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# The Association of Mental Health Conditions With Employment, Interpersonal, and Subjective Functioning After Intimate Partner Violence

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**Abstract**

This study explored the associations of posttraumatic stress disorder (PTSD), generalized anxiety disorder (GAD), and depressive symptoms with employment, social support, and subjective functioning in 100 women who were seeking mental health assistance after intimate partner violence. Depressive disorders showed significant associations with low levels of social support, diminished self-esteem, reduced quality of life, and elevated negative social problem-solving orientation. PTSD severity was significantly associated with low self-esteem and elevated negative problem orientation, while severity of GAD was only associated with negative problem orientation. Results are discussed in light of current service models for women who have experienced intimate partner violence.

**Keywords**

intimate partner violence, mental health

Intimate partner violence (IPV) is a serious social problem that affects approximately 1.5 million women in this country each year (Tjaden & Thoennes, 2000). Broadly

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defined, IPV refers to behavior that causes physical, psychological, or sexual harm to one or both romantic partners (Heise & Garcia-Moreno, 2002). Traditionally, the empirical study of IPV has focused on factors that contribute to violence and abuse (e.g., Olsen, Parra, & Bennett, 2010). Salient processes, including family of origin predictors as well as peer relationship factors, have been explored, prompting greater attention to emerging interventions for IPV (e.g., Stover, Meadows, & Kaufman, 2009). In addition to this important work, research is beginning to outline negative consequence of IPV, focusing on mental health functioning (e.g., Dutton, 2009). The current study extends this literature by evaluating associations between specific mental health conditions and employment, perceived social support, and subjective functioning.

As articulated by Dutton (2009) and other authors, mental health symptoms can create a significant burden for women who have experienced IPV. The occurrence of mental health conditions is unfortunately common following violence and abuse within a romantic relationship. Golding (1999) published one of the earliest reviews of mental health conditions associated with IPV. This review focused on mental health conditions that have been noted following physical violence, recognizing that psychological and sexual abuse often accompany physical aggression (e.g., Dutton, Kaltman, Goodman, Weinfurt, & Vankos, 2005). Major depression and posttraumatic stress disorder (PTSD) were prominent in this review. The average prevalence of depression was 47.6% (95% confidence interval [CI] = [45.0, 50.0]), with a range of 15% to 83% across 18 studies. The prevalence of depression among women residing within shelters was significantly higher compared with samples from the general population, emergency rooms, and psychiatric settings, suggesting that shelter-based samples have notably greater mental health symptoms in this regard. The average prevalence of PTSD was 63.8% (95% CI = [60.5, 67.1]) with a range of 31% to 84.4% across 11 studies. Studies that relied on self-report instruments yielded higher rates of PTSD relative to those using structured interviews suggesting that assessment modality can significantly influence obtained rates of PTSD. Similar rates of PTSD and depression are noted in more recent research. For example, Mechanic, Weaver, and Resick (2008) reported moderate (45%) to severe (31%) PTSD symptomatology among IPV survivors, using cut points on a self-report questionnaire. Depression yielded a similar pattern, with moderate (31.8%) to severe (39.6%) symptoms reported. Chandra, Satyanarayana, and Carey (2009) likewise examined PTSD and depression in an Indian psychiatry outpatient clinic. Of women who experienced IPV, 12% met the threshold for a probable PTSD diagnosis and 81.3% evidenced moderate to severe depression based on self-report inventories. These studies highlight the frequent occurrence of PTSD and depression among women who have experienced IPV, sampling across many diverse settings.

Generalized anxiety disorder (GAD) has received little attention within the IPV literature despite being identified as a common consequence of trauma exposure more generally (Breslau, Chilcoat, Kessler, Peterson, & Lucia, 1999; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Tolman and Rosen (2001) reported that 9.2% to 13.4% of female welfare recipients who experienced IPV could be diagnosed with

GAD, with higher rates associated with more recent IPV. Furthermore, 31.3% to 44.6% of this sample had diagnosable depression, while 17.6% to 38.4% had diagnosable PTSD. Given evidence that PTSD, depression, and GAD reflect unique constructs among trauma-exposed samples (Grant, Beck, Marques, Palyo, & Clapp, 2008), further investigation of GAD as a distinct diagnostic entity following IPV seems warranted.

Many authors within the literature have discussed IPV as a source of interpersonal trauma (e.g., Dutton, 2009). As a form of trauma, one can expect that IPV, like many other kinds of trauma, has the potential to create multiple, comorbid mental health conditions (e.g., Kessler et al., 1995). When considering mental health conditions among women who have experienced IPV, it seems important to account for multiple conditions when they are present, as comorbid disorders pose a larger mental health burden relative to the presence of one disorder alone.

As well, it is important to examine functioning across a range of domains following IPV, particularly given the range of mental health conditions that can exist among women who have experienced IPV. The current report focused on employment, perceived social support, and subjective functioning, as an initial step in examining the association of comorbid disorders with these domains among women who have experienced IPV. It is salient to note that some have questioned the relevance of specific mental health diagnoses when considering functioning among this population, given the general disruption created by IPV (e.g., Kelly, 2010; Weaver & Clum, 1995; Zlotnick, Franklin, & Zimmerman, 2002). In response to this argument, Johnson, Zlotnick, and Perez (2008) determined that PTSD symptoms were uniquely associated with less effective use of community resources, lower social adjustment, and greater loss of personal and social resources in female shelter residents. PTSD also mediated the relationships of IPV severity with global emotional distress and with the loss of personal and social resources. This study demonstrates that PTSD symptoms exert a clear negative influence on a woman's ability to use positive resources and on her functioning following IPV. In particular, the presence of PTSD symptoms reduces her ability to rely on help from the community at large, as well as social support from trusted friends and family (Johnson et al., 2008). In extending this work, it is important to examine the impact of multiple, comorbid mental health conditions as the next step in understanding the impact of these conditions on functioning among women who have experienced IPV. In particular, the current study focused on PTSD, GAD, and depressive symptoms among women who had experienced traumatic violence and abuse from their romantic partners.

In this report, we selected three specific areas of functioning to study: (a) employment, (b) perceived social support, and (c) subjective functioning. Traditionally, employment has been important following IPV, given the saliency of paid work in helping women establish their independence (e.g., Tolman & Rosen, 2001). Social support also is believed to be relevant in post-trauma functioning, particularly following interpersonal trauma (Brewin, Andrews, & Valentine, 2000; Schumm, Briggs-Phillips, & Hobfoll, 2006). Perceived social support has been shown to reduce the burden of PTSD and depression following the experience of trauma (e.g., Brewin et al.,

2000; Marroquin, 2011). Considering subjective functioning, the current report focused on perceived quality of life, self-esteem, and orientation toward problem solving, each of which has been shown in related studies to impact the ability to utilize external resources (e.g., parenting classes, education) following IPV (Clements & Ogle, 2007; Holowka & Marx, 2012; Şahin et al., 2010). In particular, problem-solving orientation has two dimensions: negative problem solving, which reflects an orientation that regards problems as unsolvable and threatening, and positive problem solving, which reflects an orientation wherein problems are viewed as challenges that require manageable commitment. Although research has documented the impact of individual disorders on various domains of functioning (e.g., PTSD: Holowka & Marx, 2012; depression: Nierenberg et al., 2010; anxiety disorders: Olatunji, Cisler, & Tolin, 2007), no investigation to date has examined the contribution of multiple conditions on these indicators in an IPV sample. For the current sample, interview-based measures of PTSD, GAD, and depressive symptomatology were used, based on Golding's observation that rates of self-reported disorders may be higher relative to rates derived from clinician-administered interviews. In particular, interviews were felt to represent a more conservative approach to the assessment of comorbidity. It was hypothesized that PTSD, GAD, and depressive disorders would each be uniquely associated with lack of paid employment, lower social support, lower self-esteem, lower perceived quality of life, and negative problem solving, when considering these indices of functioning using separate regression analyses. Significant associations were not hypothesized with positive problem solving. These hypotheses were based on previous studies, as well as suggestions in related literature concerning interpersonal trauma.

## Method

### *Participants*

The sample included 100 women seeking assessment and possible psychological treatment following IPV. Recruitment materials were disseminated through advocacy centers, churches, colleges, and local media. These materials described a research clinic offering mental health assessment at a local university. Women who were interested in participating phoned the clinic director, who provided a more detailed description of the research clinic and briefly assessed for IPV. Women who had experienced physical, sexual, and/or emotional abuse or violence were invited to the campus to participate. Women qualified for inclusion in this study if their IPV included actual or threatened death or serious injury and their emotional response included intense fear, helplessness, horror, or perceived life threat (American Psychiatric Association, 2000). These features comprise Criterion A2 of the PTSD diagnostic definition, which is a necessary feature to include given focus on PTSD within this study. Fear, helplessness, horror, and perceived life threat were assessed using an interview devised by the first author. Participants rated emotional response to the IPV on a 0 to 100 Likert scale (0 = *not at all* to 100 = *extreme*). Based on previous research (Grant et al., 2008),

scores of 50 or higher for ratings of fear, helplessness, or horror were used to determine Criterion A2 for PTSD.

One hundred forty-one individuals were assessed initially. Thirteen women reporting romantic relationships that did not satisfy Criterion A2 were not included in the current analysis. An additional 13 women were excluded due to psychotic symptoms ($n = 6$), cognitive impairment ($n = 5$), and unreliable responding ($n = 2$).[1] Given the focus on paid vocational functioning, women who were retired ($n = 2$), receiving permanent medical disability ($n = 6$), or were full-time homemakers ($n = 7$) also were not included in this analysis. Although conservative, this methodological choice has been used successfully in related studies (e.g., Tolman & Rosen, 2001). Characteristics of the final sample are provided in Table 1.

Thirteen women were still romantically involved and residing with their abuser, although in each case, physical and sexual abuse had stopped. The sample was well-educated, yet 46% reported household incomes of $30,000 or less. Exposure to multiple stressful life events was the norm for this sample with an average of 3.6 non-IPV-related events (see Table 1).

## Measures

*Assessment of employment.* Employment status was assessed through a demographic questionnaire. For women who were not currently employed, the date of last employment was obtained and used to create a consolidated variable (time since employment). On this variable, a score of "0" indicated that the participant currently was employed, whereas scores greater than 0 reflected the number of months since her last paid job outside of the home (full- or part-time).

*Assessment of interpersonal functioning.* Perceived social support was assessed using the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988). The MSPSS is a 12-item self-report scale designed to assess perceived social support from friends, family, and a close other. Each item is rated on a 1 to 7 Likert scale, with higher scores indicating greater support. A number of reports support the validity and reliability of the MSPSS (Clara, Cox, Enns, Murray, & Torgrudc, 2003). In the current study, the internal consistency of the MSPSS total score was .93.

*Assessment of subjective functioning.* *Self-esteem* was indexed using the Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965). This 10-item scale was designed to assess self-respect and a consideration of one's own worth. Each item is rated on a 4-point Likert scale, ranging from "strongly agree" to "strongly disagree," with higher scores reflecting greater self-esteem. The RSE is a widely used self-concept measure, with considerable support for its validity and reliability (Blascovich & Tomaka, 1991). In the current study, the internal consistency of the RSE was .91.

*Quality of life* was assessed using the Quality of Life Inventory (QOLI; Frisch, Cornell, Villanueva, & Retzlaff, 1992). The QOLI includes ratings of importance (0 = *not at all*

**Table 1.** Sample Description.

| | |
|---|---|
| Age | |
| *M (SD)* | 35.7 (11.04) |
| Range | 18-64 |
| No longer romantically involved with IPV perpetrator | 87 (87%) |
| Average interval between separation and assessment (years) | |
| *M (SD)* | 2.9 (4.77) |
| Race | |
| Caucasian | 53 (53%) |
| African American | 35 (35%) |
| Hispanic | 4 (4%) |
| Asian | 2 (2%) |
| Other | 6 (6%) |
| Educational level | |
| High school or below | 12 (12%) |
| Some college | 49 (49%) |
| Associates degree | 6 (6%) |
| Baccalaureate | 14 (14%) |
| Some graduate | 3 (3%) |
| 2-year advanced | 9 (9%) |
| PhD, MD, JD | 7 (7%) |
| Income level | |
| Below $10,000 | 19 (19%) |
| $10,000-$20,000 | 17 (17%) |
| $20,001-$30,000 | 10 (10%) |
| $30,001-$40,000 | 10 (10%) |
| $40,001-$50,000 | 9 (9%) |
| $50,001-$60,000 | 3 (3%) |
| $60,001-$70,000 | 8 (8%) |
| $70,001+ | 9 (9%) |
| Number of additional life stressors | |
| *M (SD)* | 3.6 (2.30) |
| Range | 0-11 |

*Note.* IPV = intimate partner violence.

*important* to 2 = *extremely important*) and satisfaction (−3 = *very dissatisfied* to +3 = *very satisfied*) in 17 life domains (e.g., work, recreation). The product of importance and satisfaction ratings is calculated for each area and the total QOLI score is computed as the average score across all areas. Higher scores on the QOLI indicate greater perceived quality of life. The QOLI has shown adequate stability over time and correlates strongly with self-report, interview, and peer-rated measures of life satisfaction (Frisch et al., 1992). In the current study, the internal consistency of the QOLI was .83.

*Social problem-solving orientation* was indexed with two subscales of the Social Problem-Solving Inventory–Revised (SPSI-R; D'Zurilla, Nezu, & Maydeu-Olivares, 1996). The SPSI-R is a 52-item self-report scale designed to assess an individual's motivation and cognitive construal of problems, as well as their problem-solving skills. Two subscales were selected for the current study, *Positive Problem Orientation* (SPSI-R PPO) and *Negative Problem Orientation* (SPSI-R NPO). The SPSI-R PPO subscale has 5 items that assess a constructive cognitive set wherein problems are appraised as solvable challenges that require commitment and persistence. The SPSI-R NPO subscale, which has 10 items, assesses a dysfunctional set wherein problems are viewed as unsolvable threats that outpace one's ability. Higher scores on each subscale reflect greater use of the targeted problem-solving approach. As detailed by D'Zurilla et al. (1996), the SPSI-R has strong support for its reliability and validity. Coefficient alpha for the SPSI-R NPO subscale was .93 and for the SPSI-PPO was .82 in the current study.

*Assessment of mental health conditions.* *Trauma history* was assessed using the Life Events Checklist (LEC; Blake et al., 1990), a questionnaire surveying a series of 18 stressful life events commonly associated with PTSD. Additional trauma history was quantified as the total number of non-IPV events endorsed by participants (e.g., car accident, natural disaster).

*Severity of IPV-related PTSD symptoms* was determined using the Clinician-Administered PTSD Scale (CAPS; Blake et al., 1990). The CAPS is a structured interview assessing the frequency and intensity of the 17 symptoms of PTSD. Symptoms were anchored to the woman's IPV experience via temporal occurrence and specific features (e.g., the scent of the abuser's aftershave). Frequency and intensity symptoms over the previous 30 days are rated on a 0 to 4 Likert scale. Symptoms receiving a frequency rating of at least 1 and an intensity rating of 2 or higher are counted toward a diagnosis of PTSD. As reviewed by Weathers, Keane, and Davidson (2001), the CAPS has excellent support for its psychometric properties.

The Anxiety Disorder Interview Schedule–IV (ADIS-IV; DiNardo, Brown, & Barlow, 1994) was used to determine the *severity of comorbid anxiety, mood, somatoform, and substance use disorders*. The ADIS-IV is a semi-structured interview following *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*; American Psychiatric Association, 1994) criteria for each disorder. Screening items for other disorders are also included (e.g., psychotic disorders). Distress and functional interference associated with comorbid psychopathology was rated from 0 (*not at all distressed or disabled*) to 8 (*extremely distressed or completely disabled*). As illustrated (Brown, Di Nardo, Lehman, & Campbell, 2001; DiNardo, Moras, Barlow, Rapee, & Brown, 1993), the ADIS-IV has good psychometric properties and is a widely used diagnostic tool.

For each current mental health condition, the interviewer assigned a clinical severity rating (CSR). The CSR can range from 0 (*no symptoms reported, no distress or interference*) to 8 (*numerous, frequent symptoms reported during specified time interval that cause extreme distress and interference*). A CSR of 4 or higher is used to

indicate that a condition meets the *DSM-IV* diagnostic threshold for a clinical diagnosis (DiNardo et al., 1993). To maintain consistency, IPV-related PTSD was also coded using a CSR. Following the example set by Brown and colleagues (2001), the CSRs for MDD and dysthymia were averaged to form one category (depressive disorders).

The CAPS and ADIS-IV were administered by doctoral students who received extensive training (see DiNardo et al., 1993). To determine inter-rater reliability, 24% ($n = 24$) of interviews were randomly selected and reviewed by an independent clinician. Inter-rater agreement was assessed using intraclass correlations (ICC) to examine agreements in CSR coding and was excellent for IPV-related PTSD (ICC = 0.95), GAD (ICC = 0.98), major depressive disorder (MDD, ICC = 0.95), and dysthymia (ICC = 0.99). Inter-rater agreement for other diagnoses was likewise good, although not the focus of this article.

### Procedure

Procedures were approved by the Institutional Review Board. Following provision of informed consent, each participant was interviewed individually, first, with the set of questions concerning their IPV experience, followed by the LEC, the CAPS, and the ADIS-IV. The participant then completed the questionnaires. Following the assessment, she was given feedback concerning the results of the diagnostic interviews, debriefed, and provided with referrals for treatment services when appropriate.

### Analytic Strategy

Regression analyses were conducted for each dependent variable, using hierarchical regression. Analyses controlled for the number of non-IPV events directly experienced in the first step as a way of assuring that the obtained results were not reflective of the extent of exposure to previous stressors. In Step 2, the continuous CSR scores for IPV-related PTSD, GAD, and depressive disorders were entered as simultaneous predictors (standard regression). Effect size estimates were based on $sr^2$, which reflects the proportion of variance accounted for by each independent variable. Using Cohen's (1988) guidelines, $sr^2$ values of .01 are considered small, .09 of medium magnitude, and .25 are considered large.

## Results

### Sample Characteristics

Within this sample, 18 women (18%) received no mental health diagnoses. The most common mental health conditions in this sample were GAD ($n = 34$, 34%), IPV-related PTSD ($n = 24$, 24%), and depressive disorders ($n = 18$, 18%). Other disorders included social anxiety disorder (2%), alcohol abuse or dependence (4%), and obsessive-compulsive disorder (4%). Comorbidity was common, with 76.3% of women with a mental health diagnosis receiving at least one additional diagnosis. These data suggest that women who have experienced IPV often experience significant mental health difficulties involving multiple diagnoses.

**Table 2.** Correlation Between the Variables With Means and Standard Deviations.

| | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. |
|---|---|---|---|---|---|---|---|---|---|
| 1. CSR: IPV-related PTSD | | | | | | | | | |
| 2. CSR: Depressive disorders | .28*** | | | | | | | | |
| 3. CSR: GAD | .11 | .47*** | | | | | | | |
| 4. Months since employment | .01 | −.09 | −.08 | | | | | | |
| 5. MSPSS total | −.18 | −.35*** | −.09 | −.05 | | | | | |
| 6. Rosenberg Self-Esteem | −.36*** | −.60*** | −.32*** | .03 | .42*** | | | | |
| 7. Quality of Life Inventory | −.28** | −.50*** | −.33*** | −.06 | .45*** | .66*** | | | |
| 8. SPSI-R NPO | .35*** | .56*** | .45*** | −.07 | −.24* | −.62*** | −.62*** | | |
| 9. SPSI-R PPO | −.18 | −.19 | −.20 | .02 | .08 | .43*** | .46*** | −.53*** | |
| *n* | 100 | 100 | 100 | 100 | 85 | 81 | 73 | 72 | 72 |
| *M* | 2.88 | 1.32 | 3.14 | 5.70 | 4.67 | 17.39 | 0.65 | 18.28 | 11.00 |
| *SD* | 2.04 | 1.25 | 2.34 | 19.83 | 1.53 | 6.24 | 1.91 | 10.32 | 4.81 |

*Note.* CSR = clinical severity rating; IPV = intimate partner violence; PTSD = posttraumatic stress disorder; GAD = generalized anxiety disorder; MSPSS = Multidimensional Scale of Perceived Social Support, SPSI-R NPO = Social Problem-Solving Inventory–Revised, Negative Problem Orientation; SPSI-R PPO = Social Problem-Solving Inventory–Revised, Positive Problem Orientation.
*$p$ < .05. **$p$ < .01. ***$p$ < .005.

Variable distributions, with the exception of months since last employed, approximated normality (Tabachnick & Fidell, 2001).[2] Incomplete data were noted among dependent variables, although comparison of participants with and without completed questionnaires evidenced no differences in race, education level, household income, or CSRs for GAD, IPV-related PTSD, or depressive disorders (all $p$s > .05). Sample sizes, means, standard deviations, and correlations for all measures are presented in Table 2.

## *Are Specific Mental Health Conditions Differentially Associated With Functioning?*

Results from each hierarchical regression are shown in Table 3. The number of non-IPV related stressful events was not significant in any analysis.

*Prediction of employment.* The model predicting employment failed to return any significant effects.

*Prediction of perceived social support.* Within the model predicting perceived social support, severity of depressive disorders emerged as the only significant negative predictor, indicating that increased depressive symptoms were associated with perceptions of less supportive relationships ($p$ = .003, 10.3% of variance).

**Table 3.** Hierarchical Regression Models, Predicting Functioning From Clinical Severity Ratings for GAD, IPV-Related PTSD, and Depressive Disorders (Step 2) Controlling for Exposure to Non-IPV Stressful Life Events (Step 1).

| | β | *t* | $sr^2$ | $R^2$ change | Adjusted $R^2$ |
|---|---|---|---|---|---|
| Prediction of time since last employed (*n* = 100) | | | | | |
| Step 1 | | | | — | <.01 |
| Non-IPV stress | −.03 | −0.28 | <.01 | | |
| Step 2 | | | | .01 | <.01 |
| Non-IPV stress | −.04 | −0.38 | <.01 | | |
| CSR GAD | −.05 | −0.45 | <.01 | | |
| CSR PTSD (IPV) | .04 | 0.33 | <.01 | | |
| CSR depressive disorder | −.08 | −0.66 | <.01 | | |
| Prediction of perceived social support (*n* = 85) | | | | | |
| Step 1 | | | | — | <.01 |
| Non-IPV stress | <.01 | 0.04 | .00 | | |
| Step 2 | | | | .14*** | .11 |
| Non-IPV stress | −.06 | −0.61 | <.01 | | |
| CSR GAD | .09 | 0.74 | <.01 | | |
| CSR PTSD (IPV) | −.11 | −1.0 | <.01 | | |
| CSR depressive disorder | −.38 | −3.11 ** | .10 | | |
| Prediction of subjective functioning—Self-esteem (*n* = 84) | | | | | |
| Step 1 | | | | — | <.01 |
| Non-IPV stress | .14 | 1.29 | .02 | | |
| Step 2 | | | | .38*** | .37 |
| Non-IPV stress | .03 | 0.36 | <.01 | | |
| CSR GAD | −.07 | −0.73 | <.01 | | |
| CSR PTSD (IPV) | −.20 | −2.23* | .04 | | |
| CSR depressive disorder | −.51 | −4.98*** | .19 | | |
| Prediction of subjective functioning—Quality of life (*n* = 81) | | | | | |
| Step 1 | | | | — | <.01 |
| Non-IPV stress | .15 | 1.32 | .022 | | |
| Step 2 | | | | .28*** | .28 |
| Non-IPV stress | .05 | 0.54 | <.01 | | |
| CSR GAD | −.14 | −1.31 | .02 | | |
| CSR PTSD (IPV) | −.18 | −1.8† | .03 | | |
| CSR depressive disorder | −.39 | −3.56 *** | .12 | | |
| Prediction of subjective functioning—Negative problem orientation (*n* = 73) | | | | | |
| Step 1 | | | | - | <.01 |
| Non-IPV stress | −.01 | −0.09 | <.001 | | |
| Step 2 | | | | .41*** | .38 |
| Non-IPV stress | .11 | 1.15 | .01 | | |
| CSR GAD | .25 | 2.45* | .05 | | |
| CSR PTSD (IPV) | .22 | 2.31* | .05 | | |
| CSR depressive disorder | .41 | 3.80*** | .12 | | |
| Prediction of subjective functioning—Positive problem orientation (*n* = 74) | | | | | |
| Step 1 | | | | — | <.01 |
| Non-IPV stress | .13 | 1.10 | .02 | | |
| Step 2 | | | | .06 | .03 |
| Non-IPV stress | .09 | 0.75 | <.01 | | |
| CSR GAD | −.14 | −1.08 | .02 | | |
| CSR PTSD (IPV) | −.13 | −1.12 | .02 | | |
| CSR depressive disorder | −.08 | −0.62 | <.01 | | |

*Note.* IPV = intimate partner violence; CSR = clinical severity rating; GAD = generalized anxiety disorder; PTSD = posttraumatic stress disorder.
†*p* = .06 to .08. *$p < .05$. **$p < .01$. ***$p < .005$.

*Prediction of subjective functioning.* Within the model predicting self-esteem, clinical severity of depressive symptoms emerged as a significant predictor ($p = .0001$, 18.7% variance), as well as IPV-related PTSD symptoms ($p = .03$, 3.8% variance). In both cases, higher levels of symptom severity were associated with lower levels of self-esteem.

In the model predicting quality of life, severity of depressive symptoms ($p = .001$, 11.7% variance) emerged as a significant predictor. As well, there was a trend for IPV-related PTSD to associate with quality of life in this analysis ($p = .08$, 2.9% variance). For both of these variables, higher levels of symptoms were associated with lower perceived quality of life.

Considering negative problem orientation, CSR for all three mental health conditions emerged as significant, with severity of depressive symptoms accounting for 12.4% variance ($p = .0001$), IPV-related PTSD for 4.6% variance ($p = .02$), and GAD symptom severity for 5.2% variance ($p = .01$). In each case, higher levels of symptom severity were associated with higher levels of negative problem orientation. As expected, no significant effects were noted for positive problem orientation.

## Discussion

This study examined the association of PTSD, depressive disorders, and GAD with employment, perceived social support, and subjective functioning in a sample of help-seeking women who had experienced IPV. Depressive disorders were noted to have the largest impact, with significant associations noted with lower levels of perceived social support, diminished self-esteem, reduced quality of life, and elevated levels of negative social problem-solving orientation. PTSD was significantly associated with decrements in self-esteem and elevations in negative problem orientation, while GAD was only associated with negative problem orientation. These three disorders did not show a significant association with the number of days since last employed. As well, none showed a significant association with positive social problem orientation. Prior exposure to non-IPV trauma did not account for significant variance in any analysis.

These data add to our understanding of how specific mental health conditions are associated with functioning in the aftermath of IPV. In particular, PTSD, GAD, and depressive disorders are relevant negative influences on perceived social support and subjective functioning after IPV. Related studies have focused singularly on PTSD in similar efforts. For example, Krause, Kaltman, Goodman, and Dutton (2006) noted that PTSD symptoms increase a woman's odds of being re-abused in the future. Likewise, Johnson, Zlotnick, and Perez (2011) reported that focused treatment of PTSD can reduce the risk of re-abuse. The current study adds to this literature by focusing on diagnostic comorbidity and examining the relative associations of GAD, IPV-related PTSD, and depressive disorders on employment, perceived social support, and subjective functioning. Importantly, depressive disorders were associated with reductions in both social and subjective functioning, while PTSD and GAD exerted less generalized effects. We can speculate that depressive disorders exerted the largest impact in this sample, owing to symptoms such as

reduced interest in usual activities, low energy or fatigue, feelings of worthlessness and hopelessness, and thoughts of suicide. Although the current analyses could not examine these three mental health conditions at the symptom level (owing to the sample size), it would be useful for future efforts to do so. Because some common symptoms are shared by PTSD, GAD, and depressive disorders (e.g., sleep disturbance, concentration difficulties), future analyses at the symptom level could help us expand our understanding of *how* psychiatric conditions impact the full range of functioning in IPV survivors.

In this study, employment status was not associated with mental health symptomatology, which clinically seemed surprising and is at odds with at least one previous report (Foa, Cascardi, Zoellner, & Feeny, 2000). It is possible that employment status was operationalized in a way that failed to capture its association with these disorders in the current study. In particular, there are many different reasons that a woman may not be employed outside the home, many of which are not captured by the variable that was used in this study. In considering this limitation, it is notable that severity of anxiety symptoms did not influence job type, time on a job, or job satisfaction among anxiety disordered patients (Erickson et al., 2009). Rather, anxiety severity appeared to influence only level of work performance, with impaired job advancement noted with increasing symptom severity. Thus, it is possible that mental health conditions do not influence whether a woman is employed in the aftermath of IPV; instead, they may influence the type of work that she obtains. The association between mental health conditions and vocational functioning appears more nuanced than captured by the measures used in the current study.

These data can begin to inform services for women who have experienced IPV. The immediate effects of IPV typically are addressed by police, medical facilities, judiciary, advocacy, and social services (Heise & Garcia-Moreno, 2002). Follow-up care often focuses on vocational training, parenting education, and general supportive counseling, with a relative neglect of interventions to address specific mental health disorders. The results of the current study and related publications (e.g., Johnson et al., 2008; Krause et al., 2006) suggest that depressive disorders, PTSD, and GAD are associated with diminished functioning, particularly subjective functioning and perceived social support. Addressing the specific symptoms of PTSD, depressive disorders, and GAD in IPV survivors could easily facilitate the ability of women to establish a life independent of abuse (Johnson et al., 2011). Consideration of diagnostic comorbidity is essential in designing mental health services for this population, particularly given the finding that 76.3% of the current sample was found to have multiple diagnoses. Stepped care models are likely to be an efficient way to design mental health services for individuals who have experienced IPV, given the numerous needs that are manifest in this population.

Like most empirical studies, the current one has limitations. The sample was restricted to women who were seeking help for mental health problems. As such, the observed rates of PTSD, depressive disorders, and GAD are likely higher than they would be in the general population (Golding, 1999). It also is unknown whether

similar results would be produced with male survivors of IPV. Second, assessments of employment and perceived social support were each limited to a single measure. As noted by the four measures within the subjective domain, different facets of functioning may be differentially associated with mental health conditions. Future studies would be advised to include multiple measures of functioning. Third, assessment of time since last employment leaves much room for interpretation when considering vocational functioning. It is important for future studies to utilize more multidimensional vocational measures. Fourth, the current study relied on cross-sectional data, which provide only a "snap-shot" of functioning at a specific point in time. Ideally, determination of change in functioning from pre-IPV to post-IPV is needed to ascertain the exact role of mental health symptoms on functioning in this population. As such, the current study provides one step toward a larger understanding of the impact of mental health conditions following IPV. Moreover, it is important to document mental health trajectories over time, particularly as there may be individual differences in the influence of symptoms on functioning. Finally, reliance on self-report measures could limit generalizability of the results. Optimally, future studies could include measures obtained from family collaterals or advocates within social service agencies who work with IPV survivors to obtain multiple perspectives on this issue.

The present study advances the available literature on mental health conditions among women who have experienced IPV by examining the influence of comorbidity. Because IPV affects the lives of approximately 1.5 million women in this country every year (Tjaden & Thoennes, 2000), we need to continue to focus our research efforts on psychological symptoms that are present in its aftermath. Although this population has traditionally been served by social service professionals, work in this domain represents an opportunity for interdisciplinary collaboration. As noted by Johnson and colleagues (2008), traditional services that emphasize helping the IPV victim to leave her abuser do not seem sufficient in light of the mental health symptoms noted in this population. Without treatment, mental health symptoms tend to be chronic in IPV samples (e.g., Anderson, Saunders, Mieko, Bybee, & Sullivan, 2003). As noted by Mechanic et al. (2008) and other authors (e.g., Sutherland, Bybee, & Sullivan, 2002), women who have experienced IPV have numerous ecological stressors, including poverty, lack of social and personal resources, parenting stress, and possibly ongoing contact with the perpetrator owing to joint child custody. Mental health symptoms compound the burden created by these stressors and contribute to decrements in perceived social support and subjective functioning. Addressing these needs through greater attention to specific mental health conditions should be a next step in developing services to assist women who have experienced violence and abuse from a romantic partner.

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## Notes

1. Because individuals with psychotic symptoms and possible cognitive impairment cannot provide reliable data, we excluded them from this sample. This step was taken in an effort to increase confidence in the diagnostic data.
2. The variable, time since last employed, was positively skewed and leptokurtic. To reduce the influence of these deviations from normality, the variable was transformed using a log10 + .001 transformation (to avoid zero scores). Analyses were conducted with both the original and the transformed variable with identical results. For simplicity's sake, the untransformed data are presented.

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