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The association between partner and non-partner aggression and suicidal ideation in patients seeking substance use disorder treatment

Mark A. Ilgen, PhD^{1,2}, Steve T. Chermack, PhD^{1,2}, Regan Murray, PhD², Maureen A. Walton, PhD², Kristen L. Barry, PhD^{1,2}, Marcin Wojnar, MD, PhD^{3,2}, and Frederic C. Blow, PhD^{1,2}

¹Department of Veterans Affairs, Health Services Research & Development, 2215 Fuller Road (11H), Ann Arbor, MI, 48105 ²Department of Psychiatry, University of Michigan, 4250 Plymouth Road, Ann Arbor, MI, 48109 ³Department of Psychiatry, Medical University of Warsaw, Nowowiejska 27, 00-665 Warsaw, Poland

Abstract

Objective—The present study was designed to examine the relationship between prior partner and non-partner aggression and suicidal ideation in patients seeking drug and alcohol treatment.

Method—Patients entering drug and alcohol treatment (n = 488) were screened for prior partner and non-partner aggression as well as recent suicidal thoughts. We examined the association between aggression and suicidal ideation in bivariate and multivariate models.

Results—Within the past two weeks, 33% (159/488) of the sample reported suicidal ideation. In bivariate analyses, neither psychological nor physical aggression towards a non-partner was related to suicidal ideation. Partner psychological aggression was related to suicidal ideation in bivariate but not multivariate analyses. Physical aggression towards a partner was consistently related to higher rates of suicidal ideation even after controlling for other known risk factors (OR = 1.8; CI = 1.1 - 2.7). Mediation analyses indicate that this relationship was no longer significant after accounting for current negative affect.

Conclusion—Suicidal ideation is common in patients seeking drug and alcohol treatment and particularly likely in those who report prior aggression towards a partner.

Keywords

Suicide; alcohol; violence; depression; treatment

1. Introduction

Substance misuse and suicide are significant, interrelated public health problems (Institute of Medicine, 2002; Office of the Surgeon General, 1999). Substance use disorders (SUDs) predict both fatal and non-fatal suicidal behaviors (Borges, 2000; Wilcox, Conner, & Caine, 2004) and up to 45% of patients seeking SUD treatment have attempted suicide at some point in their

Corresponding Author: Mark Ilgen, PhD, 2215 Fuller Road (11H), Ann Arbor, MI 48105, marki@umich.edu, Phone: 734-745-3646, Fax: 734-745-3249.

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lives (Johnsson & Fridell, 1997). However, more work is needed to better understand what distinguishes suicidal from non-suicidal patients entering SUD treatment (Cornelius, Clark, Salloum, Bukstein, & Kelly, 2004; Erinoff, Compton, & Volkow, 2004).

One possible explanation for the association between SUDs and suicidal behaviors is the relationship of each of these factors to aggressive or violent behavior (Conner, Duberstein, Conwell, & Caine, 2003). A propensity to react violently is thought to be a distal risk factor for suicidality, and negative affect is proposed to be a more proximal indicator of risk for suicidality in those with and without a history of violence (Conner & Duberstein, 2004). The association between prior aggression and SUDs is well documented, and as many as 70% to 75% of patients entering SUD treatment report engaging in violent behavior at some point in their lifetime (Burnette et al., in press; Chermack, & Blow, 2002; Chermack, Fuller, & Blow, 2000).

Externalizing pathology, such as antisocial personality disorder, has been routinely tied to greater risk for suicidal thoughts and behaviors (Beautrais, Joyce, & Mulder, 1998; Beautrais, Joyce, Mulder, Fergusson, Deavoll, et al., 1996; Marttunen, Aro, Henriksson, & Lönnqvist, 1994; Schuckit, 1986; Verona, Sachs-Ericsson, & Joiner, 2004). Additionally, several recent studies have examined the relationship between aggressive or violent behaviors and risk of suicide (Conner, Conwell, Duberstein, & Eberly, 2004; Conner, et al., 2001; Conner, Duberstein, & Conwell, 2000; Dumais et al., 2005). A small case control study comparing older adults who died by suicide to matched controls in the community found that general ratings of aggression (both verbal and physical) towards others were associated with a higher likelihood of suicide mortality (Conner et al., 2004). In a case control study of suicide of men with Major Depression, Dumais and colleagues (2005) found that aggressive behaviors predicted suicide and that this association was particularly strong in those with SUDs. Using a case control design in a larger and more representative sample, Conner et al. (2001) found that report of violent behavior in the past year was significantly associated with a higher risk of suicide. Also, a history of domestic violence is common in men who die by suicide (Conner et al., 2000). However, the extent to which perpetration of domestic violence is a unique risk factor for suicide relative to other forms of violence perpetration is unknown.

Many of these prior studies have utilized data collected retrospectively after the time of death to examine the relationship between aggression and suicide. As others have noted (e.g., Institute of Medicine, 2002), the study of suicide is difficult and the use of data collected after death in psychological autopsy studies has added substantially to our understanding of risk factors for suicide. However, this approach does not allow for a more finely-grained examination of patient symptoms and behaviors. Because suicidality likely occurs along a continuum of risk (Kessler, Borges, & Walters, 1999), using patient self-report data to examine the associated features of non-fatal periods of suicidal thoughts or behaviors is an alternative approach. Tiet and colleagues used this technique in a large national sample of primarily male Veterans seeking SUD treatment and found that the report of recent difficulty controlling violent behavior was associated with increased likelihood of a recent, non-fatal suicide attempt (Tiet, Ilgen, Byrnes, & Moos, 2006). Additionally, among those with alcohol dependence, individuals with a lifetime suicide attempt also report higher rates of lifetime aggression and aggressive behavior during periods of alcohol use (Koller, Preuss, Bottlender, Wenzel, & Soyka, 2002; Preuss et al., 2002).

Although prior work has highlighted the relationship between suicidality and aggression, many aspects of this relationship need to be clarified in patients entering SUD treatment. Prior research has not allowed for the examination of the influence of different forms of aggression on recent suicidal ideation. It is possible that the nature of the aggression type, either partner or non-partner aggression, may be differentially related to suicidal ideation. Specifically,

partner aggression may be more strongly associated with suicide risk because of the greater potential for partner aggression to negatively impact close social relationships, a known protective factor against suicidal thoughts (Joiner, 2005). Furthermore, understanding the nature of the aggressive episode, whether it involves psychological or physical aggression, may be important for the study of suicidality. Also, because of the previously established relationship between childhood abuse and future violent behavior (Burnette et al., in press), it is important to examine if the relationship between aggression and suicidal ideation exists after accounting for history of physical or sexual abuse. Thus, further research is needed, using more comprehensive measures of aggression in more representative samples of men and women with SUDs, in order to broaden our understanding of the association between aggression and suicidality.

In the present study, we examined the association between several aspects of past aggressive behaviors and recent suicidal ideation in a diverse sample of male and female patients presenting for SUD treatment. We examined the association between aggression and the risk of current suicidal ideation, controlling for other known risk factors such as level of substance use and history of childhood abuse. Finally, as a partial test of Conner & Duberstein's (2004) model, we examined whether current negative affect would mediate the association between prior aggression and current suicidal ideation.

2. Methods

2.1. Procedure

Participants in this study came from community residential SUD centers, intensive outpatient programs, and regular outpatient treatment programs. Participants were approached by trained research staff following admission to a SUD treatment program for the purposes of screening for a Randomized Control Trial (RCT) of an intervention program being conducted at these residential SUD centers. Information presented in this paper is derived from the screening measures used to determine eligibility for the RCT. Of those approached, approximately 95% of individuals consented to take part in this study. The study's protocol was approved by the Institutional Review Board at the University of Michigan and Certificates of Confidentiality were obtained from NIDA.

2.2. Participants

Participants included 488 individuals (372 men, 116 women) recruited from SUD treatment programs. Participants ranged in age from 18 to 63 years ($M = 35.9$), and were Caucasian (54.4%), African American (35.4%) or other ethnicities (2.5% Hispanic, 3.9% Native American, 0.4% Asian, 0.2% Middle Eastern, and 3.3% other). Concerning educational status, approximately 46% of participants attended but did not graduate from high school, 26.2% graduated from high school, 23.9% attended "some college," and 4.3% earned a college degree. With regard to marital status, 51.6% of study participants had never been married, 10.7% were married, 5.3% separated, 20.1% divorced, 1.6% widowed, and 10.7% were currently living with a partner.

2.3. Measures

2.3.1. Suicidal ideation and depression—A single item of the Patient Health Questionnaire [PHQ-9; (Kroenke, Spitzer, & Williams, 2001; Spitzer, Kroenke, & Williams, 1999)] was used as the measure of suicidal ideation. Specifically, patients were asked how often in the previous two weeks they had, "Thoughts that you would be better off dead or of hurting yourself in some way." The PHQ-9 includes each of the nine DSM-IV criteria for depression (including suicidal ideation) as zero (not at all) to three (nearly every day) for the previous two weeks. The PHQ-9 has 84% specificity and 95% sensitivity for current major

depressive disorder in a primary care population (Löwe, Spitzer, Gräfe, Kroenke, Quenter, et al., 2004). The item on suicidal ideation was recoded into a dichotomous indicator of no suicidal ideation (0) vs. some or more suicidal ideation (1) in the past two weeks. This item served as the primary dependent variable in the present study. Additionally, the other eight items of the PHQ-9 were used to measure severity of depression.

2.3.2. Partner and non-partner aggression—Past year psychological and physical aggression were measured by the revised CTS2 (Straus, Hamby, Boney-McCoy, & Sugarman, 1996), a questionnaire that was initially created to assess family violence. Revisions of the CTS2 allowed for a more comprehensive evaluation of family aggression with the inclusion of a subscale related to injury caused by violence and by asking questions related to nonverbal psychological aggression and sexual aggression (Straus et al., 1996). Psychological aggression, which the CTS2 defines as nonverbal acts which symbolically hurt the other, was assessed with questions such as, “I stomped out of the room” and “I destroyed something belonging to” another person. The CTS2 operational definition of physical aggression reflects the presence of at least one physically aggressive act. Examples in the CTS2 include, “I kicked, bit, or punched” and “I pushed or shoved” another person. The CTS2 is widely used and has demonstrated strong psychometric properties [for a review see Simpson & Christensen, 2005]. Non-partner aggression was assessed by modifying the CTS2 and asking participants to answer CTS2 items for both partners and non-partners.

2.3.3. Alcohol and drug use—Items from the Substance Abuse Outcomes Module (SAOM; Smith, Babor, Burnam, Mosley, Rost, et al., 1996) were used to assess recent (28 days prior to SUD treatment) alcohol and substance use. For the present analyses we examined the number of days involving heavy drinking (more than five drinks consumed) and how many days within the past 28 they used the following: marijuana, cocaine or crack, heroin, and tobacco. The SAOM is a frequently used measure within the SUD field, with strong psychometric properties including good validity and reliability (McLellan, Alterman, Cacciola, Metzger, & O’Brien, 1992; Smith, Burnam, Mosley, Hollenberg, Mancino, et al., 2006).

2.4. Data Analysis

After describing the rates of suicidal ideation in the past two weeks in this sample, we examined the bivariate association (t-tests and chi squared tests) between demographic characteristics, past physical and sexual abuse, current substance use, and measures of partner and non-partner violence (i.e., psychological aggression and physical assault). Then, we conducted a set of logistic regression analyses that included all aggression-related variables that were identified as significantly associated with suicidal ideation in the previous analysis as well as all other measures of the domains of interest. This approach was chosen because the four subscales of the CTS-2 that were used to measure aggression were strongly associated with one another. Examining them separately in a series of logistic regression analyses limited the collinearity in our models. Finally, for any aspects of violence that were identified as significantly associated with suicidal ideation in the multivariate analyses, we examined whether current negative affect mediated these effects using the steps outlined by Baron and Kenny (1986).

3. Results

Approximately 17% (82/488) of the sample reported suicidal ideation for several days, 9% (43/488) reported suicidal ideation more than half of the days, and 7% (34/488) reported suicidal ideation nearly every day. Collapsing across these three responses, suicidal ideation within the past two weeks was reported in 33% (159/488) of the sample.

The characteristics of those with and without suicidal ideation are presented in Table 1. Of the demographic characteristics examined, only income was related to the recent report of suicidal ideation at treatment entry. In particular, participants with lower annual income (i.e., < \$20,000 per year) were more likely to report suicidal ideation than those who reported an annual income greater than or equal to this amount. Additionally, SUD patients with a history of childhood physical or sexual abuse reported significantly higher rates of recent suicidal ideation than those without. More days of heavy alcohol use and more days of marijuana use were also significantly associated with a higher likelihood of reporting suicidal ideation.

In bivariate analyses of the questions related to aggression, measures of partner aggression were significantly related to suicidal ideation. Specifically, both psychological and physical aggression towards a partner were associated with higher rates of suicidal thoughts in the past two weeks. Non-partner aggression (i.e., psychological or physical) was not related significantly to suicidal ideation. Additionally, as has been reported previously (Chermack et al., in press; Murray et al., in press), the rates of all forms of aggression were high within the overall sample. Specifically, approximately 54% (n = 263) of participants reported physical aggression towards a partner, 77% (n = 377) reported psychological aggression towards a partner, 60% (n = 295) reported physical aggression towards a non-partner and 83% (n = 405) reported psychological aggression towards a non-partner.

The following multivariate analyses focused on the unique contribution of these two aspects of partner aggression (i.e., psychological or physical aggression) on suicidal ideation after controlling for other factors. In both of these analyses, days of binge drinking and days of marijuana use were significantly associated with greater risk of suicidal ideation. As presented in Table 2, psychological aggression towards a partner was not related to suicidal ideation after controlling for other risk factors measured in this study. However, in a separate analysis (see Table 3 – Model 1), physical aggression toward a partner was significantly associated with increased risk of suicidal ideation.

The final set of analyses examined the extent to which current negative affect might account for the relationship between partner aggression and suicidal ideation. As noted previously, physical aggression towards a partner was related to suicidal ideation in the multivariate logistic regression analysis. In a similar multivariate regression analysis predicting depressed affect, physical aggression toward a partner was significantly related to greater negative affect ($t = 3.78, p < .001$). The final model including negative affect in the logistic regression analysis is presented in Table 3 (see Model 2). In this analysis, the association between current depressed affect and greater suicidal ideation was significant ($X^2 = 81.27, p < .001$) and the association between partner-related physical aggression was no longer significant ($X^2 = 1.33, p > .10$). More broadly, in this final model, only negative affect was significantly associated with suicidal ideation.

4. Discussion

The present findings add to a growing body literature documenting the high rates of recent suicidal thoughts and behaviors in patients seeking drug and alcohol treatment (Darke, Ross, Lynskey, & Teesson, 2004; Ilgen, Tiet, & Moos, 2004; Roy, Lamparski, DeJong, Moore, & Linnoila, 1990; Tiet, Ilgen, et al., 2006). In the present sample, approximately 33% reported thoughts of suicide several days or more within the past two weeks. Those reporting recent suicidal ideation were more likely to be economically disadvantaged, have experienced childhood physical or sexual abuse, and have more days of recent binge alcohol and marijuana use. Interestingly, even in a relatively severe sample of patients seeking SUD services, severity of baseline substance use was associated with greater likelihood of suicidal ideation. Additionally, even after accounting for these factors, engaging in physical aggression towards

a partner was associated with a greater likelihood of suicidal ideation. These findings are consistent with prior community-based research on violence as a risk factor for suicidality (Conner et al., 2004; Conner et al., 2001). Finally, the association between previous partner aggression and current suicidal ideation was no longer significant after adjusting for negative affect.

Prior research has primarily relied on retrospective data collected from close acquaintances of individuals who died from suicide to establish the link between aggression and suicide. In this study, we found that both partner-related physical and psychological aggression were associated with increased risk of suicidal ideation in bivariate analyses and that partner-related physical aggression had a particularly strong association with suicidal ideation. These analyses revealed also that partner-related aggression was more closely tied to suicidal ideation than was past non-partner aggression. The reasons for the difference in patterns of results related to partners and non-partners are unknown. Prior research has documented the high rates of suicide in those with a history of domestic violence (Conner et al., 2000), but to the best of our knowledge this research has not allowed for the comparisons of the relative impact of partner and non-partner aggression on suicidality. It is possible that partner-related assault is uniquely related to a profile of psychopathology that includes suicidal thoughts. Alternatively, this form of aggression may be associated with other stressors (e.g., marital discord, legal and financial stressors) that may, in and of themselves, account for the relationship between partner violence and suicidality. In this regard, prior research has documented that negative affect is more strongly associated with partner violence than non-partner violence (Walton, Cunningham, Chermack, Maio, Blow, et al., 2007).

Many converging lines of research indicate that individuals with a history of aggression share many common risk factors with those at risk for suicide (Conner et al., 2004). These include childhood sexual abuse, childhood physical abuse, and greater severity of alcohol and drug problems (Burnette et al., in press; Chermack & Giancola, 1997; Tiet, Finney, & Moos, 2006; Wilcox et al., 2004). Understandably, others have called for SUD treatment providers to assess for and address problems related to childhood abuse and more severe substance abuse as ways to reduce suicide risk (e.g., Ilgen, Harris, Moos, & Tiet, 2007; Tiet, Finney, et al., 2006). However, in the present study, we found that the relationship between physical aggression towards a partner and suicidality remained even after controlling for these other shared risk factors. Thus, comprehensive approaches to managing suicide risk should consider aggression towards a partner an indicator of risk. The use of additional psychosocial treatments impacting partner violence (e.g., O'Farrell & Fals-Stewart, 2000) could potentially help address this risk in SUD patients.

Finally, the present findings suggest that current depressed affect appears to be an important factor that may explain the relationship between prior aggression and suicidal ideation. Among individuals with SUDs, past acts of partner aggression likely serve as indicators of impulsivity that places an individual at greater risk for responding to stressful situations (or negative affect) by engaging in suicidal behaviors (Conner & Chiapella, 2004). The potential for more proximal negative affect to mediate the effect of prior partner aggression on suicidality has not been examined previously. The present findings are consistent with the theory that the effect of prior aggression on suicidality may be due to the increased likelihood of those with prior aggression to report more negative affect and to then, in turn, report greater suicidal ideation. Similarly, it is possible that aggression may lead to relationship discord or problems, which increase negative affect and risk of suicidal thoughts or behaviors. These findings indicate that providers may want to consider interventions to address negative affect, impulsivity and/or aggression in SUD patients (e.g., Brown, Evans, Miller, Burgess, & Mueller, 1997) with a history of aggression as one way to lower suicide risks. However, this study used a cross-sectional design, and stronger tests of mediation require a temporal relationship between the predisposing factor,

the proposed mediator and the outcome (Kraemer, Wilson, Fairburn, & Agras, 2002). Additionally, the measure of negative affect in the present study was drawn from the same scale as the item related to suicidal ideation. The higher general correlation seen between items from the same measure likely inflated the strength of the relationship between our measures of suicidal ideation and negative affect. Thus, several of the other factors that were no longer significant in models including negative affect may still relate to suicidal ideation in research that utilized independent measures of suicidal ideation and depression. Additionally, other factors that were not examined in this project may better explain the association between prior physical aggression towards a partner and suicidal ideation. Future research is required to better understand the extent to which current negative affect mediates the effect of previous violent behavior on suicidal ideation.

Several additional limitations should be noted. First, this study utilized a single item measure of suicidal ideation (no/yes) as the primary outcome. Although this item is drawn from a larger scale with sound psychometric properties and the item has face validity, the test-retest reliability and validity of this item as a measure of suicidal ideation have not been established. Also, the item does not provide data about the duration or intensity of suicidal ideation. Additionally, although the rationale for this study was informed by research on suicide mortality and suicide attempts, this study is focused on suicidal ideation. As others have noted, numerous differences exist between those patients who have suicidal ideation and those who attempt (Borges, Angst, Nock, Ruscio, & Kessler, 2008; Kessler et al., 1999), and more work is needed before generalizing from the present finding to other aspects of suicidal behavior. Additionally, we used a model building approach that included the use of multiple tests of significance. This approach was designed to be inclusive but further research is needed to confirm these findings.

This study utilized a series of screening instruments as the primary predictors of suicidal ideation. The use of these brief measures allowed us to rapidly screen a large number of patients, but more detailed measures of violence perpetration, childhood abuse, and psychopathology may yield different results. In particular, the extent of correspondence of responses to the measure of aggression and actual acts of violence in the present study is unknown. One curious finding is that, although the majority of participants did not report having a partner at baseline (approximately 21% reported that they were married or living together), over half of participants (54%) reported physical aggression towards a partner and over two thirds (77%) reported psychological aggression toward a partner during the past year. This likely reflects the volatile nature of romantic relationships in this population. In patients seeking SUD treatment, their current relationship status does not necessarily capture the extent to which they have been involved in romantic relationships or engaged in aggression toward a partner in the past year. Future research on this topic should gather more precise information about the exact nature of the relationship between the participant and the victim of aggression at the time that these aggressive acts occurred. Finally, the sample was comprised of treatment seeking men and women in six SUD treatment clinics in the Midwestern United States. These results may not generalize to non-treatment seeking samples of those with SUD or those who are treated in other settings.

Despite these limitations, this study presents information on the association between prior partner and non-partner aggression and suicidal ideation. In those patients seeking SUD treatment, prior partner-related aggression, but not non-partner aggression, was associated with increased suicidal ideation at treatment entry. Additionally, current depressive symptomatology may explain the link between prior aggression and current suicidal ideation. Treatment providers in SUD treatment settings should be aware of the increased risk of suicidality in those with a history of aggression and may want to consider the utilization of add-on treatments to address depressive symptoms in this high-risk group.

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Table 1
Bivariate Demographic, Substance Use, and Psychological Correlates of Suicidal Thoughts (N=488)

Variable	No Suicidal Thoughts (n=329)		With Suicidal Thoughts (n=159)		Total (N=488)	
	n	(%)	n	(%)	n	(%)
Male	257	(78.12)	115	(72.33)	372	(76.23)
Black/ African-American	116	(35.26)	56	(35.22)	172	(35.25)
Married/ Living Together	68	(20.67)	36	(22.64)	104	(21.31)
Some College or College Grad	94	(28.57)	44	(27.67)	138	(28.28)
Employed	58	(17.63)	24	(15.09)	82	(16.80)
Annual Income <\$20,000 ^{4/a}	230	(70.99)	127	(79.87)	357	(73.91)
Physically Abused as a Child ^{1/b}	86	(26.22)	72	(45.57)	158	(32.51)
Sexually Abused as a Child ^{2/c}	54	(16.41)	48	(30.77)	102	(21.03)
Violence with Partner						
Physical Aggression ^{2/d}	156	(47.56)	105	(66.04)	261	(53.59)
Psychological Aggression ^{4/d}	243	(74.09)	133	(83.65)	377	(77.21)
Violence with Non-Partner						
Physical Aggression	191	(58.05)	104	(65.41)	295	(60.45)
Psychological Aggression	270	(82.07)	135	(84.91)	405	(82.99)
	Mean	(±SD)	Mean	(±SD)	Mean	(±SD)
Age	35.67	(10.63)	36.35	(11.18)	35.89	(10.80)
Days Had Tobacco in the Past 30 Days	18.12	(12.73)	19.51	(12.44)	18.57	(12.64)
Days Had 6 or More Drinks in the Past 30 Days ^{2/e}	5.88	(8.76)	9.13	(10.45)	6.94	(9.46)
Days Had Cocaine in the Past 30 Days	7.11	(9.87)	8.40	(10.55)	7.53	(10.11)
Days Had Marijuana in the Past 30 Days ³	4.77	(9.11)	8.13	(11.16)	5.87	(9.94)
Days Had Heroin in the Past 30 Days	2.63	(7.57)	3.01	(8.26)	2.75	(7.79)
Depression Score (PHQ ^e Total -8 Items) ¹	8.00	(5.60)	14.99	(5.22)	10.28	(6.38)

^aSome subjects did not respond or skipped this question, N=483;

^bSome subjects did not respond or skipped this question, N=486;

^cSome subjects did not respond or skipped this question, N=485;

^dSome subjects did not respond or skipped this question, N=487;

^ePHQ-Patient Health Questionnaire;

¹ p < 0.0001;

² p < 0.001;

³ p < 0.01;

⁴ p < 0.05

Table 2

Multivariate logistic regression analysis examining the effect of psychological aggression towards partner on the risk of suicidal thoughts.

Variables Entered*	OR	95% CI	
Male	0.899	0.533	1.516
Black/ African-American	1.020	0.644	1.615
Married/ Living Together	1.130	0.675	1.890
Some College or College Grad	1.041	0.652	1.663
Employed	0.867	0.481	1.562
Annual Income < \$20,000	1.329	0.799	2.210
Physically Abused as a Child ^I	1.777	1.120	2.818
Sexually Abused as a Child	1.640	0.937	2.870
Psychological Aggression to Partner	1.645	0.959	2.821
Age	1.019	0.997	1.041
Days Had Tobacco in the Past 30 Days	0.998	0.981	1.015
Days Had 6 or More Drinks in the Past 30 Day ^I	1.029	1.007	1.052
Days Had Cocaine in the Past 30 Days	0.988	0.966	1.011
Days Had Marijuana in the Past 30 Days ^I	1.029	1.007	1.052
Days Had Heroin in the Past 30 Days	1.009	0.982	1.036

^I
p < 0.05

Table 3
Multivariate logistic regression analysis examining the effect of physical assault of partner on the risk of suicidal thoughts.

Variables Entered*	MODEL 1		MODEL 2	
	OR	95% CI	OR	95% CI
Male	0.891	0.528	1.504	0.898
Black/ African-American	1.025	0.647	1.623	0.979
Married/ Living Together	1.163	0.697	1.941	0.979
Some College or College Grad	1.043	0.651	1.670	0.878
Employed	0.856	0.474	1.544	0.870
Annual Income < \$20,000	1.282	0.769	2.135	0.513
Physically Abused as a Child	1.666 ⁴	1.045	2.654	0.555
Sexually Abused as a Child	1.588	0.908	2.776	0.769
Physical Aggression towards Partner	1.784 ³	1.157	2.750	0.821
Age	1.020	0.999	1.043	0.988
Days Had Tobacco in the Past 30 Days	0.999	0.982	1.017	0.976
Days Had 6 or More Drinks in the Past 30 Days	1.026 ⁴	1.004	1.049	0.996
Days Had Cocaine in the Past 30 Days	0.987	0.965	1.010	0.968
Days Had Marijuana in the Past 30 Days	1.030 ³	1.007	1.053	0.991
Days Had Heroin in the Past 30 Days	1.009	0.982	1.036	0.952
PHQ ^a Total Score (8 items)	-	-	-	1.193

^a PHQ-Patient Health Questionnaire

¹ p < 0.0001;

² p < 0.001;

³ p < 0.01;

⁴ p < 0.05