



Published in final edited form as:

Subst Use Misuse. 2020 ; 55(5): 707–714. doi:10.1080/10826084.2019.1696825.

Substance Use, Self-Efficacy, and Differentiation as Predictors of Intimate Partner Violence Among Substance-Using Women

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Abstract

Purpose: Intimate partner violence (IPV) is prevalent in the U.S., and has many physical and mental health implications. While several studies have explored the impact of IPV experience on individuals, less is known about which factors are predictive of IPV victimization.

Method: The current study examined the extent to which substance use, self-efficacy, and differentiation each predicted experiences of IPV among women seeking treatment for a substance use disorder using a multinomial logistic regression analysis.

Results: Results showed that women who reported lower levels of differentiation were significantly more likely to experience IPV. However, no other significant IPV predictors were found.

Conclusions: Current findings suggest that differentiation may be an effective therapeutic target for IPV prevention.

Keywords

intimate partner violence; differentiation; substance use; self-efficacy

Introduction

Intimate partner violence (IPV) is a pervasive issue in the United States, and although both men and women experience IPV, women are significantly more likely to experience IPV. More than one in three women experiences physical violence, rape, and/or stalking perpetrated by an intimate partner in her lifetime, and approximately 10 million people experience IPV each year (Black et al., 2011). IPV occurs in all racial and age groups, but is most prevalent among non-Hispanic Blacks, individuals of two or more races, and individuals ages 18 to 24 (Truman & Morgan, 2014).

Women who experience IPV have poorer physical and mental health and higher rates of substance use than women who have not experienced IPV (Black et al., 2011; Ullman, Relyea, Peter-Hagene, & Vasquez, 2013). Although numerous studies have examined the impact of IPV on those who experience it, few studies have examined factors that predict

experiences of IPV. It is well established in the literature that childhood experiences of abuse and/or witnessing IPV as a child are related to experiencing IPV as an adult (Abramsky et al., 2011; Bensley, Van Eenwyk, & Simmons, 2003; Thompson et al., 2006). However, other factors such as substance use, differentiation, and self-efficacy that may predict IPV experiences remain understudied. These factors will be reviewed below.

Substance Use

Substance use has been clearly linked to IPV experiences, but the directionality of the relationship is less clear. Numerous studies have shown an association between substance use and IPV victimization and perpetration (Afifi, Henriksen, Asmundson, & Sareen, 2012; Devries et al., 2014; Smith, Homish, Leonard, & Cornelius, 2012). When assessing the longitudinal relationship between substance use and IPV, the relationship becomes more complex and less clear. A study by Testa, Livingston, and Leonard (2003) found that illicit substance use among women was associated with later experiences of IPV and that experiences of IPV were somewhat associated with later alcohol use, but not later drug use. Conversely, Kraanen and colleagues found that alcohol and cocaine abuse in women predicted both perpetration and victimization of IPV (Kraanen, Vedel, Scholing, & Emmelkamp, 2014). While substance use is clearly related to experiences of IPV, no study to date has examined the longitudinal effect of substance use on both past and current IPV experiences.

Differentiation

The degree to which a person is able to separate themselves from their experiences and from others may uniquely impact IPV. The concept of differentiation is one way to assess this ability to separate oneself. Differentiation refers to the degree to which an individual is able to separate their feeling process and thought process (Bowen, 1976). Individuals who are unable to separate these processes are considered to be 'fused' and function the poorest and experience the most problems. Fused individuals are controlled by their emotions and act more on instinct. Alternatively, individuals who are most able to separate feeling and thought processes are considered 'highly differentiated' and are able to adapt to life stressors easily. Differentiated individuals still have emotional instincts, but are able to balance these instincts with logic and reasoning (Bowen, 1976).

Scant literature has examined the relationship between differentiation and IPV. The few studies that have examined how differentiation is related to IPV have focused on how differentiation impacts the intergenerational transmission of IPV (Rosen, Bartle-Haring, & Stith, 2001) or the relationship between differentiation and IPV perpetration (Likcani, Stith, Spencer, Webb, & Peterson, 2017). It may be that levels of differentiation uniquely impact IPV experiences. However, no studies to date have examined the relationship between differentiation levels and experiences of IPV over time. Understanding the relationship between differentiation and IPV may lead to new avenues of intervention for populations vulnerable to IPV.

Self-Efficacy

The sense of self-confidence and independence a person feels may also be related to whether or not they experience IPV. Self-efficacy refers to a person's belief that they are competent and capable of handling the events in their life (Bandura, 1982). An individual's perception of self-efficacy influences the choices they make and the effort they give to difficult experiences, as well as their thoughts and emotional reactions during such events. Perception of self-efficacy is based on personal and vicarious previous experiences, verbal support/persuasion, and physiological responses when facing a given situation (Bandura, 1982). Self-efficacy influences decision-making, social abilities, and confidence in oneself.

Very little research has examined the relationship between self-efficacy and IPV outcomes. However, some research has examined the relationship between general victimization and self-efficacy, as well as the relationship between IPV experiences and self-esteem. In a study of women's experiences with victimization, Severson, Postmus, and Berry (2009) found that higher rates of self-efficacy were associated with better mental health outcomes. Zlotnick, Johnson, and Kohn (2006) found that women who reported IPV had lower self-esteem compared to women who did not report IPV. Additionally, research has shown that women who report higher self-esteem were more likely to leave an IPV relationship compared to women with low self-esteem (Kim & Gray, 2008). It is likely that self-efficacy serves as a similarly protective factor against IPV experience. Further research is needed to examine the relationship between self-efficacy and experiences of IPV over time. A better understanding of the impact of self-efficacy on IPV experiences may help clinicians intervene with individuals experiencing IPV.

Current Study

The current study explored predictive factors of IPV experiences. Data from a larger randomized clinical trial testing family systems therapy with mothers with a substance use disorder and their children were used (Slesnick & Zhang, 2016). It was hypothesized that higher rates of substance use, lower differentiation, and lower self-efficacy would each predict experiences of IPV. Examining predictors of IPV experiences has significant implications for research and practice. By better understanding predictive factors of IPV, researchers and clinicians can test ways to improve protective factors to prevent IPV experiences. Additionally, understanding predictors of repeated IPV experiences can help inform intervention for individuals who have already experienced IPV to break the cycle of IPV.

Method

Participants

Participants included 126 mothers who participated in a larger randomized clinical trial (N=183) testing the efficacy of family systems therapy for mothers seeking treatment for a substance use disorder and their children (Slesnick & Zhang, 2016). Mothers were recruited through a community-based substance use treatment facility in a large Midwestern city. Mothers were eligible to participate in the larger study if they met diagnostic criteria for a substance use disorder using the DSM-IV, were seeking outpatient treatment for their

substance use disorder, and had a biological child in their custody between the ages of 8–16 years. Participants were excluded from the current study if they did not have complete IPV data. These participants either missed a follow-up assessment or did not fully answer all of the IPV questions. All participants in this study had a substance use disorder, and many participants moved frequently or lost custody of their children at some point during the study, resulting in missed assessments.

In the current study, mother's ages ranged from 24 to 54 years ($M = 33.9$, $SD = 6.80$). Mothers reported having between one and 11 children ($M = 3.21$, $SD = 1.63$). Most mothers in the sample were white, non-Hispanic (52.4%) or African-American (44.4%). The majority of mothers had a high school diploma or less (61%). Further, more than three-fourths of the mothers reported an annual family income of \$30,000 or less (80.9%), and only 14.3% of the mothers identified as married. Almost half of the mothers (40.4%) identified opioids as their primary drug of choice, 24.9% reported alcohol as their primary drug, 23.0% identified marijuana as their primary drug, and 9.6% reported cocaine as their primary drug of choice.

Procedures

The Ohio State University Institutional Review Board approved all study procedures. Women were recruited and screened at a substance use treatment facility by a research assistant. Mothers were then consented, and parental permission for their child's participation was obtained. Upon completion of the baseline assessment, women were randomized into one of three treatment groups – in-home family therapy, in-office family therapy, or an individualized attention control, Women's Health Education (WHE) for mothers only. Treatment was completed within 6 months of randomization.

Data were collected at six time points. The first time point was at baseline, where the mother and child were randomized into one of three treatment groups. The other five time points were at 3, 6, 9, 12, and 18-months post-baseline, respectively. At each time point, extensive self-report and observational data were collected. Mothers received a \$75 gift card and their children received a \$40 gift card for each completed assessment. For the purpose of this study, only data collected from the mothers was used. Data from all time points was used to capture changes in IPV experience over time.

Measures

IPV Experiences.—IPV was measured at each time point with five questions from the Behavioral Risk Factor Surveillance Survey (BRFSS), which was introduced by the Center for Disease Control and Prevention (CDCP) as a state-based data collection tool. It has been widely used to approximate the prevalence of IPV in the United States and has been validated by previous studies (CDCP, 1994; Slesnick, Erdem, Collins, Patton, & Buettner, 2010). In this measure, IPV includes any physical (hitting, slapping, choking, shoving, kicking, or any other physical injury), sexual (being forced to participate in a sex act, including oral, vaginal, and anal penetration, as well as sex acts that do not include penetration), verbal (being put down, called names, or had their behavior controlled), or

emotional (fearing for their safety or the safety of family/friends due to partner's anger or threats) abuse perpetrated by an intimate partner.

Physical IPV was assessed through the questions, "Has an intimate partner ever hit, slapped, shoved, choked, kicked, shaken, or otherwise physically hurt you?" and "Have you ever been frightened for your safety or that of your family or friends because of anger or threats of an intimate partner?" Emotional and verbal IPV were assessed by asking, "Has an intimate partner ever put you down, or called you names repeatedly, or controlled your behavior?" Sexual IPV was measured through responses to the questions "Has an intimate partner ever forced you to participate in a sex act against your will?" and "Has an intimate partner ever threatened, coerced, or physically forced you into any sexual contact that did not include penetration or intercourse?" If a participant answered "yes" to any of these questions, they were then asked if the IPV occurred with their current intimate partner, and if it occurred with their current intimate partner within the past 12 months. Experiences of IPV were coded into four categories – women who never reported IPV, women who reported experiencing IPV in the past, but did not report any current IPV during the study, women who reported experiencing IPV once during the study, and women who reported experiencing IPV two or more times during the study.

Differentiation.—Differentiation was measured through the emotional reactivity and emotional cutoff subscales of the Differentiation of Self Inventory (DSI; Skowron & Friedlander, 1998), assessed at baseline. These subscales assess how difficult a person finds it to remain calm when responding to high emotions in others and the level of emotional distance and isolation from loved ones an individual displays, respectively (Bowen, 1976,1978; Kerr & Bowen, 1988). The subscales consist of 23 items assessing participants' typical feelings in their relationships, rated on a 6-point scale. Sample items include "At times, my feelings get the best of me and I have trouble thinking clearly" and "I'm often uncomfortable when people get too close to me." As the subscales were highly correlated in the current study ($r = .492, n = 126, p < .001$), the total score of the DSI was used instead of the subscales. The DSI has shown internal construct validity, as higher emotional reactivity and cutoff each predicted higher distress, and conversely lower emotional cutoff predicted higher relationship satisfaction (Skowron & Friedlander, 1998). Skowron and Friedlander (1998) reported coefficient alphas of .88 and .79 for emotional reactivity and emotional cutoff, respectively, indicating consistency reliability. In this study, the coefficient alphas were .88 for emotional reactivity and .88 for emotional cutoff.

Self-Efficacy.—Participants' self-efficacy was measured at baseline through the Self-Efficacy Scale (SE; Sherer et al., 1982), which assesses both general and social self-efficacy. A total of 23 items are scored on a 5-point Likert scale, with higher scores indicating higher self-efficacy. Sample questions include "Failure just makes me try harder" and "It is difficult for me to make new friends." This scale has shown high construct validity, as high scores on the SE are associated with higher self esteem, and related to aspects that predict self-efficacy, such as prior success in personal and professional areas, and ability to maintain employment (Sherer et al., 1982). The Self-Efficacy scale has shown high reliability, with Cronbach alpha coefficients of .86 for general self-efficacy and .71 for social self-efficacy

(Sherer et al., 1982). Cronbach's alpha coefficients for the current study were .89 and .57 for general and social self-efficacy, respectively. As the social self-efficacy subscale had low internal consistency, it was excluded from the analysis.

Substance Use.—Substance use, as defined by alcohol and illicit drug use, was measured at baseline using the Form-90 (Miller, 1996). The Form-90 is a standardized interview that uses a timeline follow-back approach to measure daily substance use for the past 90 days (Sobell & Sobell, 1992). Through this measure, a comprehensive report of participants' alcohol and drug use was generated, including the types of drugs used, the percentage of days of use for each substance, number of days of mild, moderate, and severe substance use for each substance, and the percentage of days of total substance use. The Form-90 has demonstrated high test-retest reliability for indices of drug use for adults and runaway adolescents, with kappas for drug classes ranging from 0.74 to 0.95 (Slesnick & Tonigan, 2004). In this study, percentage of days of substance use as reported at baseline was used to assess substance use in the 90 days leading up to data collection. Because all women in the current study had a substance use disorder, percentage of days of substance use at baseline was used as a covariate in the analyses.

Covariates.—As research has shown age and race to be disproportionately related to experiences of IPV (Truman & Morgan, 2014), these variables were controlled for in the current study, in addition to days of substance use and education level. Race and age as reported on a demographic questionnaire completed at baseline were used as covariates. Race was coded into three categories – Black/African American, White, non-Hispanic, and other, and age was standardized, and then used as a continuous variable for the analysis. Education level was assessed in the demographic questionnaire at baseline and was coded categorically by highest degree completed. Additionally, treatment group was included as a covariate to control for treatment effects.

Analytic Plan

To determine how substance use, differentiation, and self-efficacy predict differences in IPV experiences, a multinomial logistic regression analysis was conducted using SPSS software. Participants' experience of IPV was assessed using self-report data from baseline, 3-, 6-, 12-, and 18-months post-baseline. All dependent variables and covariates were assessed using reports from baseline data.

Results

Descriptive Analysis

The means and standard deviations of the independent variables are reported in Table 2. In the overall sample, participants had an average age of 33.9 ($SD=6.8$). Most participants were white, non-Hispanic (52.4%) or African American (44.4%). Additionally, participants had an average of 68.5% ($SD=31.5$) days of substance use, excluding tobacco, in the 90 days prior to baseline. Thirty-seven women reported never experiencing IPV, 37 reported experiencing IPV in the past, but at no current point during the study, and 52 women reported experiencing IPV one or more times during the study. Bivariate correlations are

reported in Table 3. Correlations were examined for each IPV sub-group, and showed similar patterns of significance and directionality. As such, only correlations for the full sample are discussed below. All variables examined were within an acceptable range for skewness and kurtosis ± 1.96 . Correlation analyses were conducted to examine the relationship between variables in the model. There was a significant positive correlation between Self-Efficacy scale (SE) scores and race ($r(126) = .420, p < .01$). Differentiation of Self Inventory (DSI) scores were positively associated with a history of IPV ($r(126) = .376, p < .01$) and negatively related to self-efficacy ($r(126) = -.382, p < .01$).

ANOVA Results

A one-way analysis of variance (ANOVA) was conducted to examine any statistically significant differences between women who reported never experiencing IPV, women who reported experiencing IPV in the past, but not at any current time point during the study, and women who reported experiencing IPV at one or more time points. All results are reported in Table 4. There was a statistically significant difference between groups in differentiation levels ($F(2,123) = 8.96, p < .001$). A Tukey post hoc test revealed that levels of differentiation were statistically significantly lower for women who reported past ($74.54 \pm 15.58, p < .001$) or current ($77.25 \pm 18.73, p = .002$) IPV compared to women who did not report a history of IPV (90.27 ± 16.96). There was no statistically significant difference between women who reported past IPV and women who reported current IPV ($p = .748$). Descriptive results are reported in Table 4 and ANOVA results are reported in Table 5.

Multinomial Logistic Regression Results

Multinomial logistic regression was used to examine the effects of self-efficacy, differentiation, substance use, and race on experiences of IPV. Never reported experiencing IPV was used as the reference category for the analysis. Due to the small number of individuals who reported only experiencing IPV once during the current study ($N=20$), individuals who reported one current IPV experience and individuals who reported experiencing IPV two or more times during the study were grouped together for the analysis. As such three groups were used – never reported IPV, reported past IPV but no current IPV, and reported current IPV – in order to capture the heterogeneity of IPV experience while ensuring statistical power for a complete analysis.

The results of the multinomial logistic regression model are summarized in Table 6. Results indicate that the full model was statistically significant [$\chi^2 = 34.66$ ($df = 14$), $p < .01$]. However, only baseline DSI scores significantly predicted experiencing IPV in the past ($OR=.95$; 95% $CI=.92-.98$) and experiencing current IPV ($OR = .96$; 95% $CI = .93-.99$) such that lower DSI scores predicted experiencing IPV. Additionally, ethnic group was significant only for women who reported experiencing current IPV ($OR = 1.19$; 95% $CI = 1.00-1.41$). That is, White women and women who reported their race as “other” were more likely to report current IPV than African American women.

Discussion

In this study, predictors of IPV were examined using data collected from a sample of women seeking treatment for a substance use disorder. This is one of the first studies to examine predictors of IPV over time, and can help inform prevention and intervention programs. Findings showed that women who reported lower differentiation were significantly more likely to report past or current experiences of IPV. Further, current results provide evidence supporting the importance of differentiation in relation to IPV experience (e.g. Bartle & Rosen, 1994; Rosen et al., 2001) and expand on the limited literature examining predictors of IPV. That is, most studies of IPV focus on the impact of parental IPV on children or the impact of past IPV on adult outcomes (for a review, see Beydoun, Beydoun, Kaufman, Lo, & Zonderman, 2012; Carpenter & Stacks, 2009; Langdon, Armour, & Stringer, 2014; Wood & Sommers, 2011). Additionally, most studies that examine predictors of IPV focus on younger populations, such as dating violence in adolescence and early adulthood (e.g. Gomez, 2010; Jain, Buka, Subramanian, & Molnar, 2010; Maas, Fleming, Herrenkohl, & Catalano, 2010), while this study examined how adult individual and relational variables predicted IPV experiences over time.

Building on previous research (Likcani et al., 2017; Rosen et al., 2001), findings supported the hypothesis that differentiation would significantly predict IPV experiences. This is the first examination of differentiation as a predictor of IPV experiences. In general, according to Bowen's Theory, individuals with low levels of differentiation are often more emotionally dependent on others and are more controlled by their emotions than their intellect (Bowen, 1976). Although low levels of differentiation do not inherently lead to problematic symptoms, it was expected that lower differentiation would impact women's ability to navigate relationships and make them more vulnerable to violent relationships. Results from this study supported this hypothesis, as women with lower differentiation were more likely to experience past or current IPV.

While no studies to date have examined differentiation as a predictor of IPV, few studies have examined the relationship between differentiation and relationship violence in general. Prior research has found that differentiation is related to the intergenerational transmission of dating violence (Rosen et al., 2001), as well as perpetration of physical IPV (Lickani et al., 2017). As Bowen's theory suggests that family of origin influences an individual's differentiation level (Bowen, 1976), current findings expand our understanding of the intergenerational transmission of violence through differentiation as a predictor of IPV experience. However, additional research is needed to examine relationship between IPV and differentiation among other populations, and to test differentiation as a focus of IPV intervention.

No significant relationship was found between frequency of substance use and IPV experiences. Previous research suggests that substance use is related to both perpetration and victimization of IPV (Afifi et al., 2012; Devries et al., 2014; Kraanen et al., 2014; Smith et al., 2012), but the current findings here did not support that relationship. This may be due to a selection effect, as all women in the current study were seeking treatment for a substance use disorder. That is, the relationship found between substance use and IPV in previous

studies may not hold true for women seeking substance use treatment since all reported a substance use disorder. It is likely that among women who view their substance use as problematic, and are thus seeking treatment, substance use is at such a level that it ceases to serve as a predictive factor of IPV.

Additionally, lower self-efficacy was expected to predict IPV experiences. That is, previous studies suggest that self-efficacy protects against IPV, as women with higher levels of self-efficacy are more likely to leave relationships with IPV or to avoid them entirely (e.g. Kim & Gray, 2008; Zlotnick et al., 2006). However, the current findings did not support this relationship. Rather, self-efficacy did not significantly predict experiencing IPV. One reason for the observed lack of relationship may be because there was not enough variance in self-efficacy scores in each group to yield a significant difference between groups. Alternatively, the relationship between self-efficacy and IPV may be inherently different among substance using populations. More research examining underlying mechanisms that contribute to this relationship is needed.

Limitations

Several limitations of this study should be considered when interpreting the findings. First, all participants in the current study were seeking treatment for a substance use disorder. As such, the sample may not represent non-treatment seeking women or women without a substance use disorder who experience IPV. Second, participants for this secondary data analysis were selected only if they completed all follow-up assessments, and may not represent women with a substance use disorder who are more transient or difficult to track over time. Finally, the current study did not assess the frequency or severity of violence, and may not capture the complexity and heterogeneity of IPV experiences. Women who reported current IPV experience may also have had IPV experience in the past (prior to 1 year before the baseline assessment), and a causal relationship between differentiation and IPV experience cannot be determined from the current study. That is, research clarifying the relationship between severity or frequency of IPV and factors such as differentiation, substance use, and self-efficacy is needed.

Conclusions

Despite these limitations, this is the first study to examine predictors of past and current IPV experiences among substance using mothers. Findings showed that differentiation significantly predicted past and current IPV. While prior research has shown that differentiation is related to IPV perpetration and the intergeneration transmission of violence (Lickani et al., 2017; Rosen et al., 2001), this study found that women reporting low levels of differentiation were more likely to experience IPV. Given the numerous physical and mental health issues related to IPV experience, results from this study indicate that promoting differentiation may be an important target in prevention and intervention efforts. Further, public policy targeting increasing differentiation and self-efficacy among women who experience IPV may be most effective in decreasing experiences of IPV victimization. In particular, policies should target protective environments, such as schools, workplaces, and community organizations. Educational settings may be a key target for prevention and intervention efforts for children and teens to increase differentiation and self-efficacy, as

well as expectations of healthy relationships. Strengthening protective environments that women who experience IPV interact with daily can also help foster self-efficacy.

Acknowledgments

This research was supported by NIDA grant R01 DA023062 to N. Slesnick.

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Table 1.

Demographic characteristics of participants (N = 126)

Variable	n (%)
Race	
African American	56 (44.4)
White, non-Hispanic	66 (52.4)
Other	4 (3.2)
Highest Level of Education	
11 th grade and below	53 (42.0)
High school graduate	24 (19.0)
Some college	42 (33.3)
Bachelor's degree or above	7 (5.6)
Total Annual Family Income	
\$0 – 5,000	36 (28.6)
\$5,001 – 15,000	42 (33.3)
\$15,001 – 30,000	24 (19.0)
\$30,001 – 45,000	11 (8.7)
\$45,001 or above	12 (9.6)
Missing	1 (0.8)
Marital Status	
Single	39 (31.0)
In a romantic relationship	44 (34.9)
Legally married	18 (14.3)
Separated, but still married	8 (6.3)
Divorced	16 (12.7)
Widowed	1 (0.8)
Primary Drug of Choice	
Alcohol	31 (24.7)
Cocaine	12 (9.6)
Marijuana	29 (23.0)
Opiates	51 (40.4)
Other	3 (2.4)

Table 2.

Means and standard deviations of continuous variables

Variable	M (SD)	Range
Age	33.91 (6.80)	22–54
SE – General	58.39 (13.10)	26–85
DSI	80.16 (18.39)	37–124
Percent Days of Drug Use	68.49 (31.47)	2.1–100

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Table 3.

Pearson correlations for complete sample

	1.	2.	3.	4.	5.	6.	7.
1. Age	1						
2. Race	-.060	1					
3. Education	.217*	.099	1				
4. DSI	.010	.165	-.111	1			
5. SE – General	-.037	-.415**	.188*	-.382**	1		
6. Percent days drug use	-.184*	.044	.092	.092	-.072	1	
7. IPV Experience	.029	.214*	.004	.297**	-.078	.139	1

* $p < .05$ (2-tailed)** $p < .01$ (2-tailed)

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Table 4.

Descriptive statistics by IPV experience

		N	Mean	Std. Deviation
Age	Never reported	37	33.35	6.26
	Reported ever, no current IPV	37	34.62	6.55
	Reported current IPV	52	33.90	6.84
	Total	126	33.95	6.56
Race	Never reported	37	0.57	0.50
	Reported ever, no current IPV	37	0.49	0.51
	Reported current IPV	52	0.33	0.47
	Total	126	0.44	0.50
Treatment Group	Never reported	37	1.43	0.50
	Reported ever, no current IPV	37	1.46	0.51
	Reported current IPV	52	1.25	0.44
	Total	126	1.37	0.48
Treatment Attendance	Never reported	37	0.70	0.46
	Reported ever, no current IPV	37	0.76	0.43
	Reported current IPV	52	0.79	0.41
	Total	126	0.75	0.43
Percent days drug use	Never reported	37	63.09	33.32
	Reported ever, no current IPV	37	66.51	34.74
	Reported current IPV	52	73.38	27.49
	Total	126	68.34	31.55
DSI	Never reported	37	90.27	16.96
	Reported ever, no current IPV	37	74.54	15.58
	Reported current IPV	52	77.25	18.73
	Total	126	80.28	18.41
SE- General	Never reported	37	60.71	13.48
	Reported ever, no current IPV	37	56.59	12.73
	Reported current IPV	52	58.00	13.09
	Total	126	58.39	13.10

Table 5.

Analysis of variance (ANOVA) for IPV experience

		df	F	Sig.
Age	Between Groups	2	.346	.708
	Within Groups	123		
	Total	125		
Race	Between Groups	2	2.778	.066
	Within Groups	123		
	Total	125		
Education	Between Groups	2	1.39	.253
	Within Groups	123		
	Total	125		
Treatment Group	Between Groups	2	2.603	.078
	Within Groups	123		
	Total	125		
Treatment Attendance	Between Groups	2	.422	.656
	Within Groups	123		
	Total	125		
Percent days drug use	Between Groups	2	1.244	.292
	Within Groups	123		
	Total	125		
DSI	Between Groups	2	8.963	.000**
	Within Groups	123		
	Total	125		
SE – General	Between Groups	2	.960	.386
	Within Groups	123		
	Total	125		

*
p .05**
p .01

Table 6.

Multinomial logistic regression for IPV experiences

Variable	Reported Past IPV		Reported Current IPV	
	Exp(B)	(95% C.I.)	Exp(B)	(95% C.I.)
Age	1.03	(.78 – 1.51)	1.10	(.80 – 1.50)
Race	1.01	(.85 – 1.21)	1.19	(1.00 – 1.41)*
Education	1.14	(.84 – 1.20)	0.95	(.75 – 1.19)
SE – General	1.01	(.96 – 1.05)	1.03	(.98 – 1.07)
Percent days drug use	1.00	(.99 – 1.02)	1.01	(1.00 – 1.03)
DSI	.95	(.92 – .98)**	.96	(.93 – .99)**

Model $\chi^2 = 34.66$ (df = 14), $p < .01$

*
 p .05**
 p .01

The reference category is Never Reported IPV.