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How Do Attachment Style and Social Support Contribute to Women's Psychopathology Following Intimate Partner Violence? Examining Clinician Ratings Versus Self-Report

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Abstract

Concurrent associations between attachment style and social support in posttraumatic stress disorder, depression, and generalized anxiety disorder were explored using regression analyses in a sample of 108 victims of intimate partner violence. To examine whether assessment modality influenced findings, self-report and clinician ratings of psychopathology were compared. Both lower perceived social support and higher attachment anxiety were significantly associated with higher self-reported PTSD; however, only lower social support was significantly associated with clinician assessed PTSD. Lower social support, higher attachment anxiety, and lower attachment closeness were related with higher self-reported depression; however, only lower social support was related to clinician assessed depression. Lastly, only higher attachment anxiety was associated with self-reported GAD, whereas lower attachment dependency showed the only significant association in clinician assessed GAD. Possible explanations for discrepancies between assessment modalities are discussed, with emphasis on application to intimate partner violence and suggestions for future research.

Keywords: Attachment style, social support, psychopathology, intimate partner violence

How Do Attachment Style and Social Support Contribute to Women's Psychopathology Following Intimate Partner Violence?

Examining Clinician Ratings Versus Self-Report

1. Introduction

Millions of women each year are exposed to some form of interpersonal trauma, including childhood abuse, intimate partner violence, and sexual assault. Studies have found that roughly 50% of women will experience physical, sexual, or psychological abuse at some point in their lifetime (Walker, 2000). Similarly, the 2010 National Intimate Partner and Sexual Violence Survey found that roughly 1 in 5 women in the United States have been raped and 1 in 4 have experienced physical abuse from a romantic partner (Black et al., 2011). With additional data suggesting that around 30% of women have experienced childhood sexual abuse, these studies highlight that interpersonal trauma is an all too common experience for women (Briere & Elliott, 2003; Finkelhor, Hotalling, Lewis, & Smith, 1990).

Not only is interpersonal trauma a common experience, but it is also associated with a series of complex conditions, including high levels of psychopathology in a variety of interpersonal trauma samples (Kilpatrick et al., 2003). For example, Molnar, Buka, and Kessler (2001) found prevalence rates of 39% for both major depressive disorder (MDD) and posttraumatic stress disorder (PTSD) in a large sample of childhood sexual assault victims using data from the National Comorbidity Survey. In a sample of 92 physically abused women, Cascardi, O'Leary, and Schlee (1999) found an individual prevalence rate of 30% for both PTSD and MDD. Although less studied in intimate partner violence (IPV), Tolman and Rosen (2001) found that 9.2% of a sample of 272 IPV victims receiving welfare met criteria for generalized

anxiety disorder (GAD). Altogether, these studies highlight the array of psychopathology often found in multiple interpersonal trauma samples including IPV victims.

1.1 Social support and psychopathology

A salient determinant of negative post-trauma functioning that has been consistently identified in the literature is social support. A large amount of research suggests that perceived social support plays a significant mediating role in the relationship between stress and the development of mental health disorders (Cohen & Willis, 1985; Cohen, Gottlieb, & Underwood, 2000; J. G. Beck, 2010). In two of the largest meta-analyses on risk and protective factors in PTSD, Brewin and colleagues (2000) and Ozer and colleagues (2003) both noted that social support demonstrated one of the largest effect sizes compared to other factors such as prior trauma history, psychiatric history, and peritraumatic response. Among a sample of 472 women who had experienced IPV, Mburia-Mwalili, Clements-Nolle, Lee, Shadley and Yang (2010) found that women reporting low and moderate social support were much more likely to report depression compared to women indicating high levels of social support, with an adjusted odds ratio of 4.95 for the low social support group and an adjusted odds ratio of 2.71 for the moderate social support group. Neria, Besser, Kiper, and Westphal (2010) examined the longitudinal trajectory of PTSD, MDD, and GAD during and after the Israel-Gaza war in a sample of Israeli college students near the Israel-Gaza border. They found that social support moderated the relationship between immediate emotional response (i.e. fear, horror) and PTSD, MDD, and GAD. More specifically, of participants reporting an immediate emotional response during the war, those who also reported higher perceived social support during the war reported significantly lower levels of PTSD, MDD, and GAD two and four months after the war. These studies suggest that supportive interpersonal relationships may be an important determinant of

mental health conditions in the aftermath of trauma, including IPV (Kocot & Goodman, 2003; Norris & Kaniasty, 1996). However, as will be discussed further below, related literature has found that the ability to maintain and rely on healthy interpersonal relationships during times of distress is influenced by attachment style (Mikulincer & Shaver, 2009).

1.2 Attachment theory and psychopathology

Attachment theory posits that individuals are characterized by relatively stable patterns of interpersonal orientations that reflect the way the individual views and interacts with others around them. Although there are several different conceptualizations of attachment theory, categorizations of attachment style can be broadly referred to as secure or insecure, based upon dimensions of attachment anxiety and avoidance (Brennan, Clark, & Shaver, 1998). Attachment anxiety refers to fears of abandonment or rejection from others and concerns about a lack of interpersonal resources in times of need. Attachment avoidance is characterized as a pattern of self-independence marked by a distrust of others and hesitancy in forming close inter-dependent bonds. Secure attachment style is characterized as being low on both attachment anxiety and avoidance dimensions whereby individuals are comfortable with closeness in relationships, willing to rely on others, and not fearful of abandonment. Insecure attachment, on the other hand, is marked by high levels of attachment anxiety and/or avoidance dimensions.

Recent research has highlighted the importance of attachment styles in mental health functioning following IPV. Scott and Babcock (2009) found that attachment style moderated the relationship between IPV and PTSD, such that women who had experienced violence from their romantic partner who were higher in attachment anxiety demonstrated significantly higher levels of PTSD symptoms than women who had experienced violence but were low in attachment anxiety. Similarly, in a sample of 60 women who had experienced childhood abuse, Stovall-

McClough and Cloitre (2006) noted that women with insecure attachment styles were approximately 7 times more likely to be diagnosed with PTSD compared to securely attached women. Although most investigations on the link between attachment styles in IPV have focused exclusively on PTSD, these results are consistent with the attachment literature as a whole which has demonstrated that attachment styles are associated with an array of mental health disorders in a variety of samples (Mickelson, Kessler, & Shaver, 2007; Mikulincer & Shaver, 2012).

1.3 Attachment theory and social support

Although both attachment styles and social support have been independently demonstrated as important in mental health functioning following IPV, few studies have examined these factors together in the context of psychopathology. This omission is surprising as the literature has highlighted that attachment style influences perceptions and utilization of social support (see Mikulincer & Shaver, 2007 for a review). Individuals with secure attachment styles tend to report higher levels of perceived support compared to insecurely attached individuals (Florian, Mikulincer, & Bucholtz, 1995). In addition, various attachment styles reflect different patterns of utilization of interpersonal resources. During times of distress, individuals with attachment anxiety tend to engage in hyperactivation strategies (i.e. hypervigilance towards distress) characterized by emphasis on negative emotions and intrusive controlling attempts to obtain support from others, whereas individuals with attachment avoidance engage in deactivation strategies downplaying distress and distancing themselves from others (Ognibene & Collins, 1998; Mikulincer & Shaver, 2009; Florian, Mikulincer, & Bucholtz, 1995; Mikulincer, Shaver, & Pereg, 2003). As research suggests that attachment and social support are interrelated and both of these constructs have been independently found to be significant in psychopathology,

it is important to examine how these two factors relate together in association with mental health functioning. Exploration of this relationship has the potential to help advance understanding of the role of interpersonal processes in mental health functioning, which to date are still not well established.

Only recently has research attempted to explicate this relationship, with Besser and Neria (2012) finding that the association between attachment anxiety and PTSD was mediated by low amounts of social support. However, this study used a sample of college students near the Israel-Gaza border under threat of missile attack who had relatively low levels of PTSD symptomatology. Studies have yet to extend examination of the relationship between social support, attachment, and psychopathology to help-seeking trauma samples. Additionally, previous studies in this area have not broadened investigations of psychopathology beyond consideration of PTSD. As highlighted previously, IPV is associated with a range of mental health conditions in addition to PTSD.

In considering the available empirical reports, it also is notable that previous studies have relied exclusively on self-report measures of psychopathology, particularly within the attachment literature. Because attachment anxiety is associated with hyperactivation strategies, whereas attachment avoidance is associated with deactivation strategies, it is possible that self-report measures of psychopathology may be influenced by attachment styles. Although this hypothesis has been relatively unexamined, one study using a sample of patients with psychotic disorders compared patients' ratings of their psychotic symptoms with those of clinicians (Dozier & Lee, 1995). Results revealed that patients characterized by attachment anxiety reported more severe psychotic symptoms than patients with attachment avoidance; however, when clinicians rated patients' symptoms, they rated patients characterized by attachment avoidance as more

symptomatic. As these results imply, inclusion of multiple assessment modalities is an important methodological component that can affect findings (Podsakoff, MacKenzie, Lee, & Podsakoff , 2003). Replication of results using multiple assessment methods provides strong validation that an association between constructs is not a result of shared measurement modality. Given that the attachment literature to date has exclusively utilized self-report mental health measures which may be more influenced by reporting style, studies incorporating clinician ratings of psychological functioning are needed.

1.4 Aims and Hypotheses

The aim of this paper is to examine the contributions of both attachment and social support to mental health symptoms among victims of IPV, incorporating self-report and clinician measures. More specifically, this report examines attachment and social support together in their associations with PTSD, depression, and GAD, using clinician and self-reported ratings of each of these mental health disorders. In line with findings from previous research, it was hypothesized that low social support would be significantly associated with self-reported and clinician-assessed PTSD, depression, and GAD. Given that previous research has found associations between attachment anxiety and psychological distress, it was also expected that attachment anxiety would be associated with self-reported PTSD, depression, and GAD. As examinations in the attachment literature have yet to incorporate clinical interview data for these outcomes, no hypotheses were made for attachment's associations with clinician-assessed PTSD, depression, and GAD. However, based upon Dozier and Lee's study (1995), it might be expected that attachment anxiety's associations with PTSD, depression, and GAD would be reduced in clinician interviewed reports of these conditions.

2. Method

2.1 Participants

The sample initially included 134 women who had experienced IPV and were seeking mental health services at a university-based research clinic. Individuals were recruited from multiple sources including local colleges, health fairs, health care facilities, and community agencies such as churches and advocacy centers. Women were included in the sample if they met Criterion A for PTSD as defined by the DSM-IV (American Psychiatric Association, 2000), which was assessed using a semi-structured IPV interview (see below) that examined both the nature of the IPV and the participant's emotional response during the abuse (e.g. fear, helplessness). Fourteen women were excluded from the study as they had not experienced an IPV related Criterion A event. Women experiencing psychotic symptoms (n = 6) or impaired cognitive functioning (n = 5) as assessed by the interviewer also were excluded from the sample. One additional woman was excluded for inconsistent reporting. Thus, the final sample examined in this study included 108 women.

Demographics and mental health diagnoses are presented in Table 1. Participants ranged in age from18 to 66 (M = 36.6, SD = 11.8). Participants were primarily Caucasian (56.5%) and African American (31.5%). Twenty-one (19.4%) of the women were still romantically involved with their most recent abusive partner, although each participant denied immediate safety concerns[1]. The average number of years away from the most recent abuser was 2.71 years (SD = 4.96). As noted in Table 1, 28.7% of the sample met diagnostic criteria for PTSD, 33.3% met criteria for Major Depressive Disorder, 7.4% for Dysthymic Disorder, and 56.5% for Generalized Anxiety Disorder. Using previously established cut scores above 29 on the Beck Depression Inventory-II (BDI-II; A. T. Beck, Steer, & Brown, 1996) and above 26 on the Beck Anxiety Inventory (BAI; A. T. Beck & Steer, 1993) as indicators of clinical levels of depression

and anxiety (Steer, Ball, Ranieri, & Beck,1999; Beck, Epstein, Brown, & Steer, 1988), 40.7% of the sample was within the clinical depression range and 32.4% of the sample was within the clinical anxiety range on the self-report measures.

2.2 Measures

Intimate Partner Violence. The IPV interview is a semi-structured interview developed by the last author designed to assess the nature and severity of IPV. The interview gathers detailed information about physical, sexual, and emotional abuse encountered from abusive romantic partners. The measure also assesses the participant's emotional responses during the IPV on a Likert scale ranging from 0 (not at all) to 100 (extreme). Sample items include "how fearful or afraid were you?", "how helpless did you feel?", and "how certain were you that you were going to die?" Ratings of 50 or above were considered to meet Criterion A2, as previous research has suggested this is an effective cut-off score (J. G. Beck et al., 2004; Blanchard et al., 1995). The IPV interview was adapted from a similar trauma interview developed by Blanchard and Hickling (2004) designed to assess traumatic exposure to motor vehicle accidents. The IPV interview was administered by a trained interviewer and was used to determine the type of abuse participants experienced and whether the IPV satisfied Criterion A.

Attachment. The Revised Adult Attachment Scale (RAAS; Collins & Read, 1990) is an 18-item self-report measure of attachment styles that asks participants to rate how they feel about their relationships, with ratings based on a 1 to 5 Likert scale. An advantage of the RAAS over other attachment measures is that it assesses attachment on a continuous scale, rather than a purely categorical approach (Brennan, Clark, & Shaver, 1998; Collins & Read, 1990). The measure includes 3 subscales: closeness (how comfortable an individual feels with closeness), dependency (capacity to depend on others), and anxiety (fear of being abandoned or rejected).

Higher scores on the attachment anxiety subscale imply greater fears of rejection or abandonment, while lower scores on closeness and dependency subscales indicate less comfort with closeness and less capacity to depend on others. The RAAS has demonstrated excellent psychometric properties, including high concurrent validity with other measures of attachment (Ravitz, Mauder, Hunter, Sthankiya, & Lancee, 2010). In the current sample, coefficient alpha for the anxiety, dependency, and closeness subscales were .85, .71, and .77, respectively.

Social Support. The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) is a 12-item self-report inventory that assesses the participant's perceived social support from family (e.g. "I can talk about my problems with my family"), friends (e.g. "I can count on my friends when things go wrong"), and significant others (e.g. "There is a special person in my life who cares about my feelings"). Each item is rated on a 7-point Likert scale from 1 (very strongly disagree) to 7 (very strongly agree). Higher scores indicate higher levels of perceived support. A total score is calculated by summing all 12 items and represents the overall level of perceived support. The total overall score was used in this study as an indicator of overall perceived social support. The measure has shown sound psychometric properties across diverse samples (Zimet, et al., 1988; Zimet, et al., 1990; Chou, 2000). The coefficient alpha in this study was .92.

Self-Reported Psychopathology. Self-reported IPV-related PTSD was assessed with the Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1997), a 22-item measure evaluating the amount of distress that an individual has experienced over the past week as a result of specific trauma-related symptoms. Each item is rated on 5-point Likert scale from 0 (not at all) to 4 (extremely). The IES-R total score was used in the self-reported PTSD analysis and was calculated as the mean response of the 22 items, with higher scores reflecting higher levels of

trauma-related symptoms. The measure has been shown to have excellent internal consistency among samples with varying levels of trauma symptomology and has been found to be a valid indicator of PTSD symptomology (Creamer et al., 2003; Rash et al., 2008, J. G. Beck et al., 2008). Internal consistency in this study was excellent with a coefficient alpha value of .92.

The Beck Depression Inventory - II *(*BDI-II; A. T. Beck, et al., 1996) is a 21-item measure that was used to assess self-reported depressive symptoms. Each item is scored on a 4 point scale ranging from 0 (*no symptoms*) to three (*severe symptoms*) with total scores ranging from 0-63. The total score was used in the self-reported depression analysis. The BDI-II has demonstrated excellent reliability and validity across multiple samples (A. T. Beck, Steer, Ball, & Ranieri, 1996; Grothe et al., 2005). Coefficient alpha for the current sample was .93.

Self-reported generalized anxiety was assessed with the Beck Anxiety Inventory (BAI; A. T. Beck & Steer, 1993), a 21-item scale that assesses cognitive, somatic, and affective anxiety symptom severity during the past week. Each item is rated on a Likert scale from 0 (*not at all affected by symptom*) to 3 (*severely affected by symptom and could barely stand it*), with higher scores indicating higher levels of anxiety. Sample items include "fear of the worst happening" and "unable to relax". The total sum of the 21 items was used in the self-reported generalized anxiety analysis. The BAI demonstrates excellent internal consistency and test-retest reliability, as well as good convergent and divergent validity (A. T. Beck et al., 1988; Fydrich, Dowdall, & Chambless, 1992). Internal consistency for the current sample was high with a coefficient alpha value of .93.

Clinician-Rated Psychopathology. The Clinician Administered PTSD Scale (CAPS; Blake et al., 1990) was used to assess current severity of IPV-related PTSD. The CAPS is a semi-structured clinical interview assessing each of the 17 symptoms of PTSD. Interviewers rate both

the frequency of symptoms from 0 (*the symptom does not occur*) to 4 (*the symptom occurs nearly every day*) and the intensity of symptoms from 0 (*not distressing*) to 4 (*extremely distressing*). The CAPS total severity score was used in the clinician assessed PTSD analysis. The CAPS total severity score reflects the overall severity of PTSD and is calculated using the sum of the frequency and intensity ratings across all 17 symptoms, with possible scores ranging from 0 to 136. If PTSD symptoms were determined by the clinician to be the result of a non-IPV trauma either by temporal precedence (e.g. emotional numbing began after childhood sexual abuse and before IPV) or content of the symptom (e.g. flashbacks of childhood sexual abuse), they were not coded as an IPV-related PTSD symptom.

In addition to being administered by a trained interviewer, all interviews were videotaped and 32% (n = 35) were reviewed by a second independent rater to assess diagnostic reliability. Intraclass correlations were calculated as an index of diagnostic reliability using the CAPS total score, with excellent agreement (r = .93). Previous studies have found the CAPS to be a highly reliable measure of PTSD, with coefficient alpha ranging from .87 to .94 (Weathers, Keane, & Davidson, 2001).

The Anxiety Disorders Interview Schedule-IV (ADIS-IV; DiNardo, Brown, & Barlow, 1994) is a semi-structured clinical interview that assesses a variety of anxiety and mood disorders. The ADIS-IV has demonstrated excellent psychometric properties in previous studies (Brown, DiNardo, Lehman, & Campbell, 2001). Interviewers rate features of each of the disorders based upon the DSM-IV criteria on a 0 (*none*) to 8 (*very severe*) scale. For example, in the GAD section, interviewers rate excessiveness and uncontrollability of worry for a number of topics (e.g. finances, work, health) and symptoms associated with worry (e.g. restlessness, fatigue). The disorders then are each given a clinical severity rating (CSR) reflecting the overall

severity of the disorder, with scores ranging from 0 (*no symptoms, no distress or interference*) to 8 (*numerous symptoms and extremely distressing and disabling*). A CSR of 4 or higher indicates that the individual meets diagnostic criteria for a particular disorder. For this study, the ADIS was used to assess major depressive disorder, dysthymia, and generalized anxiety disorder, and the CSRs of these disorders were used in their respective data analyses. Similar to previous research (Brown, Chorpita, & Barlow, 1998; Brown, et al., 2001), the clinical severity ratings for MDD and dysthymia were combined into one category of depressive disorders. As with the CAPS, 32% (n = 35) of the ADIS-IV interviews were reviewed and rated by a second independent rater to examine reliability of CSRs indicative of depression and GAD. Intraclass correlations revealed strong agreement between the two clinical severity ratings for both depression (r = .96) and GAD (r = .98).

2.3 Procedure

Following provision of informed consent, participants were interviewed using the IPV interview, the CAPS, and the ADIS-IV. Participants then completed a packet of self-report questionnaires that included the RAAS, MSPSS, IES-R, BDI-II, and BAI. For the majority of participants, the procedures spanned two to three appointments. Appointments were scheduled as close together in time as was feasible for participants. After completion of the assessment, participants were given feedback on results of the assessment, debriefed, and provided with referrals for mental health services in the community if necessary. All procedures were reviewed by the Institutional Review Board.

2.4 Data Analytic Procedures

Following the guidelines provided by Tabachnick and Fidell (2001), data were examined for skew, kurtosis, and outliers and no violations were found. Zero-order correlations were

examined between attachment, social support, PTSD, depression, and anxiety. Because few studies have examined attachment and social support together, regression analyses were conducted in which social support and the three attachment orientations were entered together in the same step to examine their associations with each type of psychopathology. Analyses were first run to predict self-reported and clinician-assessed PTSD. The same analyses were then run examining predictions of self-reported and clinician-assessed symptoms of depression and GAD. Squared semipartial correlations were calculated as an indicator of effect size using Kirk's (1996) recommendations whereby 0.01 is considered a small effect, 0.06 is considered a medium effect, and 0.14 is considered a large effect.

3. Results

The correlations, as well as means and standard deviations, between the variables are presented in Table 2. Self-reported and clinician interviewed measures of psychopathology were significantly correlated with each other. Correlations between the three attachment orientations and social support were non-significant.

3.1 Concurrent associations of attachment and social support with PTSD

Results for self-reported and clinician assessed PTSD are presented in Table 3. For self-reported PTSD, both social support (β = -.30, p = .002) and attachment anxiety (β = .35, p < .001) were found to significantly predict PTSD, with both (social support, sr^2 = .09, and attachment anxiety, sr^2 = .12) demonstrating medium effect sizes. When examining PTSD using the CAPS, only social support (β = -.23, p = .02) was a significant predictor, demonstrating a small effect size (sr^2 = .05). Thus, lower social support and higher attachment anxiety were associated with higher self-reported PTSD on the IES-R, but only lower social support was associated with higher levels of PTSD using the CAPS.

3.2 Concurrent associations of attachment and social support with depression

Results for self-reported and clinician assessed depression are presented in Table 4. For self-reported depression, BDI-II scores were predicted by social support (β = -.42, p < .001), attachment anxiety (β = .18, p = .05), and attachment closeness (β = -.20, p = .03). Social support showed a large effect size (sr^2 = .19), while attachment anxiety (sr^2 = .05) and attachment closeness showed small effect sizes (sr^2 = .05). When assessed via the ADIS-IV, only social support (β = -.35, p < .001) significantly predicted depressive symptoms, yielding a medium effect size (sr^2 = .12). Thus, higher attachment anxiety, lower social support, and lower attachment closeness were associated with higher self-reported depression, whereas only lower social support was associated with a higher CSR for depressive disorders.

3.3 Concurrent associations of attachment and social support with GAD

Results for self-reported and clinician assessed symptoms of GAD are presented in Table 5. Self-reported symptoms of generalized anxiety were only predicted by attachment anxiety (β = .20, p < .05), with trends noted for both social support (β = -.17, p = .08) and attachment closeness (β = -.18, p = .07). When predicting generalized anxiety disorder using the CSR from the ADIS-IV, attachment dependency was found to be the only significant predictor (β = -.23, p = .05). Thus, higher attachment anxiety was associated with higher self-reported anxiety, whereas only higher attachment dependency was associated with a higher CSR for generalized anxiety.

4. Discussion

The goal of the current study was to examine how attachment styles and social support contribute together in association with psychopathology. As previous research has shown that attachment styles and social support are interrelated and each construct has been independently

associated with psychopathology, the current study expanded previous investigations by exploring how these variables associate together with mental health conditions in IPV victims. To determine the impact of assessment modality, both self-report and clinician assessed measures of mental health conditions were examined.

Findings revealed that for self-reported psychopathology, higher levels of attachment anxiety and lower levels of social support were related to higher levels of self-reported PTSD. For self-reported depression, higher attachment anxiety, lower comfort with closeness, and lower levels of perceived social support were associated with more severe depressive symptoms. Finally, higher attachment anxiety was associated with more severe self-reported generalized anxiety symptoms. When PTSD, depression, and GAD were examined via clinician assessed measures, attachment styles showed different associations with psychopathology. Only lower levels of social support were associated with clinician assessed PTSD and depression, whereas only lower levels of attachment dependency (the ability to depend on others) were associated with clinician assessed GAD.

The results from the self-report analyses are consistent with the previous literature, which has highlighted the significance of both social support and attachment styles in self-reported mental health conditions. Similar to findings from previous research, attachment anxiety demonstrated a significant association with an array of self-reported psychopathology and distress (Scott & Babcock, 2009; Mallinckrodt & Wei, 2005; Wei, Heppner, & Mallinckrodt, 2003). The findings from Besser and Neria (2012) indicating a link between attachment anxiety and self-reported PTSD were also replicated. These results suggest that, even when examined jointly, both low social support and specific attachment styles significantly relate to self-reported psychopathology.

In contrast, when clinician ratings were used to index mental health conditions, attachment dimensions were not significantly associated with PTSD and depression. Unlike self-reported generalized anxiety symptoms, clinician rated GAD was significantly associated with attachment dependency, although the effect was small. Particularly notable in the clinician assessed results is the association between social support and depression, which remained strong regardless of assessment method ($sr^2 \geq .12, p < .001$). This finding echoes the larger literature highlighting the robust association between depression and poor interpersonal support (Lakey & Cronin, 2008). Contrary to results from the self-report outcomes, attachment anxiety was not significantly associated with clinician assessed PTSD, depression, or GAD. Thus, attachment anxiety appeared to play less of a role in clinician assessed psychopathology.

There are several possible explanations accounting for the differential findings between the self-report and clinical measures. First, the self-report measures may be capturing more generalized distress, as opposed to particular symptoms of specific disorders which were parsed out in the clinical interviews. This could imply that when attempts are made to parse out general distress from specific mental health symptoms, attachment plays less of an influence, particularly with PTSD and depression. A second possible explanation is that the self-report measures may be more prone to individual reporting styles, which is important when considering attachment. As discussed previously, attachment anxiety and attachment avoidance reflect discrete reactions to distress, where attachment anxiety is associated with hyperactivation strategies and attachment avoidance is associated with deactivation strategies in response to stress (Mikulincer, Shaver, & Pereg, 2003). As noted by Dozer and Lee (1995), these results could imply that individuals characterized with attachment anxiety may be more likely to endorse symptoms than individuals characterized with attachment avoidance. This may have less of an influence in the clinical

interview measures where clinicians attempted to link symptoms to specific mental health conditions. A final possible contributor accounting for some of the discrepancy between the self-report and clinician assessed outcomes includes method variance (see Podsakoff et al., 2003, for a review). Method variance is "variance that is attributable to the measurement method rather than to the construct of interest" (Bagonnzi & Yi, 1991, p. 426). As discussed by Podsakoff et al. (2003), method variance has the potential to artificially increase the observed correlation between constructs. Because both the attachment and social support variables were collected via self-report, common method variance could account for stronger associations with the self-report outcomes than with the clinician assessed outcomes.

Unlike Besser and Neria (2012), this report did not find a significant association between attachment styles and social support, noting instead that attachment styles and social support were independently associated with psychopathology. However, results should not necessarily be interpreted as implying that attachment and social support are unrelated, as the discrepancy in these findings could possibly be explained by sample differences. Whereas Besser and Neria used a nonclinical sample of college students under threat of missile attack, the current study used a clinical sample of IPV victims. Although attachment styles are thought to influence perception and utilization of social support (Mikulincer & Shaver, 2007), it is possible that exposure to IPV changed the association between these two constructs. Experiencing IPV may be a more salient factor in affecting perceptions of support, thus rendering attachment styles' association with social support insignificant when considered under the purview of IPV.

The relationship between attachment dependency and clinician assessed GAD merits further consideration. Whereas most theoretical models of GAD have highlighted non-interpersonal factors, interpersonal processes may also be important to consider when

understanding GAD, particularly within this sample of IPV victims. The findings from this study may lend support to a preliminary interpersonal theory of GAD presented by Newman and Erickson (2010). As discussed by these authors, GAD has been linked with a number of salient negative interpersonal events, including traumatic loss of significant others and childhood family conflict. These negative interpersonal experiences can require individuals to rely more on themselves to have their needs meet, which may in turn promote a negative interpersonal style characterized by attachment avoidance, including hesitancy in depending on others. When examined within this context, worry may develop as a means of coping with the demands of a hostile environment in which one lacks consistent support. However, as little research has focused on interpersonal variables in the origins of GAD, more research is needed before definitive conclusions can be made about how interpersonal processes affect the development of GAD, particularly in IPV populations.

4.1 Limitations

Although this study furthers our understanding of the relationship between attachment styles, social support, and psychopathology, some limitations should be noted. First, it should be recognized that the Beck Anxiety Inventory is not designed to exclusively assess symptoms of GAD, but rather anxiety symptoms in general. Thus, it is possible that the BAI was capturing other anxiety symptoms in addition to GAD. However, previous studies have found good sensitivity and specificity values for the BAI as an indicator of GAD (Leyfer, Ruberg, & Woodruff-Borden, 2006). Additionally, Hirai, Stanley, and Novy (2006) found that the BAI was predictive of the severity of clinician assessed GAD using the ADIS-IV, suggesting that the BAI provides an adequate indicator of GAD symptomatology. Second, although the available empirical literature supports the notion that low social support and attachment styles are

vulnerability factors for the development of psychopathology following trauma (Brewin et al., 2000; Ozer et al., 2003; Mikulincer & Shaver, 2007), it is possible that low social support and attachment styles are actually psychological outcomes of trauma exposure. Consequently, whether attachment styles or social support can be viewed as causal agents in the development of psychopathology in the current sample cannot be determined. It is important to note that Mikulincer, Shaver, and Horesh (2006) reported, based on a longitudinal study of Operation Iraqi Freedom soldiers, that attachment styles affected response to trauma exposure and that individuals with pre-war anxious attachment styles showed higher PTSD symptoms following combat. This finding is consistent with the self-report findings from this study. Additional research which separates the impact of trauma exposure from the impact of mental health conditions that may develop following trauma would seem valuable in addressing this issue. Finally, as this study is the first to examine the interrelationship between attachment, social support, and psychopathology in IPV victims, it is unknown whether these results would apply to other trauma samples. Given that social support and attachment styles both are interpersonal in nature, it is possible that social support and attachment styles may take on a more unique context in IPV trauma relative to other traumas. For example, differences in attachment style may impact how a victim responds to an abusive partner following the perpetration of IPV, which may have an impact upon psychopathology.

5. Conclusions

This study helps further our understanding of the relationship between attachment and social support in mental health functioning for IPV victims. Contrary to previous studies, findings indicated that attachment style and social support were unrelated in this study, although this is the first study to examine the interrelationship between these constructs in an interpersonal

trauma sample. Future studies should explore how interpersonal traumas such as IPV affect the relationship between attachment and social support, and whether attachment styles have less of a salient influence on social support in light of the occurrence of interpersonal violence. Longitudinal studies could help explain how attachment styles and social support both affect and are affected by interpersonal traumas such as IPV, and how this relates to mental health conditions following interpersonal traumas. Findings also suggest that both attachment styles and social support are relevant in self-reported psychopathology, but the significance of attachment style is mitigated when mental health symptoms are assessed by a clinician. Taken altogether, these results highlight the importance of incorporating multiple assessment methods in the study of mental health conditions, as assessment modality impacted findings. This is especially notable within the attachment literature, which has prominently relied upon self-report measures in its examination of the relationship between attachment styles and mental health disorders. This study begins the process of understanding the interrelationship between attachment, social support, and psychopathology in a sample of women who had experienced IPV, while also highlighting the importance of assessment methodology in future examinations.

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Footnote

1. In some circumstances, if in the interviewer's perspective a woman's personal safety was potentially at risk, the interviewer helped the woman formulate a safety plan.

Table 1

Sample Demographics

	n (%)
Race	
Caucasian	61 (56.5)
African American	34 (31.5)
Hispanic	2 (1.9)
Asian	3 (2.8)
Other	7 (6.5)
Did not respond	1 (0.9)
Education	
Elementary School	3 (2.8)
High School	10 (9.3)
Some College	51 (47.2)
College Degree	18 (16.7)
Attended or Completed Graduate Training	26 (24.1)
Income	
Below $10,000	18 (16.7)
$10,000 - $20,000	25 (23.1)
$20,000 - $30,000	10 (9.3)
$30,000 - $50,000	18 (16.7)
Over $50,000	24 (22.3)
Did not respond	13 (12.0)
Type of abuse experienced	
Emotional Abuse	2 (1.9)
Physical Abuse	2 (1.9)
Sexual Abuse	1 (0.9)
Sexual and Physical Abuse	1 (0.9)
Emotional and Physical Abuse	41 (38.0)
Emotional and Sexual Abuse	3 (2.8)
Emotional, Physical, and Sexual Abuse	58 (53.7)
Diagnoses (CAPS & ADIS-IV)	
PTSD	31 (28.7)
Major Depressive Disorder	36 (33.3)
Dysthymic Disorder	8 (7.4)
GAD	61 (56.5)

Table 2

Summary of Intercorrelations, Means, and Standard Deviations for Attachment, Social Support, and Self-Reported and Clinician Assessed PTSD, Depression, and Generalized Anxiety

Measure	***1***	***2***	***3***	***4***	***5***	***6***	***7***	***8***	***9***	***10***
1. IES-R	—									
2. BDI-II	.70***	—								
3. BAI	.55***	.65***	—							
4. CAPS	.36***	.45***	.39***	—						
5. Depression CSR (ADIS-IV)	.53***	.65***	.47***	.31**	—					
6. GAD CSR (ADIS-IV)	.22*	.39***	.32**	.18	.41***	—				
7. MSPSS	-.30**	-.45***	-.21*	-.26**	-.36***	-.01	—			
8. Attachment anxiety	.35***	.22*	.25*	-.06	.06	.03	-.02	—		
9. Attachment closeness	-.16	-.28**	-.25**	-.17	-.04	-.20*	.12	-.05	—	
10. Attachment dependency	-.20*	-.28**	-.30**	-.11	-.18	-.23*	.18	-.36***	.40***	—
M	2.2	25.7	21.1	32.6	2.8	3.3	12.2	21.3	17.0	12.2
SD	0.8	12.9	13.0	22.6	2.4	2.2	4.7	6.7	4.6	4.7

Note. N =108. IES-R = Impact of Events Scale-Revised; BDI-II = Beck Depression Inventory; BAI = Beck Anxiety Inventory; CAPS = Clinician Administered PTSD Scale; GAD = Generalized Anxiety Disorder, CSR = Clinical Severity Rating; ADIS-IV = Anxiety Disorders Interview Schedule for DSM-IV; MSPSS = Multidimensional Scale of Perceived Social Support.
*$p < .05$; **$p < .01$; ***p <.001

Table 3

Multiple Regression Analyses Predicting Self-Reported and Clinician Interviewed PTSD

	IES-R			CAPS		
	β	***t***	***sr²***	***β***	***t***	***sr²***
Predictor						
Social Support	-.29	-3.25***	.09	-.23	-2.43*	.05
Attachment Anxiety	.35	3.79***	.12	-.09	-.84	.01
Attachment Dependency	.03	.27	.00	-.06	-.45	.00
Attachment Closeness	-.12	-1.21	.01	-.12	-1.20	.01
Total R^2		.23			.09	

*$p < .05$; ***$p < .001$

Table 4

Multiple Regression Analyses Predicting Self-Reported and Clinician Interviewed Depression

	BDI-II			**Depression CSR (ADIS-IV)**		
	β	***t***	***sr²***	***β***	***t***	***sr²***
Predictor						
Social Support	-.42	-4.94***	.19	-.35	-3.72***	.12
Attachment Anxiety	.18	2.03*	.05	-.01	.12	.00
Attachment Dependency	-.06	-.58	.00	-.13	-1.20	.01
Attachment Closeness	-.20	-2.21*	.05	.04	.41	.00
Total R^2		.30			.15	

*$p < .05$; ***$p < .001$

Table 5

Multiple Regression Analyses Predicting Self-Reported and Clinician Interviewed Generalized Anxiety Disorder

	BAI			**GAD CSR (ADIS-IV)**		
	β	***t***	***sr²***	***β***	***t***	***sr²***
Predictor						
Social Support	-.17	-1.80††	.03	.05	.52	.00
Attachment Anxiety	.20	2.03*	.04	-.06	-.56	.00
Attachment Dependency	-.12	-1.15	.01	-.23	-2.03*	.04
Attachment Closeness	-.18	-1.80†	.03	-.11	-1.09	.01
Total R^2		.17			.08	

*$p < .05$; †$p = .07$; ††$p = .08$

***Highlights (for review)**

- Associations of attachment and social support in psychopathology were examined
- Analyses compared both self-report and clinician assessed PTSD, depression, and GAD
- Both attachment styles and social support were significant in self-report analyses
- Attachment was less influential in predicting clinician assessed mental health
- Findings are discussed within the context of intimate partner violence