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## The Association between Intimate Partner Violence Perpetration, Victimization, and Mental Health among Women Arrested for Domestic Violence

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### Abstract

Intimate partner violence (IPV) is a major problem. Unfortunately there is a dearth of research on the associations between IPV perpetration, victimization, and mental health among women. The current study examined these associations among a sample of women arrested for domestic violence and court-referred to batterer intervention programs (BIPs;  $N = 88$ ). Using self-report screening instruments for Axis I and Axis II mental health problems, results showed very high rates of mental health problems among women. In addition, both IPV perpetration and victimization were associated with increased mental health symptoms. Women who met diagnostic cutoff scores reported greater IPV perpetration/victimization than women who did not meet those cutoff scores. Implications of these findings for future research and IPV interventions are discussed.

### Keywords

Domestic violence; aggression; victimization; mental health; partner violence; intimate abuse; batterer

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## The Association between Intimate Partner Violence Perpetration, Victimization, and Mental Health among Women Arrested for Domestic Violence

Intimate partner violence (IPV) is a prevalent problem in the United States and throughout the world. Despite a wealth of research on IPV and increasing knowledge about its prevention (Temple, Stuart, & O'Farrell, 2009), batterer intervention programs (BIPs) appear to have questionable success at reducing aggressive behavior (Babcock, Green, & Robie, 2004; Stuart, Temple, & Moore, 2007). Thus, researchers have advocated for additional studies on malleable factors that may increase the effectiveness of IPV interventions (Shorey, Cornelius, & Bell, 2008). The field is in particular need of additional research on women who participate in violence intervention programs, as they are

understudied (Hien & Hien, 1998; Stuart et al., 2006) and likely have treatment needs that vary from their male counterparts (Dowd, 2001; Dowd & Leisring, 2008; Leisring, Dowd, & Rosenbaum, 2003). To address this gap in the literature, we examined the associations between IPV perpetration and victimization with mental health problems among a sample of women arrested for domestic violence and court-referred to BIPs.

### **IPV Perpetrated by Women**

There has been an increased focus on IPV perpetrated by women in recent years. Although there is controversy in the field about the extent and nature of IPV perpetration by women, some research has shown that women perpetrate as much, or more, physical and psychological aggression in their intimate relationships as their male counterparts (Archer, 2000; Lawrence, Yoon, Langer, & Ro, 2009; Stuart, Moore, Gordon, Hellmuth, et al., 2006). At least one study has found that IPV perpetrated by women can be severe in nature, and appears similar to the intimate terrorist classification according to Johnson's (1995, 2006) typology of IPV perpetrators (Hines & Douglas, 2010). Although violence by women generally results in less severe physical and mental health consequences than male violence (Archer, 2000; Stets & Pirog-Good, 1990; Temple, Weston, & Marshall, 2005), it is nevertheless important to attend to this form of aggression due to its prevalence and negative impact on male victims.

Women perpetrators of IPV are also subjected to a high frequency of IPV victimization. Research demonstrates that, among women mandated to BIPs, rates of IPV victimization are high (Stuart, Moore, Gordon, Ramsey, & Kahler, 2006). Some researchers have even argued that women arrested for IPV and court-referred to violence intervention programs are better conceptualized as victims of IPV due to their frequent victimization experiences (Hamberger, 1997; Leisring, Dowd, & Rosenbaum, 2003). These findings are consistent with the notion that IPV is largely bi-directional (Langhinrichsen-Rohling, 2010; Temple, Weston, & Marshall, 2005, 2010). Thus, research that examines IPV perpetration among women arrested for domestic violence should also take into consideration their IPV victimization.

### **IPV Perpetration, Victimization, and Mental Health**

Theoretically, researchers have postulated that mental health problems may be associated with IPV perpetration, possibly through dysfunctional behavioral repertoires associated with disorders, such as a decreased ability to regulate emotions effectively and/or hypervigilance (Bell & Naugle, 2008; Taft et al., 2007). Research indicates that male-perpetrated IPV is associated with mental health disorders, such as substance use (Moore & Stuart, 2004), depression (Stuart, Moore, Kahler, & Ramsey, 2003), and posttraumatic stress disorder (PTSD; Bell & Orcutt, 2009). Indeed, research demonstrates that men who perpetrate IPV are up to 13 times more likely to have mental health problems than non-perpetrators (Danielson, Moffitt, Caspi, & Silva, 1998). It is likely that these treatable correlates of IPV may also be elevated in women who perpetrate IPV. Knowledge of whether IPV perpetration by women is associated with mental health symptoms could aid in the development of more effective intervention programs designed to ameliorate IPV. However, there has been a relative dearth of research on the association between IPV perpetration and mental health among women arrested for domestic violence.

Henning, Jones, and Holdford (2003) examined Axis I and Axis II symptomatology among a sample of women arrested for domestic violence ( $N = 112$ ). Results indicated elevated rates of both Axis I and Axis II symptoms for the arrested women as compared to the general population. Dowd, Leisring, and Rosenbaum (2005) examined Axis I disorders among women who had perpetrated IPV and who were seeking anger management training, either

mandated by the court ( $n = 56$ ) or not mandated by the court ( $n = 51$ ). Results showed that 18.1% of women had a current alcohol abuse diagnosis, while 60.8% had previously abused alcohol and 24.8% had previously abused drugs. In addition, 67% of women reported depression and 38.7% reported an anxiety disorder. In contrast, general population estimates place past year prevalence of depression at 7%, substance use disorders at 2–5%, and anxiety disorders at 3–10% for women (Kessler, 1994). While these studies demonstrate that women who perpetrate IPV have elevated rates of Axis I and Axis II symptomatology, neither examined the association between mental health and IPV perpetration.

Expanding upon previous research, Stuart, Moore, Gordon, Ramsey and colleagues (2006) examined Axis I (i.e., depression, PTSD, generalized anxiety disorder, panic disorder, and substance use) and Axis II (i.e., antisocial and borderline) symptomatology among women arrested for domestic violence and court-referred to BIPs ( $N = 103$ ).<sup>i</sup> This study found that the prevalence of mental health problems was considerably higher than in the general population, although there were no significant associations between any of the mental health symptoms and physical and psychological IPV *perpetration*. Consistent with previous research on women arrested for IPV, Stuart, Moore, Gordon, Ramsey and colleagues (2006) found that their sample of arrested women reported frequent IPV victimization, which was associated with increased levels of mental health symptomatology.

The findings of Stuart, Moore, Gordon, Ramsey and colleagues (2006) are consistent with a large body of research showing strong associations between IPV victimization and mental health symptoms among women (e.g., Jordan, Campbell, & Follingstad, 2010). In addition, it is well documented that women who are victims of IPV experience higher rates of mental health disorders than non-victimized women and the general population (e.g., Golding, 1999). For instance, large population-based studies have demonstrated that female victims of IPV are more likely to have mental health problems than their non-victimized counterparts (e.g., Basile, Arias, Desai, & Thompson, 2004). Based on their findings and research, which were consistent with the notion that women who perpetrate IPV present clinically similarly to IPV victims, Stuart, Moore, Gordon, Ramsey and colleagues (2006) concluded that women arrested for domestic violence should be viewed not solely as perpetrators, but also as victims. Additional research is needed that examines the associations between IPV perpetration, victimization, and mental health among women arrested for domestic violence. Knowing how mental health symptoms are related to women's IPV perpetration could help intervention programs target the most relevant perpetrator characteristics during counseling sessions.

### Current Study

The current study sought to determine the relationships between IPV perpetration, IPV victimization, and Axis I and Axis II symptomatology among a sample of women arrested for domestic violence and court-referred to BIPs. Consistent with previous research, it was hypothesized that IPV victimization would be associated with increased mental health symptoms. Because IPV victimization is highly associated with IPV perpetration, and numerous studies have shown IPV perpetration to be associated with mental health symptoms across diverse populations, we also hypothesized that IPV perpetration would be associated with increased mental health symptoms.

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<sup>i</sup>It should be noted that the sample of women participants in Stuart, Moore, Gordon, Ramsey and colleagues' (2006) study does not overlap with the sample of women who participated in the present study.

## Method

### Participants

Participants were a convenience sample of 88 women arrested for domestic violence and court-referred to batterer intervention programs (BIPs) in Rhode Island. The state of Rhode Island has a mandatory arrest policy in cases where there is probable cause for domestic violence; domestic violence can include offenses ranging from stalking, harassment, violation of orders of protection, to assault and battery. However, the current study did not collect information on the specific charges filed against the arrested women.

The mean age of participants was 30.70 ( $SD = 10.41$ ). The majority of women were non-Hispanic White (75%), with the remainder being Hispanic (8%), African American/Black (6.8%), and “other” (e.g., Native American, Asian, etc.; 10.2%). At the time of the study, 35.2% of women were living with a partner but were not married, 29.5% indicated they were dating their current partner, 15.9% were married, 6.8% were separated, 6.8% were divorced, and 5.7% had no current intimate partner. This sample represents an overlapping sample of women that have been reported on elsewhere (Stuart, Meehan, et al., 2006; 2008).

### Measures

**Demographics**—Women provided a number of basic demographic characteristics, including age, race, relationship status, and number of children.

**IPV**—The Revised Conflict Tactics Scale (CTS2; Straus, Hamby, McCoy, & Sugarman, 1996) was used to examine IPV perpetration and victimization during the 12 months prior to attending BIPs. The physical assault, psychological aggression, sexual coercion, and injury perpetration and victimization subscales were examined for the current study. Women indicated on a 7-point scale ( $0 = \text{never}$ ;  $6 = \text{more than 20 times}$ ) the number of times a particular form of aggression was used against an intimate partner, and was used against them, in the previous year. Scores for each subscale were obtained by taking the midpoint for each response (e.g., “4” for a response of “3 to 5 times”) and then summing the frequency of each of the behaviors for each subscale, with scores ranging from 0 to 25 for each item (Straus, Hamby, & Warren, 2003). Higher scores on the CTS2 indicate more frequent aggression perpetration/victimization. The internal consistency of the CTS2 is well documented, ranging from .79 to .95 (Straus et al., 1996). Internal consistencies for the CTS2 subscales in the current study are presented in Table 1. All CTS2 subscales were log transformed prior to analyses to correct for positive skew and kurtosis, which resulted in values falling below 1.5 for each subscale, which some view as not problematic for statistical tests that assume normal distributions (Hildebrand, 1986).

**Mental Health**—The Psychiatric Diagnostic Screening Questionnaire (PDSQ; Zimmerman, 2002; Zimmerman & Mattia, 2001) was used to assess for Axis-I symptoms and probable diagnoses. The Depression, PTSD, Generalized Anxiety Disorder (GAD), Panic Disorder, Social Phobia, Alcohol, and Drug subscales were administered. The Alcohol and Drug subscales do not distinguish “abuse” diagnoses from “dependence” diagnoses. The PDSQ was created as a screening measure for potential mental health diagnoses, with cutoff scores of 9, 5, 7, 4, 4, 1, and 1 for Depression, PTSD, GAD, Panic Disorder, Social Phobia, Alcohol, and Drug diagnoses, respectively (Zimmerman & Mattia, 2001). The sensitivity and specificity, respectively, of the PDSQ subscales administered are: Depression .90, .67; PTSD .92, .62; GAD .90, .50; Panic Disorder .91, .69; Social Phobia .91, .63; Alcohol .85, .80; and Drug .85, .87 (Zimmerman & Mattia, 2001). The internal consistency, test-retest reliability, and validity of the PDSQ have been established across a range of samples

(Zimmerman, 2002). For the current study, internal consistency estimates were high for each subscale and are presented in Table 1.

The Borderline Personality Disorder (BPD) and Antisocial Personality Disorder (ASPD) subscales of the Personality Disorder Questionnaire-4 (PDQ4; Hyler et al., 1988) were used to examine Axis-II symptomatology and probable diagnoses. The PDQ4 is intended to be used as a screening instrument for possible BPD and ASPD diagnoses. For BPD the sensitivity ranges from .95 to .98, and the specificity from .41 to .68. For ASPD the sensitivity ranges from .62 to .75 and the specificity from .89 to .91 (Hyler, Skodol, Kellman, Oldham, & Rosnick, 1990). Cutoff scores for possible diagnoses are 5 for BPD and 3 for ASPD. The PDQ4 has been shown to have good reliability and validity (Hyler et al., 1988; Trull, 1993). Table 1 presents internal consistency estimates of the BPD and ASPD subscales for the current study.

## Procedure

All questionnaires were completed during women's regularly scheduled batterer intervention sessions and participation was voluntary. Women were not compensated for their participation. Groups were open and the mean number of intervention sessions attended prior to completing the questionnaires was 10.70 ( $SD = 6.99$ ). Number of intervention sessions attended was positively related to BPD ( $r = .28, p < .05$ ), ASPD ( $r = .36, p < .01$ ), and depressive symptoms ( $r = .29, p < .01$ ), but was unrelated to IPV and all other mental health variables ( $ps > .10$ ). None of the information gathered was shared with the intervention facilitators or anyone within the criminal justice system. After providing informed consent, participants were provided with a packet of questionnaires to complete. For additional information about the procedures for the current study, the interested reader is referred to Stuart, Meehan, and colleagues (2006) and Stuart and colleagues (2008).

## Results

Table 1 presents descriptive statistics for the study variables. Consistent with previous research on women arrested for domestic violence (i.e., Stuart, Moore, Gordon, Ramsey, et al., 2006), women endorsed perpetrating and being victimized by aggressive behavior quite frequently. In addition, women reported very high levels of psychopathology. Based on cutoff scores for probable Axis I diagnoses, 40.9% of women met the cutoff score for depression, 46.6% for PTSD, 44.3% for GAD, 35.2% for panic disorder, 36.4% for social phobia, 31.8% for an alcohol disorder, and 23.9% for a drug disorder. For Axis II problems, 29.5% met the cutoff score for a probable BPD diagnosis, and 39.8% met the cutoff score for a probable ASPD diagnosis.

Table 2 presents bivariate correlations among the study variables. In contrast with previous research (e.g., Stuart, Moore, Gordon, Ramsey, et al., 2006), women's perpetration was significantly associated with psychopathology symptoms. Psychological aggression perpetration was positively and significantly associated with symptoms of BPD, ASPD, depression, GAD, panic disorder, and alcohol and drug use. Physical aggression and injury perpetration were positively and significantly associated with symptoms of BPD, ASPD, depression, PTSD, and GAD. Sexual aggression perpetration was positively related only with symptoms of PTSD and drug use. For victimization, psychological aggression was positively associated with symptoms of BPD, ASPD, depression, GAD, and panic disorder. Physical victimization was associated with increased symptoms of BPD, PTSD, and GAD. Sexual victimization was correlated with increased symptoms of BPD, ASPD, depression, PTSD, panic disorder, and drug use; and injury victimization with symptoms of BPD, ASPD, depression, PTSD, and GAD.

We also examined whether women meeting probable diagnostic cutoff scores for psychopathology reported more frequent IPV perpetration and victimization using *t* tests. These findings are displayed in Table 3 (perpetration) and Table 4 (victimization). Women meeting the cutoff score for depression reported more physical perpetration, injury perpetration, sexual victimization, and injury victimization, than women not meeting the cutoff score for depression. Women with a probable PTSD diagnosis reported more psychological, physical, and injury perpetration, as well as more psychological, physical, and injury victimization, than women not meeting the PTSD cutoff score. For GAD, women meeting the cutoff score reported more psychological, physical, and injury perpetration, as well as more psychological, and injury victimization. Women meeting the cutoff score for panic disorder reported more sexual victimization. Women meeting the cutoff score for social phobia reported more psychological perpetration. Women meeting the drug diagnosis cutoff score reported more psychological, and sexual perpetration, as well as sexual victimization. No differences were found for the alcohol groups.

For Axis II probable diagnoses, women meeting the cutoff score for BPD reported more psychological, physical, and injury perpetration, as well as more psychological, sexual, and injury victimization. For women meeting the ASPD cutoff score, they reported more psychological, physical, and injury perpetration, as well as more psychological, physical, and injury victimization.

## Discussion

The current study examined the associations between IPV perpetration, victimization, and mental health among a sample of 88 women arrested and court-mandated to BIPs. We extended and replicated the findings of Stuart, Moore, Gordon, Ramsey and colleagues (2006), which examined mental health and IPV among a different sample of women arrested for domestic violence. To our knowledge, this is one of the only studies to examine mental health correlates of IPV perpetration and victimization in this understudied population.

Consistent with previous research (e.g., Henning et al., 2003; Stuart, Moore, Gordon, Ramsey, et al., 2006) results demonstrated that mental health problems were prevalent in this sample. Rates of depression (40.9%), PTSD (46.6%), GAD (44.3%), panic disorder (35.2%), social phobia (36.4%), alcohol disorder (31.8%), drug disorder (23.9%), BPD (29.5%), and ASPD (39.8%) were all considerably higher in this sample than the estimated prevalence rates of these disorders in the general population. For instance, in the general population of women, lifetime prevalence rates for PTSD and social phobia are 10% and 15.1% respectively, and past year prevalence is 7%, 4%, 3%, 5%, and 2% for depression, GAD, panic disorder, alcohol abuse/dependence, and drug abuse/dependence (e.g., American Psychiatric Association, 1994; Kessler, 1994; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Magee et al., 1996). For BPD and ASPD, lifetime prevalence rates for women in the general population are 3% and 1%, respectively (American Psychiatric Association, 1994; Kessler, 1994). Thus, this study adds to the growing body of literature that shows that participants in batterer programs, whether men or women, may have elevated levels of mental health problems. The results further support the notion that women arrested for domestic violence should also be considered victims of IPV, as evidenced by the very high rates of victimization reported in this sample. Additionally, the most prevalent mental health problem reported by this sample was PTSD, which is also among the most common mental health problems reported by battered women (Golding, 1999).

The rates of mental health problems reported in the current sample of women arrested for domestic violence are largely consistent with samples of incarcerated women. For instance, Zlotnick (1999) showed in a sample of incarcerated women that the prevalence of PTSD

(49%), depression (48%), substance use disorders (83%), BPD (40%), and ASPD (48%) were all higher than that found in the general population. Using a sample of incarcerated women, Lafortune (2010) found that rates of mental health disorders exceeded those found in the general population, specifically for anxiety disorders (48%), depression (26.3%), personality disorders (27.5%), and substance use disorders (18.1–34.5%). Thus, although our sample of women reported higher rates of mental health problems than women in the general population, the prevalence of psychopathology appears to be quite similar to women who have been arrested and incarcerated for a variety of crimes.

It should be noted that although the results from the current study were largely consistent with previous research, our findings also differed from previous research in a few ways. Whereas Stuart, Moore, Gordon, Ramsey and colleagues (2006) found no association between IPV perpetration and mental health in their sample of women arrested for domestic violence, our findings showed numerous associations between IPV perpetration and mental health. For instance, BPD, ASPD, depressive, and GAD symptoms were all positively associated with psychological IPV, physical IPV, and injury perpetration, and psychological aggression was associated with all mental health variables except PTSD and social phobia. Furthermore, women meeting the diagnostic cutoff scores for most mental health problems reported significantly greater IPV perpetration than women not meeting probable diagnostic cutoff scores.

One possible reason for the inconsistency between our study -- which found associations between IPV perpetration and mental health -- and Stuart, Moore, Gordon, Ramsey and colleagues' (2006) study -- which showed no such associations -- may be the higher rates of ASPD in our study. Stuart, Moore, Gordon, Ramsey and colleagues (2006) found that 7% of their sample of women met the probable cutoff score for an ASPD diagnosis, whereas 39.8% of the women in our sample met the cutoff score for a probable ASPD diagnosis. There is a wealth of research on male IPV perpetrators that demonstrates that there are strong associations between ASPD and IPV perpetration (e.g., Edwards et al., 2003; Hanson et al., 1997). It is possible that features of ASPD (e.g., callousness, hostility) interacted with other mental health problems in this sample, leading to significant associations between IPV perpetration and psychopathology. Additional research is needed to replicate these findings, particularly using longitudinal designs to determine whether mental health problems predict or are a consequence of IPV perpetration among women arrested for domestic violence.

One explanation for the possible associations between IPV perpetration, victimization, mental health problems may be due to participants' general difficulties regulating emotions. Recent theory and research suggest that many Axis I and Axis II conditions are characterized by pervasive difficulties regulating emotions (Campbell-Sills & Barlow, 2007; Tull, Barrett, McMillan, & Roemer, 2007; Tull, Stipelman, Salters-Pedneault, & Gratz, 2009), and research indicates that these difficulties are associated with IPV perpetration and victimization (Gratz, Paulson, Jakupcak, & Tull, 2009; Iverson, Shenk, & Fruzzetti, 2009; Tager, Good, & Brammer, 2010). For instance, BPD can be conceptualized as a disorder that is characterized by pervasive difficulties with emotion regulation (Gratz, 2007), and BPD was associated with all IPV variables except sexual aggression perpetration. Although this is speculative, emotion dysregulation may be one mechanism through which mental health problems are associated with IPV perpetration and victimization.

The current study could have important implications for the treatment of women arrested for domestic violence. First, the findings suggest that it may be important for BIPs to assess for mental health problems among women. If BIPs have the resources to individually tailor their treatments, they could target mental health problems among women or provide referral recommendations for mental health treatment to participants, which may help to reduce

future perpetration. It should be noted that screening and/or targeting mental health problems in BIPs, particularly for males, has been the source of some controversy, as violence is often viewed as a method to control one's partner, and some may view targeting mental health problems as associated with IPV as a way to excuse violence. However, we believe that a number of unique and diverse factors likely contribute to IPV perpetration, and mental health problems may be one such important factor for some perpetrators. Second, and consistent with the recommendations of Leisring and colleagues (2003) and Stuart, Moore, Gordon, Ramsey and colleagues (2006), BIPs should consider the victimization experiences of women, and some BIPs may already be considering such experiences. Although the cross-sectional nature of the current study hinders our understanding of whether mental health problems occurred as a result of victimization experiences, it is likely that victimization experiences contributed significantly to mental health problems. Thus, the trauma that is often associated with IPV victimization could be targeted in BIPs for women specifically. Given that trauma-related symptomatology is associated with IPV perpetration (Bell & Orcutt, 2009; Taft, Street, Marshall, Dowdall, & Riggs, 2007), targeting the aftereffects of victimization may help to reduce the chances that women will continue to perpetrate aggression.

When interpreting findings from the current study, it is important to consider its limitations. First, the cross-sectional design precludes the determination of causality. Longitudinal research is needed to determine the interrelationships among IPV perpetration, victimization, and mental health among women arrested for domestic violence. Although the current study supports associations between IPV and mental health, the direction of these relationships remains a question to be answered empirically. In addition, mental health was assessed with self-report screening instruments, not structured diagnostic interviews, which may have inflated estimates of Axis I and Axis II problems. Future research would benefit from using structured diagnostic interviews to assess for Axis I and Axis II psychopathology, as this could provide a more accurate picture of mental health problems. Furthermore, the PDSQ does not allow for the separate examination of alcohol/drug abuse and dependence, or the specific drug(s) used. It is possible that the relationships between IPV perpetration/victimization varies depending on the nature of the diagnosis and the specific substance used. Additional research is needed that examines alcohol/drug abuse and dependence separately. It is also possible that recent arrests for IPV, and also recent experiences with IPV, may have inflated rates/reporting of mental health symptomatology. Future research should examine how recent episodes of IPV, and arrests for IPV, are associated with mental health symptoms.

The interpretation of study findings is further limited by the diagnostic comorbidity seen among disorders, as evidenced by the strong correlations among mental health variables. It is difficult to determine whether relationships exist among IPV perpetration/victimization and specific symptomatology for each disorder, or whether there are problems seen across all of the disorders (e.g., emotion regulation) that account for these associations. Comorbidity issues could be disentangled somewhat in future research with the use of structured diagnostic interviews that would allow for more precise assessments of mental health problems and how they may be related to IPV perpetration and victimization. All CTS2 subscales were also log-transformed prior to analyses, although the lack of normal distributions still may have impacted study findings. Although log-transformations reduced non-normality of data, additional research should determine how the positive skew and kurtosis often associated with violence data may impact study findings. In addition, the large number of statistical tests conducted increased our risk of Type 1 error. This inflated experimentwise error rate suggests that the findings from the study should be interpreted with caution, and thus it will be important to replicate the findings in future research. We also did not have information on whether women's partners were also arrested for domestic



violence, and whether the violence that led to the BIP was bidirectional. Future research should examine the reasons why women were arrested and how this impacts mental health findings. Finally, the sample of women used in the current study limits the generalizability of study findings. The sample consisted of primarily non-Hispanic, White women who were arrested for domestic violence. Replication of these findings in more diverse samples is needed.

It should also be noted that we decided not to examine the unique effects of IPV perpetration and victimization on mental health symptoms (e.g., through regression analyses) for a number of reasons. First, there is considerable multicollinearity among perpetration and victimization variables, which is evident in our correlation table. We also ran tolerance statistics among IPV variables, and these values were indicative of high multicollinearity among variables. Thus, it would be difficult to disentangle the predictive effects of victimization and perpetration on mental health problems due to these strong associations. Indeed, we ran a number of regression analyses where perpetration and victimization were predicting mental health, and results were consistently unable to show associations due to this multicollinearity. Future research should attempt to partial out the unique effects of IPV perpetration and victimization with associations to mental health.

In summary, the current study sought to examine IPV perpetration, victimization, and mental health among a sample of women arrested for domestic violence and court-referred to BIPs. Results showed strong associations between IPV perpetration and victimization and Axis I and Axis II problems, with women having more mental health problems than the general population. In addition, this is the first known study to show associations between IPV perpetration and mental health problems in this understudied population. Further, this study is consistent with previous research (Stuart, Moore, Gordon, Ramsey et al., 2006) that showed that women arrested for domestic violence also sustain IPV victimization with great frequency. These findings suggest that BIPs may benefit from exploring the impact of mental health problems on the IPV perpetration and victimization experiences of women.

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**Table 1**

Means, Standard Deviations, and Alpha Reliabilities for Participants' Frequency of IPV Perpetration and Victimization and Their Scores on the Axis 1 and Axis 2 Measures of Psychopathology

<b>Variable</b>	<b><i>M</i></b>	<b><i>SD</i></b>	<b><math>\alpha</math></b>
Psychological Perpetration	43.65	38.04	.81
Physical Perpetration	19.02	29.69	.84
Sexual Perpetration	4.45	9.66	.78
Injury Perpetration	3.22	7.28	.79
Psychological Victimization	45.68	37.79	.78
Physical Victimization	24.73	41.20	.91
Sexual Victimization	8.04	18.17	.85
Injury Victimization	5.97	10.86	.82
Depression	7.30	5.71	.91
Posttraumatic Stress Disorder	5.34	5.07	.93
Generalized Anxiety Disorder	4.77	3.98	.94
Panic Disorder	2.54	3.00	.92
Social Phobia	3.97	4.57	.92
Alcohol Disorder	1.27	2.12	.93
Drug Disorder	0.87	1.75	.91
Borderline Personality Disorder	3.07	2.56	.79
Antisocial Personality Disorder	2.31	2.07	.75

Table 2

Bivariate Correlations among IPV Perpetration, IPV Victimization, and Axis 1 and Axis 2 Measures of Psychopathology

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Psychological Perpetration	---	.66***	.06	.45***	.91***	.63***	.20	.49***	.46***	.36**	.22*	.21	.37***	.24*	.18	.22*	.22*
2. Physical Perpetration		---	.16	.74***	.57***	.81***	.32**	.67***	.44***	.34**	.27*	.30**	.29**	.14	.19	.09	.17
3. Sexual Perpetration			---	.16	.04	.16	.79***	.15	.18	.06	.09	.21*	-.05	.18	.01	.03	.24*
4. Injury Perpetration				---	.39***	.55***	.21*	.68***	.36**	.25*	.22*	.32**	.27*	.05	.12	.08	.17
5. Psychological Victimization					---	.67***	.18	.52***	.39***	.28*	.21*	.20	.38***	.22*	.12	.20	.13
6. Physical Victimization						---	.29**	.78***	.27*	.20	.20	.23*	.24*	.07	.06	.11	.18
7. Sexual Victimization							---	.27**	.41***	.24*	.25*	.29**	.08	.36**	.12	-.05	.28**
8. Injury Victimization								---	.33**	.22*	.29**	.30**	.25*	.06	.05	.19	.18
9. BPD									---	.58***	.71***	.49***	.62***	.64***	.54***	.29**	.34*
10. ASPD										---	.37**	.25*	.28*	.25*	.24*	.26*	.20
11. Depression											---	.47***	.62***	.54***	.48***	.16	.27***
12. PTSD												---	.48***	.57***	.21*	.12	.20
13. GAD													---	.64***	.62***	.36**	.20
14. Panic Disorder														---	.48***	.23*	.31**
15. Social Phobia															---	.29**	.34**
16. Alcohol Disorder																---	.16
17. Drug Disorder																	---

Note: BPD = Borderline Personality Disorder; ASPD = Antisocial Personality Disorder; PTSD = Posttraumatic Stress Disorder; GAD = Generalized Anxiety Disorder.

\*  $p < .05$ ,

\*\*  $p < .01$ ,

\*\*\*  $p < .001$

**Table 3**

Differences in Frequency of Aggression Perpetration for Probable Diagnosis and Non-Diagnosis Groups

	Diagnosis Group <i>M (SD)</i>	Non-Diagnosis Group <i>M (SD)</i>	<i>t</i>	<i>p</i>
<b>Depression</b>	<i>n</i> = 36 (40.9%)	<i>n</i> = 52		
Psychological Aggression	50.97 (34.75)	38.59 (39.70)	1.86	.06
Physical Aggression	25.02 (26.62)	14.86 (31.22)	2.36	.02
Sexual Aggression	4.19 (8.31)	4.63 (10.56)	0.44	.65
Injury	4.00 (6.02)	2.69 (8.05)	2.04	.04
<b>PTSD</b>	<i>n</i> = 41 (46.6%)	<i>n</i> = 47		
Psychological Aggression	57.60 (40.97)	31.48 (30.87)	2.56	.01
Physical Aggression	30.97 (37.11)	8.59 (15.21)	3.75	.00
Sexual Aggression	5.56 (11.44)	3.48 (7.78)	0.85	.39
Injury	5.60 (9.73)	1.14 (2.91)	3.73	.00
<b>GAD</b>	<i>n</i> = 39 (44.3%)	<i>n</i> = 49		
Psychological Aggression	55.35 (34.60)	34.34 (38.41)	2.93	.00
Physical Aggression	26.74 (37.36)	12.87 (20.14)	2.47	.01
Sexual Aggression	3.64 (8.38)	5.10 (10.60)	0.68	.49
Injury	4.92 (9.44)	1.87 (4.62)	2.54	.01
<b>Panic Disorder</b>	<i>n</i> = 31 (35.2%)	<i>n</i> = 57		
Psychological Aggression	49.83 (35.63)	40.29 (39.18)	1.38	.16
Physical Aggression	23.48 (38.43)	16.59 (23.69)	0.91	.36
Sexual Aggression	5.61 (9.83)	3.82 (9.59)	1.26	.21
Injury	3.83 (9.75)	2.89 (5.57)	0.13	.89
<b>Social Phobia</b>	<i>n</i> = 32 (36.4%)	<i>n</i> = 56		
Psychological Aggression	51.62 (36.77)	39.10 (38.33)	1.87	.06
Physical Aggression	22.43 (25.65)	17.07 (31.83)	2.04	.04
Sexual Aggression	4.37 (8.47)	4.50 (10.35)	0.41	.67
Injury	3.46 (6.10)	3.08 (7.92)	0.82	.41
<b>Alcohol Disorder</b>	<i>n</i> = 28 (31.8%)	<i>n</i> = 60		
Psychological Aggression	48.35 (35.46)	41.46 (39.28)	1.25	.21
Physical Aggression	16.85 (24.35)	20.03 (32.02)	0.23	.81
Sexual Aggression	5.85 (10.47)	3.80 (9.27)	0.74	.46
Injury	3.35 (6.01)	3.16 (7.85)	0.58	.56
<b>Drug Disorder</b>	<i>n</i> = 21 (23.9%)	<i>n</i> = 67		
Psychological Aggression	57.61 (37.92)	39.28 (37.29)	2.21	.03
Physical Aggression	22.71 (24.21)	17.86 (31.29)	1.72	.08
Sexual Aggression	8.57 (13.82)	3.16 (7.61)	2.27	.02
Injury	3.85 (5.62)	3.02 (7.75)	1.15	.25
<b>BPD</b>	<i>n</i> = 26 (29.5%)	<i>n</i> = 56		
Psychological Aggression	65.03 (35.82)	34.67 (36.36)	3.32	.00
Physical Aggression	36.15 (41.97)	12.67 (19.62)	3.36	.00
Sexual Aggression	5.26 (9.58)	4.00 (9.63)	0.92	.35

	<b>Diagnosis Group</b> <i>M (SD)</i>	<b>Non-Diagnosis Group</b> <i>M (SD)</i>	<i>t</i>	<i>p</i>
Injury	6.96 (11.23)	1.75 (4.10)	3.52	.00
<b>ASPD</b>	<i>n</i> = 35 (39.8%)	<i>n</i> = 45		
Psychological Aggression	63.91 (39.52)	29.33 (31.42)	3.17	.00
Physical Aggression	32.34 (39.07)	10.13 (15.97)	3.09	.00
Sexual Aggression	3.85 (8.50)	4.86 (10.58)	0.50	.61
Injury	5.68 (10.29)	1.42 (3.12)	2.67	.00

*Note:* PTSD = Posttraumatic stress disorder; GAD = Generalized anxiety disorder; BDP = Borderline Personality Disorder; ASPD = Antisocial Personality Disorder. Percentages are number of women meeting probably diagnostic criteria for each disorder.



**Table 4**

Differences in Frequency of Aggression Victimization for Probable Diagnosis and Non-Diagnosis Groups

	Diagnosis Group <i>M (SD)</i>	Non-Diagnosis Group <i>M (SD)</i>	<i>t</i>	<i>p</i>
<b>Depression</b>	<i>n</i> = 36 (40.9%)	<i>n</i> = 52		
Psychological Aggression	57.22 (40.82)	37.69 (33.67)	1.80	.07
Physical Aggression	30.13 (38.23)	21.00 (43.19)	1.64	.10
Sexual Aggression	13.47 (25.86)	4.28 (8.30)	2.01	.04
Injury	8.19 (10.43)	4.44 (10.98)	2.88	.00
<b>PTSD</b>	<i>n</i> = 41 (46.6%)	<i>n</i> = 47		
Psychological Aggression	59.12 (41.44)	33.95 (30.08)	2.22	.02
Physical Aggression	34.58 (45.49)	16.14 (35.33)	2.51	.01
Sexual Aggression	9.75 (16.25)	6.55 (19.74)	1.85	.06
Injury	8.92 (12.49)	3.40 (8.53)	3.19	.00
<b>GAD</b>	<i>n</i> = 39 (44.3%)	<i>n</i> = 49		
Psychological Aggression	58.56 (37.67)	35.42 (34.97)	2.70	.00
Physical Aggression	31.17 (46.09)	19.61 (36.52)	1.29	.19
Sexual Aggression	11.51 (24.41)	5.28 (10.43)	0.85	.39
Injury	8.02 (12.32)	4.34 (9.35)	2.16	.03
<b>Panic Disorder</b>	<i>n</i> = 31 (35.2%)	<i>n</i> = 57		
Psychological Aggression	53.48 (41.44)	41.43 (35.33)	1.08	.28
Physical Aggression	29.45 (49.56)	22.17 (36.08)	0.22	.82
Sexual Aggression	15.70 (26.47)	3.87 (9.33)	3.24	.00
Injury	6.87 (12.46)	5.49 (9.96)	.032	.74
<b>Social Phobia</b>	<i>n</i> = 32 (36.4%)	<i>n</i> = 56		
Psychological Aggression	51.96 (36.57)	42.08 (38.33)	1.49	.13
Physical Aggression	27.96 (39.10)	22.89 (42.58)	1.04	.30
Sexual Aggression	11.31 (24.50)	6.17 (13.19)	1.31	.19
Injury	6.46 (10.23)	5.69 (11.28)	0.78	.43
<b>Alcohol Disorder</b>	<i>n</i> = 28 (31.8%)	<i>n</i> = 60		
Psychological Aggression	50.92 (38.12)	43.23 (37.71)	1.18	.23
Physical Aggression	27.00 (46.84)	23.68 (38.66)	0.50	.61
Sexual Aggression	6.03 (10.01)	8.98 (20.93)	0.24	.81
Injury	7.82 (12.76)	5.11 (9.85)	1.45	.14
<b>Drug Disorder</b>	<i>n</i> = 21 (23.9%)	<i>n</i> = 67		
Psychological Aggression	57.19 (38.75)	42.07 (37.04)	1.72	.08
Physical Aggression	34.66 (51.53)	21.62 (37.30)	1.68	.09
Sexual Aggression	17.61 (29.16)	5.04 (11.79)	2.97	.00
Injury	8.85 (14.40)	5.07 (9.44)	1.50	.13
<b>BPD</b>	<i>n</i> = 26 (29.5%)	<i>n</i> = 56		
Psychological Aggression	64.76 (37.77)	38.35 (36.25)	2.78	.00
Physical Aggression	34.42 (43.35)	22.32 (41.64)	1.79	.07
Sexual Aggression	18.00 (29.27)	3.83 (7.54)	2.93	.00

	<b>Diagnosis Group</b> <i>M (SD)</i>	<b>Non-Diagnosis Group</b> <i>M (SD)</i>	<i>t</i>	<i>p</i>
Injury	9.46 (13.22)	4.66 (9.77)	2.61	.01
<b>ASPD</b>	<i>n</i> = 35 (39.8%)	<i>n</i> = 45		
Psychological Aggression	65.31 (42.57)	32.62 (28.87)	2.99	.00
Physical Aggression	35.60 (47.90)	18.24 (36.24)	2.07	.04
Sexual Aggression	11.37 (24.86)	5.11 (9.58)	0.84	.40
Injury	8.40 (12.29)	3.86 (8.74)	2.26	.02

*Note:* PTSD = Posttraumatic stress disorder; GAD = Generalized anxiety disorder; BDP = Borderline Personality Disorder; ASPD = Antisocial Personality Disorder. Percentages are number of women meeting probably diagnostic criteria for each disorder.