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The Prevalence of Mental Health Disorders in a Community Sample of Female Victims of Intimate Partner Violence

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Abstract

Intimate partner violence (IPV) is a serious, devastating, and prevalent problem. IPV places women at risk for negative health consequences, including increased mental health disorders. The majority of research to date has focused on mental health disorders among women in domestic violence shelters, and research is needed that examines mental health disorders among a broader range of women experiencing IPV. Therefore, the present study examined the prevalence of posttraumatic stress disorder (PTSD), depression, and substance abuse disorders in a community sample of IPV victims ($N = 94$) using diagnostic interviews. Results showed that the majority of women met diagnostic criteria for a mental health disorder, with PTSD being the most common mental health disorder. Furthermore, psychological abuse was a significant predictor of both PTSD and depression, whereas physical aggression did not predict these outcomes. Implications of these findings for treatment and intervention work with battered women are discussed.

Keywords

Domestic violence; intimate partner violence; prevalence; mental health disorders

Intimate partner violence (IPV), or acts of physical, psychological and sexual aggression directed towards a romantic partner, constitutes a serious societal problem with significant prevalence rates. Research demonstrates that as many as 20% to 40% of women report experiencing physical or sexual IPV (Tjaden & Thoennes, 2000) and upwards of 90% experience psychological IPV each year (Lawrence, Yoon, Langer, & Ro, 2009). IPV can result in complicated repercussions for victims, both psychologically and physically (Bybee & Sullivan, 2005; Tjaden & Thoennes, 2000). Women who are victims of IPV are at an increased risk for developing mental health problems, such as posttraumatic stress disorder (PTSD) (Golding, 1999; Johnson & Zlotnick, 2009), depression (Anderson, Saunders, Mieko, Bybee, & Sullivan, 2005; Golding, 1999; Mechanic, Weaver, & Resick, 2008), and substance use disorders (Helfrich, Fujiura, & Rutkowski-Kmitta, 2008).

Although the psychological consequences of IPV can be broad, the most common disorders are PTSD and depression (Golding, 1999; Marais, de Villiers, Moller, & Stein, 1999; Woods, 2005). Moreover, research indicates that females who are victims of IPV are more likely to engage in substance use in an attempt to cope with depression and trauma-related symptoms (Testa & Leonard, 2001). Research further suggests that mental health problems, including PTSD, depression, and substance abuse/dependence, may increase the chances that women will remain with their abusive partners and, in turn, increase risk for re-abuse (Bell & Goodman, 2001). To date, much of the research examining mental health disorders within IPV victims has focused exclusively on shelter samples (e.g., Helfrich et al., 2008) and/or used self-report instruments for diagnostic purposes (Golding, 1999). Thus, in order to gain a more comprehensive understanding of mental health problems among women exposed to IPV, research examining community samples of women that employs structured diagnostic interviews is needed.

Posttraumatic Stress Disorder

PTSD arises from exposure to violent and traumatic experiences, including experiences with IPV. The symptoms of PTSD include a) persistent re-experiencing of the traumatic event, b) persistent avoidance of stimuli associated with the traumatic event and numbing of emotions, and c) persistent symptoms of increased physiological arousal (American Psychiatric Association, 2000). Research indicates that PTSD is experienced by 51% to 75% of women who are victims of IPV, depending on the instrument used to examine PTSD (e.g., checklists, clinical interviews; Golding, 1999; Woods, 2000). Furthermore, IPV victims report significant levels of mild to severe PTSD (55%-92%) (Gorde, Helfrich, & Finlayson, 2004; Humphreys, Lee, Neylan, & Marmar, 2001), rates much higher than those found in the general population or women (i.e., 10.4%). Research also indicates that there is a positive association between intensity of victimization and severity of symptoms (Scott, 2007). That is, the more severe the violence towards the victim, the more severe the PTSD symptoms are the more likely that their symptoms will garner a diagnosis of PTSD (Woods, 2000).

Depression

Similar to the high prevalence of PTSD among women who experience IPV, high rates of depression have been noted in IPV populations. Depression has been diagnosed in 35% to 70% of women who are victimized by IPV (Gerlock, 1999; Peterson, Gazmararian, & Clark, 2001; Stein & Kennedy, 2001) compared to 12% of women in the general population (National Institute of Mental Health, 2000). Furthermore, depression and PTSD are highly associated with each other. In fact, Nixon, Resick, and Nishith (2004) found that in a study of PTSD and depression prevalence within a domestic violence shelter sample, 75% of IPV victims were diagnosed with PTSD and 54% diagnosed with depression. In addition to the severe impact of functioning on those with PTSD, depression can compromise women's ability to establish and maintain relationships, contributing to social isolation and decreased access to social support (Carlson, McNutt, Choi, & Rose, 2002).

Substance Abuse/Dependence

Substance abuse/dependence has been shown to be a significant problem among IPV victims. White and Chen (2002) reported a significant relationship between alcohol use and the experience of IPV among young married women. Similarly, Testa, Livingston, and Leonard (2003) found an association between women's use of hard drugs and an increase in the likelihood of experiencing IPV over the subsequent 12 months in a community sample of young women. A study by Lipsky and colleagues (2005) demonstrated that 13.5% of IPV victims were alcohol dependent in comparison with 1.4% in non-victims. Similarly, 22.8% of IPV victims used illicit drugs within the past 12 months in comparison to 2.8% in non-IPV women. IPV victims suffering from PTSD and depressive symptoms often turn to self-medicating tactics in order to cope with the negative cognitive, behavioral, and affective features of these disorders (Fowler, 2008). Specifically, the desire to avoid memories associated with the trauma often leads to coping through alcohol and recreational drug use (Testa et al., 2001). Utilizing substances as a means of coping may impair IPV victim's ability to adequately process the specifics of her relationship, including her assessment of her level of risk for future abuse (Cattaneo, 2007).

Ethnic Differences in Mental Health

IPV does not discriminate between different ethnicities. In fact, research suggests that Caucasian and African American women experience similar rates of IPV (e.g., Tjaden & Thoennes, 2000). However, there is research to suggest that Caucasian and African

American victims of IPV may have different rates of mental health disorders. For example, using a sample of women who experienced IPV victimization, Lilly and Graham-Bermann (2009) found that Caucasian women exhibited more PTSD symptoms than African American women. A study conducted by Wright, Perez, and Johnson (2010) were consistent with these findings, and their findings suggested that factors of resiliency and empowerment may play a role in lesser endorsement of PTSD among African-American IPV victims. However, Lilly and colleagues (2009) found that, although there was a disparity between ethnicities regarding PTSD, Caucasian women and African American women experienced similar rates of depression. Unfortunately, we are unaware of research that has examined ethnic differences in substance use (alcohol and drug) disorders among women who have experienced IPV. Knowing whether rates of substance use disorders are similar or different across Caucasian and African American victims of IPV may help elucidate the treatment and intervention strategies that may be most effective across ethnic groups.

Types of IPV and Mental Health

Although it is well established that physical and sexual aggression are associated with increased mental health problems (e.g., Mechanic et al., 2008), recent research has suggested that psychological abuse is a significant predictor of mental health symptoms among victims of IPV. Moreover, research has suggested that the effects of psychological abuse can be even more damaging than the effects of physical abuse (O'Leary, 1999). In fact, research supports the notion that psychological abuse is implicated in the development of PTSD in domestic violence victims even after controlling for the effects of physical victimization (Street & Arias, 2001). Furthermore, Sackett and Saunders (1999) demonstrated that psychological abuse significantly contributes to depression, leading to a lowered sense of self-worth and self-esteem. Mechanic and colleagues (2008) also found that psychological abuse was predictive of PTSD diagnosis and depression. Thus, research that examines mental health problems among victims of IPV should take into consideration the effects of different types of IPV victimization.

Current Study

The current study examined the prevalence of mental health disorders in a community sample of women who had been victimized by, specifically posttraumatic stress disorder (PTSD), depression, and substance (alcohol and drug) abuse and dependence. To our knowledge, this is the first study to examine the prevalence of mental health disorders within a non-shelter community sample of IPV victims using clinically administered diagnostic interviews to assess these disorders. Based on previous research (e.g., Golding, 1999; Helfrich et al., 2008), we expected PTSD to be the most common mental health disorder diagnosed, followed by depression, alcohol use disorders, and drug use disorders. We also expected Caucasian women to have greater rates of PTSD than African American women, but not greater rates of depression or substance use.

Method

Procedures

Women were solicited through flyers in a large Southeastern city in the United States. The flyers were placed in a wide range of public venues in order to recruit women, including local churches, colleges, the YWCA, and the local courthouse. The flyers indicated that women were being sought for participation in "The Women's Health Study." Prospective female participants were instructed to call the research lab for further information on qualifications for the study. Eligibility was determined based on age (i.e., 18 years or older), relationship status (i.e., in a current romantic relationship or a relatively recent separation,

up to 6 weeks prior), and an experience of at least one act of physical abuse by a romantic partner during the previous 6 months. Prospective participants were assessed for psychical victimization using four items from the Revised Conflict Tactics Scale (CTS2; Straus, Hamby, McCoy, & Sugarman, 1996) (i.e., “having something thrown at you”, “pushed, grabbed, or shoved you”, “hit [or tried] to hit you”, and “hit or tried to hit you with something hard”).

Each phase of the study, including the recruitment, initial screening for participation, and assessment, was completed by clinical psychology doctoral students under the supervision of a Ph.D. clinical psychologist. As informed by the work of Sullivan and Bybee (2005), the recruitment procedure followed a method that ensured the utmost safety of the women, including assuring the participants were in a safe place to answer questions related to their abuse experience when being screened over the phone for eligibility. In addition to sensitivity, the flyers adhered to a recruitment model specific to women issues (i.e., “Women’s Health Study”) instead of domestic violence in order to protect participants. The participants were given flexibility to decide a convenient time for their participation, provided with transportation to and from their homes (if needed), and provided childcare services (if needed). Participants first completed an informed consent and then completed diagnostic interviews (discussed below) administered by doctoral level graduate students. After completing the interviews, participants completed a packet of self-report questionnaires (not included in the current study). The assessment took approximately three hours and participants were paid \$100.00 for their participation and provided with a list of referrals for domestic violence, substance use, and counseling.

Participants

A total of 101 women participated in the current study. The average age of women participating in the study was 32.85 years old ($SD = 9.52$). The sample was primarily non-Hispanic Caucasian (61.4%) and African American in ethnicity (31.7%). One participant endorsed each Native American, Indian/middle eastern, “mixed,” and, “other,” ethnicity. Three women did not indicate their race and were excluded from analyses. Only Caucasian and African-American participants ($n = 94$) were included in subsequent analysis, as the small number of other ethnic identities would preclude the examination of potential ethnic differences. At the time of the study the majority of women were unemployed (61.7%), followed by receiving disability benefits (14.9%), employed full-time (12.9%), and employed part-time (9.6%). Educationally, 26.6 of women had a high school degree, followed by some high school education (25.5%), some college education (23.4%), technical school degree (13.8%), other education (5.3%), and bachelor's degree (3.1%). At the time of the study, slightly less than half of participants reported being single (42.5%), followed by those “separated” from their partner (26.6%), married (11.7%), engaged (8.5%), and divorced (5.3%). The mean length in months that women had been with their partner was 74.5 ($SD = 96.31$) and 31.7% of women were living with their partner at the time of the study. Among the 63 women who had children the average number was 2.46 ($SD = 1.24$).

Measures

Demographics—Participants responded to an 11-item questionnaire that assessed their age, ethnicity, employment status, education, relationship status, and number of children.

Intimate Partner Violence (IPV)—Women were instructed to indicate their frequency of psychological, physical, sexual, and injury victimization in their current romantic relationship (or recently separated partnership) during the previous six months using the Revised Conflict Tactics Scales (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). Women were instructed to indicate the frequency with which each aggressive behavior

occurred using a 6-point scale (0 = this never happened to me; 6 = happened more than 20 times). The CTS2 has been supported as both reliable and valid across a wide range of populations (Straus et al., 1996; Vega & O'Leary, 2007). Internal consistency for the CTS2 in the current study was .81 (psychological aggression), .91 (physical assault), .82 (sexual coercion), and .56 (injury victimization). All CTS2 subscales were log transformed prior to analyses to account for non-normality (i.e., positive skew) of data.

Posttraumatic Stress Disorder (PTSD)—The Clinician Administered Posttraumatic Stress Disorder Scale (CAPS) (Blake et al., 1995), a structured diagnostic interview, was used to assess current PTSD. Prior to the interview, women completed the Life Events Checklist (LEC; Gray, Litz, Hsu, & Lombardo, 2004), which contains a list of seventeen traumatic events (i.e., witnessed a fire, involved in an accident, etc.). Participants were asked to indicate if each event had happened to them, if they had witnessed it, or learned about it. The interviewers inquired about up to three of these events, asking participants to describe the first, worst, and most recent traumatic events (Blake et al., 1995). The frequency of participants' re-experiencing, avoidance, and arousal symptoms were rated on 5-point scales. If a particular symptom was endorsed women were then asked how frequently each symptom occurred (i.e., once in the past month, twice in the past month, several times in the past month, or almost every day for the past month). The severity of each symptom was then rated on a 4-point scale (i.e., from mild to extreme). For participants to receive a diagnosis of PTSD, all DSM-IV-TR criteria, including 1 month duration of symptoms, was required. The CAPS has demonstrated excellent validity and reliability across studies and samples (Weathers, Keane, & Davidson, 2001).

Depression and Substance Abuse/Dependence—The Structured Clinical Interview for DSM-IV (SCID) (First, Spitzer, Gibbon & Williams, 2002) was used to assess current major depressive disorder, alcohol/drug abuse, and alcohol/drug dependence. For major depressive disorder, all participants were asked if each of the 9 DSM-IV-TR symptoms were present in the past month (i.e., feeling down for at least two weeks, loss of interest, and/or change in appetite). For alcohol/drug abuse and dependence, women were asked if the DSM-IV-TR symptoms for each respective disorder were present in the past month. Representative criteria for alcohol/drug abuse included repeated failure to meet major role obligations due to substance use and continued use of a substance in physically hazardous conditions. Criteria for alcohol/drug dependence included marked increase in amount of a substance used to produce desired effects, persistent desire quit without success, and/or characteristic withdrawal. The validity and reliability of the SCID for diagnostic purposes has been shown to be good across populations, including IPV victims (Nixon et al., 2004).

Results

Analyses for the current study were conducted using SPSS 16.0. Results from the CTS2 showed that women experienced frequent IPV victimization in the previous 6 months. Women reported high levels of physical ($M = 62.42$, $SD = 64.76$), psychological ($M = 65.99$, $SD = 46.45$), sexual ($M = 23.30$, $SD = 35.79$), and injury ($M = 15.26$, $SD = 19.37$) victimization. Results showed that 57.4% of the overall sample met criteria for PTSD while 56.4% met criteria for depression. Furthermore, the rate of alcohol dependence was 18.1% and alcohol abuse was 3.2%. The rate of substance dependence was 6.4% and substance abuse was 6.4% (note that these were different women for substance dependence and substance abuse). Of the participants who met criteria for a drug disorder, it was determined that all women engaged in cannabis use, followed by opioids (50%), hallucinogens (33%), sedatives (17%), and stimulants (17%). Many women (45.7%) met criteria for at least two disorders, with few meeting criteria for 3 (10.6%) or 4 disorders (3.2%) simultaneously. Rates of common co-morbid disorders are listed in Table 1. The most common co-morbid

disorders were PTSD and depression (45%), depression and substance dependence (12.7%), and PTSD and alcohol dependence (11.7%).

Bivariate correlations among study variables are presented in Table 2. Results indicated that psychological, sexual, and injury victimization were associated with a PTSD diagnosis. Furthermore, psychological aggression was the only type of IPV victimization that was associated with a depressive diagnosis. Similarly, PTSD was positively associated with depression. Depression was also positively associated with drug dependence, and drug dependence was correlated with alcohol dependence.

We next examined differences between ethnic groups in frequency of violence victimization and rates of mental health disorders. *T* tests were conducted to examine differences in frequency of violence victimization and chi-square analyses were conducted to examine differences in mental health disorders. There were no differences between ethnic groups in frequency of violence victimization (see Table 3). Analyses showed that Caucasian women had a higher rate of PTSD in comparison to African American women, $\chi^2(1) = 10.565, p < .01$. Additionally, Caucasian women were more likely to have a depression diagnosis than African American women, $\chi^2(1) = 4.899, p < .05$. Similarly, there was no significant differences in the rates of alcohol dependence $\chi^2(1) = .014, p > .05$, alcohol abuse, $\chi^2(1) = 1.599, p > .05$, substance dependence $\chi^2(1) = .001, p > .05$, or substance abuse $\chi^2(1) = .862, p > .05$, between ethnic groups. The percentage of Caucasian and African American women meeting diagnostic criteria for each disorder is displayed in Table 3.

Discussion

The current study examined the prevalence of PTSD, depression, and substance use disorders in a community sample of female victims of IPV. Expanding upon previous research, the current study utilized structured diagnostic interviews to assess for mental health disorders, instead of relying on self-report measures as is commonly employed in research with female victims of IPV (Golding, 1999). The current study did not restrict the sample of IPV victims to domestic violence shelter residents, instead using a community sample of women, expanding upon to previous research on mental health disorders among female victims of IPV, which has largely focused on women residing in domestic violence shelters (e.g., Helfrich et al., 2008).

Results of our study showed high rates of PTSD, depression, and substance abuse/dependence among our community sample of women who had experienced IPV. We found that within a broad community sample of IPV victims, a large percentage of the sample met criteria for PTSD (57.4%) as well as depression (56.4%). Similarly, a significant portion of the sample met criteria for alcohol dependence (18.1%) as well as drug dependence (6.4%). Moreover, almost half of our sample met diagnostic criteria for two disorders. Regarding domestic violence shelter populations, research shows that PTSD in sheltered domestic violence victims ranges from 51-75% (Golding, 1999; Street et al., 2001), while depression ranges from 35-70% (Golding, 1999; O'Leary, 1999), and substance abuse disorders is estimated at approximately 10% (Helfrich et al., 2008). General population estimates of mental health disorders is 10% (PTSD), 7% (depression), 5% (alcohol abuse or dependence), and 2% (drug abuse or dependence) (American Psychiatric Association, 2000; Kessler, 1994). Taken together, our findings demonstrate that our community sample of women who had experienced IPV report higher rates of mental health disorders than found in the general population, and comparable rates of mental health disorders as women residing in domestic violence shelters. These findings are consistent with Tolman and Rosen (2001) who estimated that IPV victims were at least twice as likely to show signs of mental illness when compared with the general population.

Our results also showed that Caucasian women had higher rates of PTSD and depression than African American women (see Table 3). This is consistent with previous research showing higher rates of PTSD among Caucasian IPV victims than African-American IPV victims (Lilly & Graham-Berman, 2009). However, inconsistent with the findings of Lilly and colleagues (2009), our findings showed that Caucasian women also had higher rates of depression than African American women. Finally, there were no significant differences found between Caucasian and African-American domestic violence victims regarding substance use disorders or in frequency of violence victimization. There are a number of possible explanations for why Caucasian women had higher rates of PTSD and depression than their African American counterparts. For instance, African American women often report greater satisfaction with and closeness to individuals who provide them with social support (e.g., Keith, Kim, & Schafer, 2000), and increased social support is associated with decreased rates of mental health disorders (Lakey, 2010). Additionally, African American women often turn to religious/spiritual methods of coping, even with IPV, and this method of coping is often associated with less mental health problems (Mitchell et al., 2006). African American women may have more resilience to developing mental health problems than Caucasian women due to the above support and coping mechanisms. Although these are possible reasons for why African American women may have lower rates of PTSD and depression than their Caucasian counterparts, these are empirical questions that remain warrant investigation.

Our findings were also consistent with previous research showing that psychological abuse may be as damaging, if not more damaging, than physical and sexual victimization. For instance, our results showed that increased frequency of psychological abuse was associated with increased PTSD and depression. Physical aggression was unrelated to these mental health problems. These findings, in conjunction with previous research on psychological abuse (e.g., O'Leary, 1999; Street & Arias, 2001) indicates that researchers and clinicians need to take into consideration the detrimental impact that psychological abuse can have on victims. For instance, research demonstrates that women who experience IPV often rate psychological abuse as more damaging than physical abuse (Follingstad, Rutledge, Berg, Hause, & Polek, 1990). Intervention and treatment programs for individuals who experience IPV may need to focus their efforts on reducing the negative consequences of sustaining psychological abuse.

Clinical Implications

Findings from the current study may have important clinical implications for individuals who work with women who experience IPV. First, our results speak to the importance of considering the prevalence of mental health disorders within a community sample of IPV victims. Specifically, manifestations of PTSD and depression can create barriers to treatment, including inconsistency with treatment due to heightened symptoms of avoidance present in PTSD and feelings of hopelessness present in depression (Brush, 2000). PTSD, depression, and substance abuse/dependence can also create difficulty for women to see alternatives to their abusive relationships, possibly due to loss of resources (Hopfoll et al., 2003). The decision to terminate an abusive relationship is personal, subjective, and heavily dependent upon tangled ecological layers surrounding a domestic violence victim. However, due to possible risk of increased violence over time, some advocates and researchers view termination as a vital action for preventing further abuse (Raghavan, Swan, Snow, & Mazure, 2005). Recognizing that mental health disorders may impact victims' decision to stay or leave their abusive relationship will be important for individuals who work with IPV victims.

Cognitive-behavioral treatments for individuals experiencing PTSD and depression are found to be the most efficacious interventions in the vast majority of clinical populations

(Foa et al., 2005; Iverson, Gradus, Resick, Suvak, Smith, & Monson, 2011). However, individuals who experience IPV in particular experience additional stressors in addition to mental health problems, including immediate safety concerns, lack of social support, and concerns related to their children (Jones et al., 2001). Currently, only one treatment protocol has been developed and tested for victims of IPV with PTSD (Kubany et al., 2004). Kubany and colleagues (2002; 2004) developed cognitive-trauma therapy for battered women (CTT-BW), which incorporates several traditional cognitive-behavioral strategies for PTSD (e.g., stress management, psychoeducation, and exposure) and strategies specific for battered women (assertiveness skill building, ways of managing unwanted contacts with partners, self-advocacy, etc.). Results of CTT-BW have shown large and sustained reductions in PTSD and depression, as well as increases in self-esteem (Kubany et al., 2004). However, CTT-BW is best advised for women who are not currently involved in an abusive relationship, have no intention of returning to their abusive partner, have not been physically or sexually abused in the 30 days prior to treatment, and are not currently abusing alcohol or drugs (Kubany et al., 2004). Thus, while CTT-BW is a promising intervention approach for IPV victims who are no longer in an abusive relationship, specialized interventions for women who are experiencing ongoing abuse is needed.

One such intervention for women who are currently being abused, or are at risk for continued victimization, has been recently been developed by Johnson and Zlotnick (2009). This treatment, termed "HOPE", or Helping to Overcome PTSD through Empowerment, addresses the cognitive, behavioral, and interpersonal dysfunction associated with PTSD in women who have experienced IPV in a nine to twelve individual session treatment plan (Johnson & Zlotnick, 2009). The HOPE protocol was specifically designed for women who are currently residing in a domestic violence shelter and have ongoing safety concerns (e.g., risk of continued abuse), although this treatment could potentially be modified for women who are not currently in a domestic violence shelter. The HOPE protocol focuses on issues of safety, trust, intimacy, power/control, and establishing boundaries, as well as how one's cultural background may influence experiences of abuse and PTSD. Additionally, HOPE focuses on reducing PTSD through cognitive strategies, relaxation, and coping skills, but does not use exposure techniques because many PTSD symptoms experienced by IPV victims represent fear responses to the threat of continued victimization, and desensitization may place women at risk for future victimization (Johnson & Zlotnick, 2009). The HOPE protocol may represent a unique treatment for women who are still involved with, or may return to, their abusive partner, although research is needed to determine whether this treatment will be effective for community IPV victims.

Findings from the current study also speak to the importance of assessing women who have experienced IPV for substance use disorders. Since research consistently indicates that those experiencing trauma and/or depression utilize self-medicating techniques in order to cope (Testa & Leonard, 2001), it is important to fully assess victims, either for individual treatment or group intervention work, for issues with substance abuse/dependence. Alcohol and drug abuse impairs treatment of psychological disorders by hindering the effective nature of treatment, possibly numbing the patient's affective experience and negating the benefits of treatment. Thus, in order for victims to receive the utmost psychological care, it is important for clinicians to be aware of the current struggles of the client, including co-morbid substance abuse/dependence disorders. Research is needed to determine the intervention approaches that may be most beneficial in reducing substance use among women who have experienced IPV.

Limitations and Directions for Future Research

When interpreting the findings from the current study it is important to consider its limitations. First, although the participants were recruited from non-shelter locations, the

predominant recruitment venues consisted of locations in which women who have experienced IPV were highly prevalent (i.e., the local court and a YWCA offering support groups for battered women from the community). Thus, it is plausible that a more diverse group of female IPV victims could have been recruited. Due to the venues of recruitment, the women used in the current study represent a frequently abused sample of women, which limits the generalizability of the findings to women who have experienced less frequent abuse. Women who volunteered for a “women's health study” may also have had more severe health problems than women who would not volunteer to participate for this type of study. By extending recruitment to a wider scope of individuals, such as those from a higher socioeconomic status or various ethnic backgrounds, the findings could have provided richer and more comprehensive information regarding the wide spectrum of mental health disorders among women who experience IPV. In addition, our study only examined four possible mental health disorders, and future research would benefit from examining other disorders among women who have experienced IPV (e.g., panic disorder, generalized anxiety disorder, personality disorders, etc.). The cross-sectional nature of the current study precludes the determination of causality among study variables. Future research would benefit from examining the longitudinal effects of IPV on mental health diagnoses while employing structured diagnostic interviews.

In summary, results from the current study showed high rates of PTSD, depression, and substance use disorders within a community sample of women who had experienced IPV. These findings speak to the importance of individuals working with victims of IPV in the community to determine the mental health problems they are experiencing, as well as how these disorders are impacting their ability to remain safe from future abuse. Future research would benefit from examining additional mental health disorders among victims of IPV, as well as whether disorders vary among other ethnic groups (e.g., Hispanic, Asian, etc.).

References

- American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 5th ed.. Washington, D.C.: 2000.
- Anderson D, Saunders D, Yoshihama M, Bybee D, Sullivan C. Long-term trends in depression among women separated from abusive partners. *Violence Against Women*. 2003; 9:807–838.
- Bell ME, Goodman LA. Supporting women involved with the court system: An evaluation of a law school-based advocacy intervention. *Violence Against Women*. 2001; 7:1377–1401.
- Blake D, Weathers F, Nagy L, Kaloupek D, Gusman F, Charney D, Keane T. The development of a clinician-administered ptsd scale. *Journal of Traumatic Stress*. 1995; 8:75–90. [PubMed: 7712061]
- Brush LD. Battering, traumatic stress, and welfare-to-work transition. *Violence Against Women*. 2000; 6:1039–1065.
- Bybee D, Sullivan C. Predicting re-victimization of battered women 3 years after exiting a shelter program. *American Journal of Community Psychology*. 2005; 36:85–97. [PubMed: 16134046]
- Carlson B, McNutt L, Choi D, Rose I. Intimate partner abuse and mental health: the role of social support and other protective factors. *Violence Against Women*. 2002; 8:720–745.
- Cattaneo LB, Bell ME, Goodman LA, Dutton MA. Intimate partner violence victims' accuracy in assessing their risk of re-abuse. *Journal of Family Violence*. 2007; 22:429–440.
- First, M.; Spitzer, R.; Gibbon, M.; Williams, J. Structured clinical interview for dsm-iv axis I disorders, research version, non-patient edition (SCID-I/NP). Biometrics Research, New York State Psychiatric Institute; New York: 2002.
- Foa EB, Hembree EA, Cahill SP, Rauch SAM, Riggs DS, Feeny NC, Yadin E. Randomized trial of prolonged exposure for posttraumatic stress disorder with and without cognitive restructuring: Outcome at academic and community. *Journal of Consulting and Clinical Psychology*. 2005; 73:953–964. [PubMed: 16287395]

- Follingstad DR, Rutledge LL, Berg BJ, Hause ES, Polek DS. The role of emotional abuse in physically abusive relationships. *Journal of Family Violence*. 1990; 5:107–120.
- Fowler D. Screening for co-occurring intimate partner abuse and substance abuse: challenges across service delivery systems. *Journal of Social Work Practice in the Addictions*. 2009; 9:318–229.
- Gerlock. Health impact of domestic violence. *Issues in mental health nursing*. 1999; 20:373–385. [PubMed: 10624238]
- Golding JM. Intimate partner violence as a risk factor for mental disorders: A meta-analysis. *Journal of Family Violence*. 1999; 14:99–132.
- Gorde M, Helfrich C, Finlayson M. Trauma symptoms and life skill needs of domestic violence victims. *Journal of Interpersonal Violence*. 2004; 19:691–708. [PubMed: 15140319]
- Grant B, Stinson F, Dawson D, Chou P, Dufour M, Compton W, Pickering R, Kaplan K. Prevalence and co-occurrence of substance use disorders and independent mood and anxiety disorders: results from the national epidemiologic survey on alcohol and related conditions. *Archives of General Psychiatry*. 2004; 61:807–816. [PubMed: 15289279]
- Gray M, Litz B, Hsu J, Lombardo T. Psychometric Properties of the Life Events Checklist. Assessment. 2004; 11:330–341. [PubMed: 15486169]
- Helfrich C, Fujiura G, Rutowski-Kmitta V. Mental health disorders and functioning of women in domestic violence shelters. *Journal of Interpersonal Violence*. 2008; 23:437–453. [PubMed: 18252937]
- Hobfoll SE, Johnson RJ, Ennis N, Jackson AP. Resource loss, resource gain, and emotional outcomes among inner city women. *Journal of Personality and Social Psychology*. 2003; 84:632–643. [PubMed: 12635922]
- Humphreys J, Lee K, Neylan T, Marmar C. Psychological and physical distress of sheltered battered women. *Health Care for Women International*. 2001; 22:401–414. [PubMed: 11813787]
- Kessler RC. The national comorbidity survey of the United States. *International Review of Psychiatry*. 1994; 6:365–376.
- Iverson K, Gradus J, Resick P, Suvak M, Smith K, Monson C. Cognitive-behavioral therapy for PTSD and depression symptoms reduces risk for future intimate partner violence among interpersonal trauma survivors. *Journal of Consulting and Clinical Psychology*. 2011; 79:193–202. [PubMed: 21341889]
- Johnson D, Zlotnick C. HOPE for battered women with PTSD in domestic violence shelters. *Professional Psychology: Research and Practice*. 2009; 40:234–241.
- Jones L, Hughes M, Unterstaller U. Post-traumatic stress disorder (PTSD) in victims of domestic violence: A review of the research. *Trauma, Violence, and Abuse*. 2001; 2:99–119.
- Keith PM, Kim S, Schafer RB. Informal ties of the unmarried in middle and later life: Who has them and who does not? *Sociological Spectrum*. 2000; 20:221–238.
- Kessler RC, Chiu WT, Demler O, Walters EE. Prevalence, severity, and comorbidity of the 12-month DSM-IV disorders in the national comorbidity survey replication. *Archives of General Psychiatry*. 2005; 62:617–627. [PubMed: 15939839]
- Kubany ES, Hill EE, Owens JA, Iannce-Spencer C, McCaig MA, Tremayne KJ, Williams P. Cognitive trauma therapy for battered women with PTSD (CTT-BW). *Journal of Consulting and Clinical Psychology*. 2004; 72:3–18. [PubMed: 14756610]
- Lakey, B. Social support: Basic research and new strategies for intervention.. In: Maddux, JE.; Tangney, JP., editors. *Social Psychological Foundations of Clinical Psychology*. Guildford; NY: 2010. p. 177-194.
- Lee R, Thompson V, Mechanic M. Intimate partner violence and women of color: a call for innovations. *American Journal of Public Health*. 2002; 92:530–534. [PubMed: 11919045]
- Lilly M, Graham-Bermann S. Ethnicity and risk for symptoms of posttraumatic stress following intimate partner violence: prevalence and predictors in european american and african american women. *Journal of Interpersonal Violence*. 2009; 24:3–19. [PubMed: 18299418]
- Lipsky S, Caetano R, Field C, Larkin G. Psychosocial and substance-use risk factors for intimate partner violence. *Drug and Alcohol Dependence*. 2005; 78(4):39–47. [PubMed: 15769556]

- Marais A, de Villiers P, Moller A, Stein D. Domestic violence in patients visiting general practitioners--prevalence, phenomenology, and association with psychopathology. *Journal of Affective Disorders*. 2004; 82:315–320. [PubMed: 15488264]
- Mechanic M, Weaver T, Resick P. Mental health consequences of intimate partner abuse: a multidimensional assessment of four different forms of abuse. *Violence Against Women*. 2008; 14:634–654. [PubMed: 18535306]
- Mitchell MD, Hargrove GL, Collins MH, Thompson MP, Reddick TL, Kaslow ND. Coping variables that mediate the relation between intimate partner violence and mental health outcomes among low-income, African American women. *Journal of Clinical Psychology*. 2006; 62:1503–1520. [PubMed: 16897697]
- Nixon R, Resick P, Nishith P. An exploration of comorbid depression among female victims of intimate partner violence with posttraumatic stress disorder. *Journal of Affective Disorders*. 2004; 82:315–320. [PubMed: 15488264]
- O'Leary K. Psychological abuse: a variable deserving critical attention in domestic violence. *Violence and Victims*. 1999; 14(1):3–23. [PubMed: 10397623]
- Petersen R, Gazmararian J, Clark K. Partner violence: implications for health and community settings. *Women's Health Issues*. 2001:116–125. [PubMed: 11275515]
- Raghavan C, Swan S, Snow D, Mazure C. The mediational role of relationship efficacy and resource utilization in the link between physical and psychological abuse and relationship termination. *Violence Against Women*. 2005; 11(1):65–88. [PubMed: 16043541]
- Sackett L, Saunders D. The impact of different forms of psychological abuse on battered women. *Violence and Victims*. 1999; 14(1):1–12.
- Scott ST. Multiple traumatic experiences and the development of posttraumatic stress disorder. *Journal of Interpersonal Violence*. 2007; 22:932–938. [PubMed: 17575070]
- Solomon SD, Johnson DM. Psychosocial treatment of posttraumatic stress disorder: A practice-friendly review of outcome research. *Journal of Clinical Psychology*. 2002; 58:947–959. [PubMed: 12115717]
- Stein M, Kennedy C. Major depressive and posttraumatic stress disorder comorbidity in female victims of intimate partner violence. *Journal of Affective Disorders*. 2001; 66:133–138. [PubMed: 11578665]
- Straus MA, Hamby SL, Boney-McCoy S, Sugarman DB. The revised conflict tactics scales (CTS2): Development and preliminary psychometric data. *Journal of Family Issues*. 1996; 17:283–316.
- Straus MA. Future research on gender symmetry in physical assaults on partners. *Violence Against Women*. 2006; 12:1086–1097. [PubMed: 17043370]
- Street A, Arias I. Psychological abuse and posttraumatic stress disorder in battered women: examining the roles of shame and guilt. *Violence and Victims*. 2001; 16(1):65–78. [PubMed: 11281225]
- Stuart G, Ramsey S, Moore T, Kahler C, Farrell L, Recupero P, Brown R. Marital violence, victimization, and perpetration among women substance abusers: a descriptive study. *Violence Against Women*. 2002; 8(8):934–95.
- Testa M, Leonard KE. The impact of marital aggression on women's psychological and marital functioning in a newlywed sample. *Journal of Family Violence*. 2001; 12(2):115–130.
- Testa M, Livingston J, Leonard K. Women's substance use and experiences of intimate partner violence: A longitudinal investigation among a community sample. *Addictive Behaviors*. 2003; 28:1649–1664. [PubMed: 14656551]
- Tjaden P, Thoennes N. Prevalence and consequences of male-to-female and female-to-male intimate partner violence as measured by the national violence against women survey. *Violence Against Women*. 2000; 6:142–161.
- Tolman RM, Rosen D. Domestic violence in the lives of welfare recipients: mental health, health and economic well-being. *Violence Against Women*. 2001; 7(2):141–158.
- Vega E, O'Leary D. Original article test–retest reliability of the revised conflict tactics scales (CTS2). *Journal of Family Violence*. 2007; 22(8):703–708.
- Weathers FW, Keane TM, Davidson JRT. Clinician-administered ptsd scale: A review of the first ten years of research. *Depression and Anxiety*. 2001; 13:132–156. [PubMed: 11387733]

- White HR, Chen PH. Problem drinking and intimate partner violence. *Journal of Studies on Alcohol*. 2002; 63:205–214. [PubMed: 12033697]
- Wright CV, Perez S, Johnson DM. The mediating role of empowerment for african american women experiencing intimate partner violence. *Psychological Trauma: Theory, Research, Practice, and Policy*. Sep 27.2010 :1–7.
- Woods SJ. Prevalence and patterns of posttraumatic stress disorder in abused and post-abused women. *Issues in Mental Health Nursing*. 2000; 21:309–324. [PubMed: 11075070]
- Woods SJ. Intimate partner violence and post-traumatic stress disorder symptoms in women: what we know and need to know. *Journal of Interpersonal Violence*. 2005; 20(4):394–402. [PubMed: 15722493]

Table 1

Co-occurrence of Mental Health Disorders among IPV Victims.

	<i>n</i>	% within disorder	
		PTSD	Depression
PTSD & Depression	43	79.6	81.1
PTSD & Alcohol Dep	11	PTSD	Alcohol Dep
		20.4	64.7
PTSD & Substance Dep	4	PTSD	Substance Dep
		7.4	6.7
PTSD & Alcohol Abuse	3	PTSD	Alcohol Abuse
		5.6	100
PTSD & Drug Abuse	5	PTSD	Drug Abuse
		9.3	83.3
Depression & Alcohol Dep	12	Depression	Alcohol Dep
		22.6	70.6
Depression & Substance Dep	6	Depression	Substance Dep
		11.3	100
Depression & Alcohol Abuse	2	Depression	Alcohol Abuse
		3.8	66.7
Depression & Substance Abuse	4	Depression	Substance Abuse
		7.5	66.7
Alcohol & Substance Dep	5	Alcohol Dep	Substance Dep
		29.4	83.3
Alcohol Dep & Substance Abuse	2	Alcohol Dep	Substance Abuse
		11.8	33.3

Note: Dep = Dependence

Table 2

Bivariate Correlations among Study Variables.

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Psychological Aggression	---	.68 ^{***}	.46 ^{***}	.50 ^{***}	.22 [*]	.28 ^{**}	-.07	.10	.02	-.05
2. Physical Assault		---	.54 ^{***}	.74 ^{***}	.17	.04	-.12	-.04	-.14	-.03
3. Sexual Coercion			---	.47 ^{***}	.31 ^{**}	.06	.15	.08	.08	.01
4. Injury Victimization				---	.23 [*]	.07	-.02	-.05	.04	.02
5. PTSD					---	.41 ^{***}	.06	.15	.04	.14
6. Depression						---	.13	.03	.23 [*]	.05
7. Alcohol Dependence							---	-.08	.44 ^{***}	.10
8. Alcohol Abuse								---	-.04	-.04
9. Drug Dependence									---	-.06
10. Drug Abuse										---

Note: PTSD = Posttraumatic Stress Disorder

* $p < .05$

** $p < .01$

*** $p < .001$

Table 3

Ethnic Differences among Study Variables

	Caucasian	African American	<i>p</i> value
	<i>n</i> = 62	<i>n</i> = 32	
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	
Physical Assault	61.54 (67.26)	71.27 (63.84)	.50
Psychological Aggression	70.38 (48.10)	62.48 (44.71)	.44
Sexual Coercion	23.23 (36.38)	28.17 (37.33)	.53
Injury Victimization	15.75 (20.62)	16.50 (18.42)	.86
PTSD	69%	34%	.01
Depression	65%	40%	.02
Alcohol Dependence	17%	19%	.90
Alcohol Abuse	4%	0%	.20
Drug Dependence	6%	6%	.97
Drug Abuse	8%	3%	.35