. Highest level of education completed:

- Less than High School
- High School/GED
- Some College
- College

6. Relationship Status:

- Black or African-American
- Hispanic/Latina
- White
- Black or African-American
- Hispanic/Latina
- White

7. Are you still with the partner who hurt or abused you?

- Yes
- No

8. If you left this partner, how long ago did you leave?

Month: _____

Year: _____

9. Please select the box that corresponds to YOUR personal income (before tax).

- Below \$20,000

- \$20,000-\$39,999
- \$40,000-\$69,999
- \$70,000-\$100,00
- Over \$100,000

10. If you are still with your partner, please select the box that corresponds with your PARTNER's personal income (before tax).

- Below \$20,000
- \$20,000-\$39,999
- \$40,000-\$69,999
- \$70,000-\$100,00
- Over \$100,000
- Not Applicable

11. How many children do you have? _____

12. How many children still live with you or in your household? _____

13. What is your current employment status?

- Employed
- Unemployed

14. If employed, what is your current occupation? _____

15. If unemployed, what was your last occupation? _____

16. If unemployed, when were you last employed? Month _____ Year _____

17. To what degree did concerns or worries about your financial future impact your decisions about staying or leaving your partner?

- Not at all/Not applicable
- To a small degree
- To a moderate degree
- To a considerable degree
- To a great degree

18. Which of the following resources have you used regarding your experiences with abuse?

- Support groups
- Crisis/hotline counseling
- Individual counseling
- Emergency shelter

- Transitional housing
- Parenting classes
- Child care
- Legal advocacy
- TANF
- Job training
- Other _____

Table 1: *Summary of Means, Standard Deviations, and Reliability Estimates (N = 141)*

Variable	Psychological Abuse	Physical Abuse	Economic Abuse, Exploitation	Economic Abuse, Control	Economic Abuse, Sabotage	Resource Loss, Interpersonal
Mean (SD)	3.47 (.96)	2.60 (1.17)	1.84 (1.43)	2.43 (1.30)	1.38 (1.40)	21.17 (9.87)
Actual Range	1-5	1-5	0-4	0-4	0-4	0-36
Possible Range	1-5	1-5	0-4	0-4	0-4	0-36
Cronbach Alpha	.93	.92	.82	.88	.91	.88

Variable	Resource Loss, Financial	Resource Loss, Work	PTSD	Depression	Economic Self-Sufficiency	Financial Self-Efficacy
Mean (SD)	21.22 (12.32)	10.41 (8.95)	64.11 (14.24)	37.71 (13.56)	2.20 (1.06)	20.17 (9.31)
Actual Range	0-36	0-28	26-85	6-60	1-5	5-35
Possible Range	0-36	0-28	17-85	0-60	1-5	5-35
Cronbach Alpha	.95	.90	.92	.92	.93	.91

Table 2: *Intercorrelations among all Measures (N = 141)*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Psychological Abuse	1												
2. Physical Abuse	.73*	1											
3. Economic Abuse, Exploitation	.63*	.38*	1										
4. Economic Abuse, Control	.71*	.41*	.68*	1									
5. Economic Abuse, Sabotage	.67*	.56*	.47*	.55*	1								
6. Economic Abuse, Total	.79*	.53*	.82*	.90*	.81*	1							
7. Resource Loss, Interpersonal	.45*	.37*	.41*	.43*	.42*	.50*	1						
8. Resource Loss, Financial	.55*	.43*	.50*	.55*	.42*	.58*	.69*	1					
9. Resource Loss, Work	.41*	.40*	.37*	.31*	.50*	.46*	.62*	.59*	1				
10. PTSD	.54*	.42*	.33*	.48*	.36*	.47*	.55*	.41*	.35*	1			
11. Depression	.43*	.34*	.28*	.37*	.29*	.38*	.57*	.41*	.32*	.73*	1		
12. Economic Self-Sufficiency	-.37*	-.29*	-.31*	-.44*	-.22*	-.39*	-.30*	-.38*	-.15	-.35*	-.37*	1	
13. Financial Self-Efficacy	-.11	-.01	-.09	-.20*	-.05	-.15	-.15	-.07	.03	-.21*	-.33*	.32*	1

Note: $p < .05$

Table 3: Hierarchical Regression Analysis Predicting PTSD Symptoms ($N = 141$)

Variable	<i>B</i>	<i>SE B</i>	β	<i>T</i>	<i>df</i>	<i>R</i>	<i>R</i> ²	ΔR^2	<i>F</i>	ΔF
Step 1					5, 135	.57	.32	.00	12.85*	12.85*
Psychological Abuse	5.48	2.18	.37	2.52*						
Physical Abuse	1.19	1/32	.10	.91						
Economic Abuse, Exploitation	-1.00	1.00	-.10	-1.00						
Economic Abuse, Control	2.94	1.24	.27	2.38*						
Economic Abuse, Sabotage	-.41	.99	-.04	-.41						
Step 2					6, 134	.66	.44	.12	17.34*	27.30*
Psychological Abuse	5.12	2.00	.34	2.57*						
Physical Abuse	.63	1.21	.05	.52						
Economic Abuse, Exploitation	-1.61	.92	-.16	-1.74						
Economic Abuse, Control	2.34	1.14	.21	2.06*						
Economic Abuse, Sabotage	-1.08	.91	-.11	-1.18						
Resource Loss, Interpersonal	.57	.11	.40	5.23*						

Note: * $p < .05$

Table 4: Hierarchical Regression Analysis Predicting Depressive Symptoms (N = 141)

Variable	B	SE B	β	T	df	R	R ²	ΔR^2	F	ΔF
Step 1					5, 135	.45	.20	.00	6.77*	6.77*
Psychological Abuse	4.21	2.25	.30	1.87						
Physical Abuse	.85	1.37	.07	.62						
Economic Abuse, Exploitation	-.31	1.04	-.03	-.30						
Economic Abuse, Control	1.77	1.28	.17	1.38						
Economic Abuse, Sabotage	-.25	1.02	-.03	-.25						
Step 2					6, 134	.62	.38	.18	13.68*	38.80*
Psychological Abuse	3.78	1.99	.27	1.89						
Physical Abuse	.17	1.21	.02	.15						
Economic Abuse, Exploitation	-1.04	.92	-.11	-1.12						
Economic Abuse, Control	1.06	1.14	.10	.93						
Economic Abuse, Sabotage	-1.05	.91	-.11	-1.15						
Resource Loss, Interpersonal	.68	.11	.49	6.23*						

Note. * $p < .05$

Table 5: Hierarchical Regression Analysis Predicting Economic Self-Sufficiency (N = 141)

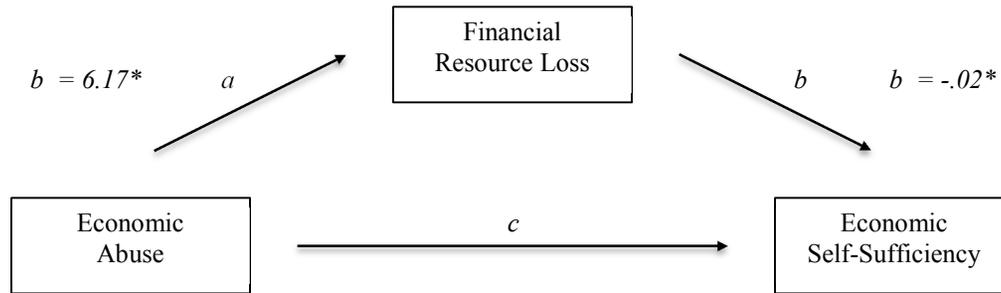
Variable	B	SE B	β	T	df	R	R ²	ΔR^2	F	ΔF
Step 1					5, 135	.46	.21	.00	7.31*	4.92*
Psychological Abuse	-.06	.17	-.05	-.32						
Physical Abuse	-.13	.11	-.15	-1.2						
Economic Abuse, Exploitation	-.01	.08	-.01	-.10						
Economic Abuse, Control	-.32	.10	-.40	-3.28*						
Economic Abuse, Sabotage	.09	.08	.12	1.11						
Step 2					7, 133	.49	.24	.03	5.93*	1.09
Psychological Abuse	-.01	.17	-.01	-.08						
Physical Abuse	-.12	.11	-.13	-1.13						
Economic Abuse, Exploitation	.00	.08	.00	.05						
Economic Abuse, Control	-.27	.10	-.33	-2.63*						
Economic Abuse, Sabotage	.06	.08	.08	.75						
Resource Loss, Financial	-.02	.01	-.23	-2.08*						
Resource Loss, Work	.01	.01	.10	.96						

Note. * $p < .05$

Table 6: Hierarchical Regression Analysis Predicting Financial Self-Efficacy (N = 141)

Variable	B	SE B	β	T	df	R	R ²	ΔR^2	F	ΔF
Step 1					5, 135	.23	.05	.00	1.52	1.52
Psychological Abuse	-.81	1.68	-.08	-.48						
Physical Abuse	-.83	1.02	.10	.81						
Economic Abuse, Exploitation	.49	.77	.08	.63						
Economic Abuse, Control	-1.91	.96	-.27	-2.00*						
Economic Abuse, Sabotage	.36	.77	.05	.47						
Step 2					7, 133	.24	.06	.00	1.14	.24
Psychological Abuse	-.77	1.71	-.08	-.45						
Physical Abuse	.73	1.04	.09	.71						
Economic Abuse, Exploitation	.39	.79	.06	.50						
Economic Abuse, Control	-1.86	1.00	-.26	-1.86						
Economic Abuse, Sabotage	.18	.82	.03	.22						
Resource Loss, Financial	-.00	.09	-.01	-.05						
Resource Loss, Work	.08	.12	.07	.63						

Figure 1. *Mediation of economic abuse and economic self-sufficiency by financial resource loss*



Total effect (c): $b = -.36$, $SE = .07$, $CI_{95\%} = -.50$ to $-.22$
Direct effect (c'): $b = -.24$, $SE = .09$, $CI_{95\%} = -.41$ to $-.07$
Indirect effect (ab): $b = .12$, $SE = .06$, $CI_{95\%} = -.24$ to $-.01$
Note: $*p < .05$

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