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Physical Assault Victimization and Coping Among Adults in Residential Substance Use Disorder Treatment

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Abstract

Many individuals with Substance Use Disorders (SUDs) have been the victims of violence and individuals with SUDs often exhibit coping skills deficits. The extent to which coping skills relate to victimization is unknown. This study evaluated the relationships between physical assault victimization types (i.e., only partner victimization, only non-partner victimization, or both partner and non-partner victimization) and emotion-focused, problem-focused, and avoidant coping among individuals in residential SUD treatment. More frequent use of problem-focused coping was associated with reduced odds of being victimized by partners and non-partners and more frequent use of avoidant coping was associated with increased odds of victimization across both partners and non-partners. These results highlight the potential value of assessing violence across relationship types and bolstering adaptive coping among individuals with SUDs.

Introduction

Violence victimization is a significant public health problem linked to many negative outcomes such as injury, aggression, poor physical health, emotional distress, and substance use, (e.g., Coker et al., 2002; Lilly & Graham-Bermann, 2010; Scarpa & Haden, 2006; Smith, Homish, Leonard, & Cornelius, 2012). According to crime statistics, approximately 12 out of every 1000 people were victims of criminal assault in the United States during 2010 (Bureau of Justice Statistics, 2011). National surveys indicate that the past-year prevalence of partner violence victimization is 5–12% among women and 6–10% among men (Caetano, Vaeth, & Ramisetty-Mikler, 2008; Smith, Homish, Leonard, & Cornelius, 2012).

Prior research suggests that substance use may play a role in physical assault victimization (Testa, 2004; Testa, Livingston, & Leonard, 2003) and that such victimization typically occurs more frequently among individuals with Substance Use Disorders (SUD) than in the general community (Lipsky & Caetano, 2008; Mericle & Havassy, 2008; Schneider, Burnette, Ilgen, & Timko, 2009; Stuart, O'Farrell, & Temple, 2009). For example, in samples recruited from outpatient and residential treatment centers, the prevalence of past-year partner physical assault victimization ranged from 54% to 65%, and the prevalence of past-year non-partner physical assault victimization ranged from 45% to 75% (Chermack, Murray, Walton, Booth, Wryobeck, & Blow, 2008; Chermack, Walton, Fuller & Blow, 2001; Murray, Chermack, Walton, Winters, Booth, & Blow, 2008). Prior research with SUD treatment samples has also found different patterns of substance use and associated problems depending on whether individuals were victimized by a partner only, by a non-partner only, or by both partners and non-partners (Chermack et al., 2009).

Contemporary theory and results from recent research suggest that individual factors such as demographics, alcohol/drug problem severity, and psychiatric factors are associated with victimization among substance users (e.g., Chermack et al., 2001; 2009; Coker et al., 2002; Mericle & Havassy, 2008; Schneider et al., 2009). In their conceptual model of violence severity, Chermack and colleagues (2009) propose that coping skills deficits are one such factor and researchers have begun to evaluate relationships between coping and different types of violence victimization (e.g., Kocot & Goodman, 2003; Krause et al., 2008; Sullivan et al., 2010). Prior research also suggests that coping styles vary across groups with different types of stressors (e.g., psychiatric, work stress, physical health) and with regard to severity of problems (Vitaliano et al., 1987; Vitaliano et al., 1990), thus it is plausible that coping styles may differ across individuals with different levels of physical assault victimization.

Coping refers to cognitive and/or behavioral strategies used to manage or control stressors that result in emotional distress (Folkman & Moskowitz, 2004; Pearlin & Schooler, 1978). Researchers have developed several models to distinguish subtypes of coping, although there tends to be overlap among the definitions and constructs (Skinner, Edge, Altman, & Sherwood, 2007). The present study evaluates emotion-focused, problem-focused, and avoidant coping in relation to physical assault victimization among patients in SUD treatment. Emotion-focused coping generally refers to efforts to regulate the emotions associated with the distress whereas problem-focused coping involves attempts to manage or resolve the problem causing the distress (Folkman, 1984; Folkman & Moskowitz, 2004) and may include approach-oriented strategies. Avoidant coping involves denying or withdrawing from the stressor (Roth & Cohen, 1986). In those treated for SUDs, greater use of action-oriented (e.g., problem-focused) coping and less use of avoidance have been linked to favorable treatment outcomes (Forys, McKellar, & Moos, 2007).

Coping styles, victimization, and substance use are likely to be inter-related and the relationships amongst these variables may be bi-directional. However, research focusing on coping and victimization among SUD treatment samples is lacking. Understanding these relationships may have implications for SUD treatment and also violence prevention in this population. Prior work with samples of female victims of partner violence consistently support links between more avoidant coping and increased frequency and severity of partner

violence victimization (Calvete, Corral, & Estevez, 2008; Canady & Babcock, 2009; Krause et al., 2008; Mitchell & Hodson, 1983; Sullivan, Schroeder, Dudley, & Dixon, 2010). Similarly, in a sample of pregnant Latina women, those who had experienced partner violence exhibited more use of avoidant coping than those who had not experienced partner violence (Rodriguez et al., 2010). Among women who reported a history of physical violence *toward* their partners, their victimization *by* their partners was positively related to use of avoidant strategies for coping with relationship stress (Swan & Sullivan, 2009; Sullivan et al., 2005). These investigations have generally not accounted for substance use in the analyses.

Findings regarding victimization and other types of coping are somewhat inconsistent. Among a sample of battered women from a domestic violence center, physical assault by partners was positively related to problem-focused efforts to cope with the assault (Kocot & Goodman, 2003). However, two other studies of women who experienced partner violence did not find significant relationships between problem-focused coping and victimization (Lilly & Graham-Bermann, 2010; Taft, Resick, Panuzio, Vogt, & Mechanic, 2007). Similarly, one study of women reported a positive correlation between emotion-focused coping and frequency of partner violence (Lilly & Graham-Bermann, 2010), but another study reported that the relationship between these two variables was non-significant (Taft et al., 2007). The inconsistent findings regarding these different types of coping may be due, at least in part, to the types of samples used, the context of the violence, the type of coping assessed, and/or the time periods measured.

Few studies of coping and victimization have involved mixed gender adult samples. In a study that compared men and women who were victims of partner violence to those who were victims of other violent crime, those involved in violent crime endorsed more use of avoidance coping than those who were victimized by a partner. However, there were no differences between groups on measures of emotion-focused and problem-focused coping (Green & Kane, 2009). Finally, in a sample of young adults recruited from college campuses, frequency of physical assault was associated with avoidant coping among young men (Hassan, Mallozzi, Dhingra, & Haden, 2011)

The studies reviewed above provide valuable information regarding the relationships between coping and victimization; however, such research conducted among individuals with SUDs is limited. Though substance use, coping, and physical assault victimization are likely inter-related, only two qualitative studies were identified that incorporated these three constructs. In a focus group study of women in a methadone program, some of the participants described using substances as a means of coping with the emotional and physical pain of partner abuse (Gilbert, El-Bassel, Rajah, Foleno, & Frye, 2001). Data from qualitative interviews with men who experienced violence perpetrated by male partners also suggests that some men used substances as a means of coping with the violence (Cruz & Peralta, 2001). However, neither of these studies reported on other types of coping or used quantitative measures to evaluate coping responses.

Prior work provides a useful foundation for understanding the relationships among coping and physical assault victimization; however, these results are limited in their application to

substance using populations. Furthermore, although large numbers of both men and women experience violence, especially among individuals with SUDs (e.g., Chermack, Murray, Walton, Booth, Wryobeck, & Blow, 2008; Chermack, Walton, Fuller & Blow, 2001; Murray, Chermack, Walton, Winters, Booth, & Blow, 2008), many studies focus solely on women's victimization by male intimate partners (e.g., Calvete, Corral, & Estevez, 2008; Canady & Babcock, 2009; Krause et al., 2008; Sullivan, Schroeder, Dudley, & Dixon, 2010) or on undifferentiated types of violence (Green & Kane, 2009; Hassan, Mallozzi, Dhingra, & Haden, 2011). With regard to coping, some investigations measured coping only as it pertains to relationship stress or partner physical assault (Sullivan et al., 2010; Taft, Resick, Panuzio, Vogt, & Mechanic, 2007) or did not measure multiple types coping (Kocot & Goodman, 2003; Rodriguez et al., 2010).

In summary, prior research, mostly conducted in female domestic violence samples, has found that more frequent use of avoidant coping is related to increased levels of victimization. Other types of coping (e.g., emotion-focused, problem-focused) have also been related to violence outcomes, but less consistently across studies. Furthermore, qualitative studies also suggest that substance use may serve as a method of coping with violence, perhaps as an attempt to regulate negative emotions associated with victimization. However, to our knowledge, no quantitative studies have simultaneously reported on the relationships between substance use, coping style, and physical assault victimization. Therefore, we sought to evaluate these relationships among a sample of both men and women entering a residential SUD treatment program; we examined whether general problem-focused, emotion-focused, and avoidant coping styles were related to physical assault by a partner only, by a non-partner only, or by both partners and non-partners. We hypothesized that more frequent avoidant and emotion-focused coping and less frequent problem-focused coping would be related to increased odds of physical assault victimization and that the strongest associations might occur among those who have been physically assaulted by both partners and non-partners.

Method

2.1 Procedure

From 2008–2009 men and women age 18 or older were recruited from a large residential substance abuse treatment facility in Waterford, Michigan. Research assistants made announcements (including eligibility criteria) about the present study at the treatment facility's morning meeting for all patients. During these announcements, patients were encouraged to attend screening sessions taking place on the hour each day, when they had free time in their regular treatment schedule. This recruitment method allowed us to screen a large number of patients without interfering with their treatment; however, this process does not allow for tracking refusals. When individuals presented to screening sessions they were provided with information about the study protocol, provided their written informed consent, and completed several self-report measures. Participants usually completed the surveys within 45 to 60 minutes and they were given a gift card valuing \$10 for their time. Individuals who met the following criteria were not eligible to participate: unable to speak or understand the English language, unable to provide a written informed consent, or the

research staff's observation of acute psychotic symptoms. No potential participants were found to be ineligible at screening. The research procedures were approved by human subjects research review committees at our university and at the study site.

2.2 Measures

The surveys used in this study included several self-report questionnaires measuring participants' demographics, substance use, coping, physical assault victimization, and general mental and physical health. We used the following measures for the present analyses.

2.2.1 Brief COPE—Individuals in this study completed the brief version of the COPE (Carver, 1997; Carver, Scheier, & Weintraub, 1989; Clark, Borman, Cropanzano, & James, 1995), which includes 28 items assessing how often participants use different coping strategies when they encounter stressful life events. For each of the 28 different items included on this measure, participants provided ratings using a four point Likert-type scale: 1 = "I don't do this at all," 2 = "I do this a little bit," 3 = "I do this a medium amount," and 4 = "I do this a lot."

For the present analyses, we grouped items from the Brief COPE into subscales reflecting three domains of coping styles. Following the structure used in previous research (Canady & Babcock, 2009; Haden & Scarpa, 2008; Hassan, Mallozzi, Dhingra, & Haden, 2011; Horwitz, Hill, & King, 2011; Wilson, Pritchard, & Revalee, 2005) we created three subscales reflecting *Emotion-Focused Coping* (using the 16 items from the substance abuse, emotional support, venting, positive reframing, humor, acceptance, religion, and self-blame subscales of the Brief COPE), *Problem-Focused Coping* (using the 6 items from the active coping, instrumental support, and planning subscales of the Brief COPE), and *Avoidant Coping* (using the 6 items from the distraction, denial, and behavioral disengagement subscales of the Brief COPE). Internal consistency coefficients for the three subscales were as follows: Emotion-Focused $\alpha = .76$, Problem-Focused $\alpha = .82$, and Avoidant $\alpha = .62$; however, we eliminated two items (i.e., "I turn to work or other activities to take my mind off things" and "I do something to think about it less, such as going to the movies, watching tv, reading, daydreaming, sleeping, or shopping.") from the Avoidant subscale which resulted in increased reliability ($\alpha = .70$). These coefficients are consistent with those (α 's ranging from .68 to .81 for the 3 subscales) reported by Canady & Babcock (2009). Furthermore, as recommended by Clark and Watson (1995), these subscales demonstrated moderate mean inter-item correlations (Emotion-Focused = .17, Problem-Focused = .43, and Avoidant = .37) supporting the unidimensionality of each of these three sub-scales.

We calculated total scores for each participant on each dimension of coping measured; higher scores are indicative of more frequent use of each coping style. Participants had a limited number of missing data points on the 28 scale items (i.e., no item had more than 7 responses missing), therefore we retained data from all participants on this measure and replaced missing data points with the sample mean for each item.

2.2.2 Substance Use History—We selected questions from the self-report Addiction Severity Index (ASI; McLellan, Luborsky, O'Brien, & Woody, 1980; Rosen, Henson,

Finney, & Moos, 2000) to measure participants' substance use history. Items from the ASI used in this investigation's analyses included the number of days in the 30 days prior to entering treatment that participants reported having used alcohol, marijuana, heroin, and cocaine, which were the most frequently used substances reported within this sample.

2.2.3. Physical Assault Victimization—In order to measure victimization experienced in the year before treatment, we used a modification of the Conflict Tactics Scale (CTS; Straus, 1979; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). Originally, the CTS was used to assess family violence using questions about methods by which conflict is resolved among family members. The modified CTS used in this study asked participants to rate how often specific aggressive behaviors were perpetrated against them during conflicts with partners and non-partners (e.g., strangers, friends, acquaintances) separately within the year before treatment enrollment. The present analyses utilize nine items assessing physical assault victimization for each type of relationship separately. Participants' responses on each version of the physical assault subscale were dichotomized into presence or absence of any partner or non-partner physical assault victimization. Then, based on these dichotomous scales, participants were grouped into four distinct categories: 1) no reported past-year victimization, 2) presence of any past-year victimization by a partner, 3) presence of any past-year victimization by a non-partner, or 4) presence of any past-year victimization by both a partner and non-partner. This method of categorizing participants has been used in previous research (e.g., Chermack et al., 2009)

2.3 Data analysis

We used three separate, but parallel, multinomial regression analyses, to evaluate the associations between the four physical assault victimization types (no victimization, victimization by a partner only, victimization by a non-partner only, victimization by both a partner and non-partner) and the independent variables, including: age, gender, race, frequency of past month alcohol, heroin, cocaine, and marijuana use, plus one of the coping scales (emotion-focused, problem-focused, and avoidant coping). Given the limited variation in racial composition in this sample, we treated race as a dichotomous variable (i.e., White and Black/Other) in these analyses. The three analyses included the independent variables described above entered simultaneously, and each coping subscale (emotion-focused, problem-focused, avoidant) entered into a separate regression model; no reported past-year physical assault victimization was the reference category for all analyses. Follow-up analyses involved one-way ANOVAs to test for between group differences on each of the items included on the Brief COPE. Eight of the 351 participants had missing data on the dependent measure of violence victimization and were therefore excluded from our analyses leaving a final sample of 343.

3. Results

3.1 Participant characteristics

As displayed in Table 1, our sample included 351 men (76.1%) and women (23.9%) attending the residential treatment center described above. On average, participants were 35.6 years old ($SD = 10.8$); two-thirds self-identified as White (64.7%), one-quarter self-

identified as Black (26.8%) and other races (8.5%) were also represented. Participants had an average of 11.8 years of education ($SD = 2.1$) and most were unemployed or retired (84.5%). Most of our sample were unmarried/divorced/separated/widowed (82.2%), whereas 17.8% were married or living with a partner.

Alcohol, heroin, cocaine, and marijuana were among the most frequently reported substances used by participants in the 30 days preceding treatment (ranging from $M = 4.6$ days for heroin to $M = 6.4$ days for alcohol). On average, participants reported 1.7 prior alcohol treatment episodes and 2.8 prior drug treatment episodes. With regard to physical assault victimization, 41.3% reported no victimization in the prior year, while 20.5% reported assault by a partner only, 13.4% by a non-partner only, and 22.5% by both partners and non-partners.

3.2 Analyses evaluating correlates of physical assault victimization type

Table 2 depicts the inter-correlations among independent variables included in our multinomial regression analyses. Emotion-Focused coping was moderately significantly correlated with Avoidant and Problem-Focused subscales ($r_s = .40$ and $.44$, respectively). The remaining variables' correlation coefficients ranged from $.00$ to $.33$.

Table 3 displays the results from the three multinomial regression models evaluating the associations between physical assault victimization type and demographics, substance use, and coping. The full model evaluating physical assault victimization type using Problem-Focused Coping as an independent variable was significant ($\chi^2[24] = 55.99, p < .001$). More frequent Problem-Focused coping was associated with decreased likelihood of reporting victimization by both partners and non-partners ($OR = 0.91$). For every one point increase on the Problem-Focused coping subscale, there is a 9% decrease in odds of victimization by both partners and non-partners. Thus, for a one standard deviation increase in Problem-Focused coping, the OR for this type of victimization would decrease by 31% ($OR = 0.69$). In this model, older age was associated with decreased likelihood of partner victimization only ($OR = 0.97$) and decreased likelihood of victimization by both partners and non-partners ($OR = 0.95$). Furthermore, White individuals ($OR = 0.44$) had a decreased likelihood of reporting partner victimization only whereas Black/Other individuals had an increased likelihood of reporting partner victimization only. Frequency of recent heroin use ($OR = 1.05$) was positively associated with partner victimization only.

The full model evaluating physical assault victimization type using Avoidant coping as an independent variable was significant ($\chi^2[24] = 62.28, p < .001$). Avoidant coping was not associated with partner or non-partner violence victimization separately, but was related to increased odds of having been assaulted by both partners *and* non-partners during the previous year ($OR = 1.21$). This finding suggests that those who engage more frequently in Avoidant coping are more likely to report being victimized by both partners and non-partners. Specifically, for every one point increase on the Avoidant coping subscale, there is a 21% increase in odds of victimization by both partners and non-partners. Thus, for a one standard deviation increase in Avoidant coping, the OR for this type of victimization would increase by 72% ($OR = 1.72$). In this model, older age was associated with decreased odds of experiencing partner-only victimization ($OR = 0.97$) and both partner and non-partner

victimization (OR = 0.95). Individuals of Black/Other races were significantly more likely to report partner-only violence whereas, White individuals were less likely to reporting partner-only violence (OR = 0.43).

The full model evaluating physical assault victimization including Emotion-Focused Coping as an independent variable was statistically significant ($\chi^2[24] = 51.84, p < .01$). There was no association between Emotion-Focused Coping and any type of victimization, however, compared to the no victimization group, older age was associated with decreased odds of reporting partner victimization only (OR = 0.97) and victimization by both partners and non-partners (OR = 0.95). More frequent heroin use was associated increased odds of reporting partner victimization only (OR = 1.05) and victimization by both partners and non-partners (OR = 1.03). Finally, individuals of Black/Other races were more likely to report partner victimization only and White individuals were less likely to report this type of victimization (OR = 0.45).

Because specific coping strategies included in these scales may be more or less adaptive, as a post-hoc exploration of which individual items may be contributing to the associations between the coping subscales and physical victimization, we also conducted one-way ANOVAs evaluating the mean ratings for each of the 28 items across the four victimization groups. Three items from the Emotion-Focused subscale differed across victimization groups. “I say things to let my unpleasant feelings escape” was endorsed more frequently by those reporting physical assault by both partners and non-partners compared to those with no reported victimization. The two substance use coping items were more frequently endorsed among those who reported both types of violence and by those who reported partner victimization only compared to those who had no reported victimization history. In addition, “I use alcohol or drugs to make myself feel better” was also more frequently endorsed among victims of non-partner violence only compared to those with no victimization history. Participants’ mean scores on three of the four Avoidant coping items differed across groups. “I give up trying to deal with it,” “I give up the attempt to cope,” and “I say to myself, ‘this isn’t real,’” were more frequently endorsed by those who reported physical assault by both partners and non-partners compared to those who reported no victimization. There were no significant differences between groups on mean ratings of the Problem-Focused coping items.

Discussion

In this investigation, we evaluated the associations of three dimensions of coping (i.e., emotion-focused, problem-focused, and avoidant), in addition to demographic factors and recent substance use, with substance users’ experiences of physical assault victimization (either no victimization, partner-only victimization, non-partner only victimization, or *both* partner and non-partner victimization). These analyses revealed that participants’ use of avoidant coping styles was associated with increased odds of physical assault victimization by both partners and non-partners. Post-hoc analyses suggested giving up and denial were the specific items that differed most across groups. More frequent use of problem-focused coping styles was associated with decreased likelihood of victimization in both types of relationships, but participants’ ratings on individual problem-focused items did not differ

across groups. At the multivariate level, emotion-focused coping was not significantly associated with victimization type, however, venting and substance use coping items from this subscale appeared to differentiate victimization groups in exploratory item level analyses. No type of coping was significantly associated with being victimized by only partners or non-partners separately.

Similar to prior research (Chermack et al., 2008; 2009), several individual demographic and background characteristics also emerged as significant. Older age was consistently related to decreased odds for partner-only victimization and victimization by both partners and non-partners. Individuals who self-identified as White were at decreased odds of reporting partner-only victimization, whereas individuals in the Black/Other race group were more likely to report partner-only victimization. Although significant relationships between race and victimization were present, race is likely a proxy for the influence of other socio-ecological factors that impact violence involvement.

Due to the considerable variation in how researchers define and measure coping (Skinner, Edge, Altman, & Sherwood, 2007), these results should be interpreted in light of the domains as assessed by the Brief COPE as it was utilized in this study. Our finding that more frequent problem-focused coping was associated with decreased odds of reporting physical assault by both partners and non-partners is consistent with theory and research supporting problem-focused efforts as being related to more desirable outcomes (Forys, McKellar, & Moos, 2007; Linley & Joseph, 2004; Penley, Tomaka, & Wiebe, 2002). Although some prior studies did not identify significant relationships between problem-focused coping and victimization (Green & Kane, 2009; Hassan et al., 2011; Lilly & Graham-Bermann, 2010; Taft et al., 2007), Kocot and Goodman (2003) reported a positive relationship between these variables. However, Kocot and Goodman's findings might reflect the circumstances of their sample, a group of women presenting at a domestic violence intake center (i.e., who are engaging in a problem-focused, active coping strategy by seeking services) following the arrest of their partner for assault. Furthermore, their measure of coping was specific to partner violence whereas our measure assessed general coping styles for stressful situations. Given the present finding, it is possible that, in SUD treatment settings, infrequent use of problem-focused coping may be a marker for those exposed to victimization by both partners and non-partners. However, future research is needed to evaluate separately the precise relationships between specific coping behaviors and violence.

Prior work has reported positive relationships between avoidance coping and partner violence victimization (Calvete, Corral, & Estevez, 2008; Canady & Babcock, 2009; Krause et al., 2008; Mitchell & Hodson, 1983; Sullivan et al., 2010). Our present analyses found that avoidant coping was related to those who reported assault across relationship types. Furthermore, we did not find a significant relationship between emotion-focused coping and any type of victimization in our sample; however, findings from prior research regarding relationships between emotion-focused coping and victimization have been equivocal and our item-level analyses suggest that at least some of these types of coping may be related to victimization. Further, these differing results regarding each of the three coping styles may be specific to the measures used, our specific sample, or to individuals with SUDS, a relatively high risk group that may be limited in their adaptive coping responses.

Furthermore, our findings derive from comparing those who were victimized to a non-victimized reference group, whereas prior studies typically did not include non-victimized comparison groups. However, it may also be that these differences can be attributed to other investigation's lack of measurement of non-partner violence among victims of partner violence. This is somewhat supported by the results reported by Green and Kane (2009) who found that individuals involved in violent crime reported significantly more avoidant coping than those who were victims of partner violence. However, direct comparison with Green and Kane's results are limited because they do not report details regarding their recruitment methods and whether individuals in either group (i.e., violent crime or intimate partner violence) had a history of the other type of violence.

Prior research with SUD treatment samples has documented relationships between substance use (e.g., alcohol, cocaine, heroin) and victimization in samples drawn from addictions treatment (e.g., Chermack et al., 2008; 2009). Somewhat surprisingly, in some, but not all of our models, heroin use was the only significant substance use variable, and it was associated with increased odds of partner victimization only and victimization by both partners and non-partners. This inconsistency may be due to the relatively limited time period (i.e., one month) over which substance use was measured or perhaps to limited variability in the severity of substance use among this residential sample.

Although this investigation extends previous research on the relationships between coping and physical assault victimization among substance users, it has several limitations. For example, this study relied on retrospective self-reports of behaviors measured over different time periods preceding treatment entry (e.g., substance use over 30 days, victimization over 12 months) and substance use was assessed for a relatively brief time frame; thus, results may differ if a longer period of use were measured. The Brief COPE measures coping styles based on reported frequency of use across stressful situations, and thus findings may differ if various measures of coping are employed. Given that we cannot compare our participants to those at our study site who did not volunteer for the study, the representativeness of our sample is unknown. Additionally, generalizability of our findings to the larger patient population at this treatment site and to other groups (e.g., non-treatment samples), is also limited in that we used data from a specific, relatively high-risk, sample of individuals involved in residential SUD treatment. Furthermore, the racial composition of this sample was somewhat limited and generalizability could be improved with the inclusion of more diverse samples. Although the assessment of partner and non-partner physical assault victimization separately is a strength of this work, there are other contextual factors of coping and victimization that were not assessed (e.g., types of non-partner relationships, instigation of the aggressive behavior, retaliation, and coping strategies used specifically for victimization, rather than general coping styles), but that may contribute to clarifying the relationships between coping and victimization in substance users.

Perhaps the most notable limitation is that the present data are cross-sectional and thus conclusions regarding the causal relationships between coping and physical assault victimization are beyond the scope of our data. Whether physical assault victimization leads to poor coping or whether individuals who exhibit poor coping skills are more likely to be victimized, remains unclear and these relationships are likely influenced by many other

variables. Nonetheless, there are several possible hypotheses as to how victimization and coping are related that warrant exploration in future research. For example, it may be that a lack of or insufficient use of adaptive coping skills (and/or over-reliance on maladaptive methods) makes it difficult for individuals to avoid, leave, or escape risky situations where physical assault could occur. In addition, the effects of substance use may impair cognitive abilities, including the ability to effectively and efficiently implement coping skills that might reduce risk for victimization. Furthermore, it may be that repeated victimization and/or its associated emotional distress may also tax one's coping resources for managing situations in which victimization may occur. Repeatedly victimized individuals may begin to feel helpless in their situations and turn to avoidant or passive coping strategies in an attempt to minimize their distress. Finally, contemporary theory suggests that both enduring and transitory environmental circumstances could constrain one's use of specific coping methods (Moos & Holohan, 2003). Thus, individuals who are victimized may also be limited in their coping responses due to specific environmental or contextual factors associated with the victimization.

Despite these limitations, the present results suggest several clinical implications. In addition to interventions aimed at helping substance users reduce their drug and alcohol use and involvement in situations that lead to violence, patients may benefit from specific approaches that bolster problem-focused coping efforts and seek to reduce reliance on avoidance-related efforts. However, because these cross-sectional results could also suggest that victimization could lead to poor coping skills, targeting reductions in violence and conflict involvement during SUD treatment may result in improved adaptive coping responses, which are associated with other positive post-treatment outcomes (Forys, McKellar, & Moos, 2007). Furthermore, intake clinicians may be able to identify individuals in need of specific coping and violence prevention interventions by screening not only for partner violence victimization, but also non-partner violence victimization.

Overall, these results indicate that an improved understanding of coping could help to understand the causes and consequences of victimization in adults with substance use disorders. Because we found relationships present between coping styles (and some individual coping items in exploratory analyses) and physical assault victimization by both partners and non-partners, the present results support the notion that future research efforts continue to assess victimization across distinct types of relationships (i.e., partner, non-partner) among diverse samples. In addition, since substance users comprise a group that experiences victimization more frequently than the general population, interventions aimed at helping these individuals reduce substance use and engagement in violent relationships (beyond only intimate partner relationships) are needed. Research should seek to identify which types of intervention strategies contribute best to increases in adaptive coping and decreases in maladaptive coping, substance use, and violence involvement across different relationship types post-treatment.

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Table 1

Descriptive characteristics of the sample

	% or M (SD)
Male	76.1%
Race	
White	64.7%
Black	26.8%
Other	8.5%
Age	35.6 (10.8)
Years of Education	11.8 (2.1)
Employment Status	
Unemployed	70.1%
Disabled (and Unemployed)	12.8%
Employed Full- or Part-time	15.3%
Retired	1.0%
Relationship Status	
Never Married	59.3%
Divorced/Separated	19.9%
Living with Someone	8.8%
Married	8.8%
Widowed	2.0%
Past-Year Physical Assault Victimization	
None	41.3%
Partner Only	20.5%
Non-partner Only	13.4%
Both Partner and Non-Partner	22.5%
Number of Days Used Each Substance in 30 Days before Treatment	
Alcohol	6.4 (10.4)
Heroin	4.7 (10.4)
Cocaine	4.6 (9.0)
Marijuana	4.8 (9.9)
Mean Number of Times in Treatment	
For Alcohol	1.7 (4.7)
For Drugs	2.8 (5.1)
Coping Subscales	
Emotion-Focused ^a	41.0 (7.6)
Problem-Focused ^b	15.5 (4.0)
Avoidant ^c	7.7 (2.8)

Note. *N*'s for these variables range from 338 to 343 due to missing data on individual items.

^a Possible range = 16 to 64.

^b Possible range = 6 to 24.

^cPossible range = 4 to 16.

Table 2

Correlations among demographics, substance use, and coping subscales used in regression analyses

	White	Male	Age	Alcohol	Heroin	Cocaine	Marijuana	Emotion-Focused Coping	Problem-Focused Coping
White	-								
Male	-.16**	-							
Age	-.26***	.17**	-						
30-day alcohol	.05	.11*	.06	-					
30-day heroin	.20***	-.15**	-.24***	-.05	-				
30-day cocaine	-.02	-.04	.00	.33***	.11*	-			
30-day marijuana	.01	.01	-.25***	.19***	.06	.21***	-		
Emotion-Focused Coping	.03	-.22***	-.10	.04	.01	.07	.00	-	
Problem-Focused Coping	-.19**	-.05	.11*	-.15**	-.20***	-.17**	-.17**	.44***	-
Avoidant Coping	.15**	-.13*	-.14**	.22***	.12*	.12*	.18**	.40***	-.19***

*
 $p < .05$,**
 $p < .01$,***
 $p < .001$

Table 3

Summary of multinomial regression analyses examining coping, substance use, and demographics as predictors of victimization type.

	Model including Emotion-Focused Coping (N = 322) ^a OR (95% CI)	Model including Problem-Focused Coping (N = 322) OR (95% CI)	Model including Avoidant Coping (N = 322) OR (95% CI)
<i>Both Partner and Non-Partner Victimization</i>			
White race	0.78 (0.40–1.53)	0.68 (0.34–1.36)	0.72 (0.36–1.43)
Male	0.98 (0.48–2.02)	0.88 (0.43–1.80)	1.11 (0.53–2.30)
Age	0.95 (0.92–0.98)**	0.95 (0.92–0.98)**	0.95 (0.92–0.99)**
30-day alcohol	1.00 (0.98–1.03)	1.00 (0.97–1.03)	0.99 (0.97–1.03)
30-day heroin	1.03 (1.00–1.07)*	1.03 (1.00–1.06)	1.03 (1.00–1.06)
30-day cocaine	1.01 (0.98–1.04)	1.01 (0.97–1.04)	1.01 (0.97–1.04)
30-day marijuana	1.02 (0.99–1.05)	1.01 (0.98–1.05)	1.01 (0.98–1.05)
Coping subscale	1.01 (0.97–1.05)	0.91 (0.84–0.99)*	1.21 (1.08–1.36)**
<i>Partner Victimization Only</i>			
White race	0.45 (0.23–0.88)*	0.44 (0.22–0.86)*	0.43 (0.22–0.84)*
Male	0.85 (0.40–1.78)	0.78 (0.38–1.62)	0.84 (0.41–1.76)
Age	0.97 (0.94–1.00)*	0.97 (0.94–1.00)*	0.97 (0.93–1.00)*
30-day alcohol	1.00 (0.97–1.03)	1.00 (0.97–1.03)	0.99 (0.96–1.03)
30-day heroin	1.05 (1.02–1.08)**	1.05 (1.02–1.08)**	1.05 (1.02–1.08)**
30-day cocaine	0.97 (0.92–1.01)	0.96 (0.92–1.01)	0.97 (0.93–1.01)
30-day marijuana	1.03 (1.00–1.07)	1.03 (1.00–1.07)	1.03 (1.00–1.06)
Coping subscale	1.02 (0.98–1.06)	0.98 (0.90–1.06)	1.09 (0.97–1.23)
<i>Non-Partner Victimization Only</i>			
White race	1.28 (0.58–2.83)	1.24 (0.55–2.77)	1.23 (0.55–2.73)
Male	1.19 (0.51–2.78)	1.09 (0.47–2.52)	1.17 (0.50–2.72)
Age	0.98 (0.95–1.02)	0.98 (0.95–1.02)	0.98 (0.95–1.02)
30-day alcohol	0.97 (0.93–1.01)	0.97 (0.93–1.01)	0.97 (0.93–1.01)
30-day heroin	1.02 (0.99–1.06)	1.02 (0.99–1.06)	1.02 (0.99–1.06)

	Model including Emotion-Focused Coping (N = 322) ^a OR (95% CI)	Model including Problem-Focused Coping (N = 322) OR (95% CI)	Model including Avoidant Coping (N = 322) OR (95% CI)
30-day cocaine	1.02 (0.98–1.06)	1.02 (0.98–1.06)	1.02 (0.98–1.06)
30-day marijuana	0.97 (0.92–1.02)	0.97 (0.92–1.02)	0.97 (0.92–1.02)
Coping subscale	1.02 (0.97–1.07)	0.98 (0.89–1.07)	1.08 (0.94–1.23)

* $p < .05$,
 ** $p < .01$,
 *** $p < .001$
^a N = 322 for these analyses because 21 participants had missing data on one or more independent variables included in these models.
 Note. Reference group is “no victimization” group. Three models were tested and each column represents a single model.