ORIGINAL RESEARCH—PSYCHOLOGY

Intimate Partner Violence: Relationships Between Alexithymia, Depression, Attachment Styles, and Coping Strategies of Battered Women

Giuseppe Craparo, PhD,* Alessio Gori, PhD,† Irene Petruccelli, PhD,* Vincenza Cannella, PsyD,‡ and Chiara Simonelli, PhD§

*Kore University of Enna, Enna, Enna, Italy; †University of Florence, Florence, Tuscany, Italy; ‡Cipa Meridionale, School of Psychotherapy, Palermo, Italy; §University of Rome "La Sapienza", Rome, Italy

DOI: 10.1111/jsm.12505

ABSTRACT

Introduction. One of the most common forms of violence against women is the intimate partner violence (IPV). This term includes physical, sexual, and emotional abuse and controlling behaviors by an intimate partner.
Aim. This exploratory study investigates the relationship between alexithymia, adult attachment styles, depression, and coping strategies in a group of female victims of IPV and a control group.
Methods. Participants were 80 female victims of IPV with an age range from 18 years to 54 years (mean 31.62; standard deviation 9.81). The control group included 80 women with no history of IPV with an age range from 19 years to 37 years (mean 25.05; standard deviation 3.67).
Main Outcome Measures. We administered the following self-report questionnaires: (i) 20-Item Toronto Alexithymia Scale (TAS-20); (ii) Coping Orientation Problems Experienced; (iii) Beck Depression Inventory (BDI)-II; and (iv) Attachment Style Questionnaire (ASQ).
Results. Compared with control group, the IPV group showed higher mean scores on TAS-20 (52.9 vs. 41.1, $P < 0.001$) and BDI-II (19.50 vs. 9.95, $P < 0.001$). In both groups, we found significant correlations between BDI-II and TAS-20 total scores ($P < 0.001$) and between BDI-II and the following dimensions of ASQ: confidence ($P < 0.001$), discomfort with closeness ($P = 0.002$), relationships as secondary ($P < 0.001$), need for approval ($P < 0.001$), and preoccupation with relationships ($P < 0.001$). Differently from the control group, in the IPV group, social support correlated significantly and positively ($P < 0.001$) with the dimension preoccupation with relationships on ASQ, but not with the secure attachment style.
Conclusions. In comparison to the control group, alexithymia, depressive symptoms, and an insecure attachment style were negatively correlated with the ability to cope with stress for women in the IPV group. **Craparo G, Gori A, Petruccelli I, Cannella V, and Simonelli C. Intimate partner violence: Relationships between alexithymia, depression, attachment styles, and coping strategies of battered women. J Sex Med 2014;11:1484–1494.**

Key Words. Intimate Partner Violence; Battered Women; Domestic Violence; Alexithymia; Coping; Attachment Style

Introduction

The United Nations defines violence against women as any act of gender-based violence that results in, or is likely to result in, physical, sexual, or mental harm or suffering to women, including threats of such acts, coercion, or arbitrary deprivation of liberty, whether occurring in public or private [1].

There are many forms of violence against women, including sexual, physical, or emotional abuse by an intimate partner; physical or sexual abuse by family members or others; sexual harassment and abuse by authority figures (such as

teachers, police officers, or employers); trafficking for forced labor or sex; traditional practices such as forced or child marriages or dowry-related violence; and honor killings, when women are murdered in the name of family honor. Systematic sexual abuse in conflict situations is another form of violence against women.

Health consequences can result directly from violent acts or from the long-term effects of violence.

Intimate Partner Violence

One of the most common types of violence against women that exists in all societies, among rich as well as poor women, is violence by an intimate male partner or former partner. The term intimate partner violence (IPV) usually refers to abuse between husband and wife, or between present or former cohabiting partners. Some definitions also include non-married or cohabitating partners (i.e., boyfriends and girlfriends). Other terms often used to describe IPV include domestic violence, battering, and wife/spouse/partner abuse. IPV is one of the most common forms of violence directed at women. It has been suggested that the term IPV should be made specific by including "against women" to accurately describe the phenomenon [2].

Perpetrators and Victims of IPV

Researchers now acknowledge that perpetrators of IPV constitute a heterogeneous group. As a result, there has been much effort to distinguish subtypes of men who batter women [3,4]. Personality disorder (PD) is one dimension that is consistently used to categorize batterers [5–7]. Some have argued that PD is not merely a correlate but also an etiological factor in perpetration of violence for some men [5]. In fact, in characterological batterers, who often exhibit personality dysfunction and tend to be violent in all their intimate relationships, violence is thought to be one manifestation of their pathology [8].

Furthermore, research suggests that PDs are relevant predictors of violence domestic [9]. Antisocial and borderline personalities are among the most commonly referenced in IPV research, and it has been suggested that both of these disorders be considered when investigating male-perpetrated IPV [10].

According to Holtzworth-Munroe and Stuart [10], three subtypes of batterers exist and exhibit different profiles, particularly in terms of psychopathology and severity of IPV. Borderline/dysphoric batterers, including individuals diagnosed with Borderline Personality Disorder (BPD), are thought to be "pathologically dependent" on their partners, jealous, and volatile. Generally, violent/antisocial batterers, diagnosed with Antisocial Personality Disorder (ASPD), have relatively positive views of violence and tend to view their partners as objects to be controlled. Family-only batterers tend to be the least violent and typically do not exhibit psychopathology, although some do show traits of Dependent Personality Disorder. In addition to their centrality in batterer typologies, ASPD and BPD represent Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5) [11] diagnoses with symptom patterns that are quite similar to descriptions of many perpetrators of partner abuse [9]. For example, both people diagnosed with BPD and a subgroup of batterers exhibit abandonment fears, unstable moods, and unstable relationships. BPD is characterized by emotion dysregulation, fear of abandonment, feelings of intense anger that are difficult to control, and instability in interpersonal relationships. Batterers with BPD may physically lash out at their partners when they become distressed as a way to regulate negative emotions [12].

A meta-analytic study conducted by Norlander and Eckhardt [13] suggested that relative to nonviolent males, IPV perpetrators consistently show higher levels of anger and hostility across various measurement approaches. Bowlby [14] recognized that anger is the natural response of the child when the expectation of safety, close to the attachment figure, is jeopardized.

In normal development, anger has a signaling function of strengthening the relationship between child and caregiver [15]. The normal anger response, however, turns to aggression when insensitivity is pervasive. Although anger has an important function within the attachment relationship, aggression is clearly dysfunctional because it threatens to break apart the attachment bond. Fonagy [15] proposed that relationship violence might be seen as an exaggerated response of a disorganized attachment system. It is related to a disorganized attachment pattern in infancy coupled with a history of abuse and an absent male parental figure. He suggested that violent acts against women are often committed by men with inadequate cognitive capacity and history of childhood abuse.

Regarding victims, Back et al. [16] examined the personality features of battered women in a psychiatric facility and found that 83% of them were given a discharge diagnosis of borderline, passive-dependent, or passive-aggressive PDs. In comparison, only 45% of non-abused psychiatric patients were diagnosed with PD. Other researchers have observed a high prevalence of antisocial PD and obsessive–compulsive disorder accompanied by more frequent paranoid ideation in female victims of IPV [17]. Moreover, Shields et al. [18] found a positive correlation between the severity and extent of current IPV and the severity of BPD. So far, the instrument more frequently used to assess PD in abused women has been the Minnesota Multiphasic Personality Inventory (MMPI) [19]. MMPI studies attempting to explore the differences between female victims of IPV and a control group have confirmed that the former show higher overall levels of psychopathology [17]. Khan et al. [20] studied the MMPI-II profiles of 31 battered women and found elevations on clinical scales 4, 6, 8, and 9 (i.e., psychopathic deviate, paranoia, schizophrenia, and hypomania scales). Both studies concluded that, in their samples, MMPI scale elevations were likely a reaction to IPV rather than suggestive of underlying psychopathology. An important issue is the type of violence to which women have been exposed. Although women may experience varying, and often complex, combinations of physical, psychological, and sexual IPV, most studies have focused only on physical IPV [21].

Risk Factors for IPV

Poor anger control and alcohol use may function by reducing inhibition of aggressive impulses [22]. The combination of these factors may synergistically reduce inhibition of aggressive impulses more than either one of them alone.

Provocation is another factor that has been demonstrated in experimental research as well as in descriptive studies of IPV. In fact, alcohol may have very little influence on IPV in the absence of provocation [23]. In marital relationships, several variables may serve as provoking events, including jealousy, verbal abuse, and marital conflict. Foran and O'Leary [24] argued that presence of alcohol during partner violence does not necessarily mean that alcohol is the cause of the violence being reported. It is important to consider that violence could have occurred without individuals being under the acute influence of alcohol. In order words, they may use alcohol over a long period of time or experience significant problems with alcohol, but not necessarily be intoxicated at the time of IPV perpetration.

Several additional risk factors may be associated with IPV. Personality characteristics such as impulsivity have been associated with both alcohol use and violence. Impulsivity is a risk factor for IPV that is often characterized as an inability to regulate certain behaviors, including aggression and sensation seeking [25–29].

In addition, men who were abused in childhood or witnessed violence among parents or caregivers are at higher risk of becoming batterers during adolescence and adulthood than those who have not. Conversely, women who have been abused in childhood or witnessed violence at home are at higher risk of being victimized [30].

Women who have witnessed interparental violence may perceive violence as a normal part of intimate relationships. For example, if a girl is convinced by the batterer that her mother was responsible for the violence, this may also increase the likelihood that she will blame herself if she is abused by a male partner as an adult [31].

There also are structural aspects of the society and individual level factors linked to IPV. At the structural level, socioeconomic status, gender roles, and the perception of women's place in society have been identified as contributing factors to IPV. At the individual level, family history of observing threats or actual violence between parents has been associated with both victimization and perpetration of violence in adulthood [32].

A longitudinal study conducted in the United States shows that the prevalence, incidence, and recurrence of IPV are higher among African-American and Hispanic couples compared with Caucasian couples [33]. The likelihood of IPV recurrence is associated with severity, but the rate of recurrence of severe IPV among African-American and Hispanic couples is six and four times higher, respectively, than the rate among Caucasians. Jasinski [34] also reports findings indicating a higher rate of IPV incidence among African Americans compared with Caucasians, although she found that African-American men are more likely than Caucasian men to stop being violent during a follow-up period.

Consequences of IPV

IPV has both short- and long-term physical and mental health consequences for women [35–37]. Research addressing mental health effects in

female victims of IPV has reported that the most prevalent psychological problems are depression, posttraumatic stress disorder (PTSD), and anxiety [38,39]. In one study [40], violence victimization was significantly related to symptoms of psychopathology. Specifically, sexual and psychological abuse by partners was associated with the presence of PTSD, depression, and generalized anxiety disorder diagnoses. Battered women also report significantly high rates of self-reported gastrointestinal symptoms (e.g., loss of appetite, eating disorders) and diagnosed functional gastrointestinal disorders (e.g., chronic irritable bowel syndrome) that are associated with chronic stress [41].

In a recent study [42], women who experienced sexual coercion or violence reported more PTSD symptoms and had higher rates of probable PTSD than women without PTSD. Sexual coercion emerged as a unique predictor of PTSD symptoms relative to sexual violence, but in multivariate analyses examining multiple forms of abuse, sexual abuse was not uniquely associated with PTSD symptoms, whereas psychological abuse was [43–46].

Both physical and psychological abuse is related to PTSD symptoms. Although physical and psychological abuse is highly correlated, psychological abuse does not predict PTSD symptomatology over and above the effect due to physical assault. Furthermore, psychophysiological reactivity, and anger and fear displayed during an argument with the partner did not mediate the link between abuse and trauma, while social support moderated the relation between psychological abuse and PTSD symptomatology [47].

In another study [48], a model of PTSD that included the four intercorrelated factors of intrusions, avoidance, dysphoria, and hyperarousal was found in 396 medical patients who screened positive for IPV and 405 women seeking services for IPV. Structural invariance testing indicated that this four-factor model remained stable across service setting and time.

A meta-analysis of mental disorders among IPV victims found that 31% to 85% of battered women met diagnostic criteria for PTSD with a weighted mean prevalence of 63.8%, while the second most frequent disorder was depression with a mean prevalence of 47.6% [49]. Interestingly, several studies have suggested that symptoms of PTSD may be linked to decreases in social support, more frequent and severe re-abuse experiences, and decreased safety among victims of interpersonal violence [50–52].

One study [53] found that PTSD symptoms fully mediated the associations of both physical and psychological aggression with physical health symptoms. In addition, the influence of PTSD symptoms on physical health symptoms was partially mediated by anger/irritability.

Despite the increasingly well-documented literature on the association between IPV and DSM Axis I diagnoses, there has been relatively little empirical focus on the interactions between IPV and PDs, and between IPV and alexithymia. Further, little attention has been paid to analyzing the relationships between IPV and coping strategies, and IPV and attachment styles. However, the assumption of the interaction between inherited susceptibility and environmental factors, such as traumatic experiences, in this case chronic violence by the partner, could lead us to the hypothesis that these victims are at high risk of developing PD symptoms. The higher incidence of PD symptoms in female victims of IPV could probably be a reaction to chronic violence exposure. In fact, as suggested by Bremner [54], some personality disturbances could be part of a stress-related disorder spectrum. According to this model, chronic traumatic stress can alter structural and functional aspects of the brain and lead to the development of a range of psychiatric disorders that share a relationship to stress. Undoubtedly, the exposure to chronic physical and/or psychological violence by the partner is a stressful condition for women. The effects of stress increase liability to psychiatric illness in general and over time may produce the quasi-stable constellations of maladaptive traits and behaviors, and pervasive dysfunctions that are typical of PDs.

In conclusion, it is reasonable to suppose that if female victims of IPV develop PD symptoms or other mental health problems, they may suffer worse detrimental effects on their well-being, and therefore may require specialized therapeutic intervention strategies.

Aims

The primary aim of this study was to investigate the relationship among alexithymia, adult attachment styles, depression, and coping strategies in a group of female victims of IPV and a control group. We tested the following hypotheses: (i) In accordance with Taylor et al. [55], a diminished ability to modulate the affects is associated with depression: from this point of view, we can consider depression as an outcome of affect

dysregulation. (ii) Frequencies of participants with insecure attachment styles, alexithymia, and coping strategy deficits are higher in women with IPV compared with the control group. (iii) There are significant correlations among insecure attachment styles, alexithymia, depression, and maladaptive coping.

Methods

Participants and Procedure

Participants were 80 female victims of IPV with an age range from 18 years to 54 years (mean 31.62; standard deviation 9.81). The control group included 80 women with no history of IPV with an age range from 19 years to 37 years (mean 25.05; standard deviation 3.67). The mean age in the two groups was significantly different ($t = -5.46$; degrees of freedom = 79; $P < 0.001$).

Women who had experienced IPV were recruited in two Sicilian centers (located in Palermo and Catania) specialized in treatment of victims of violence. Inclusion criteria included: (i) being 18 years of age or older, (ii) being a victim of physical aggressions during the past 6 months, and (iii) absence of family support. After they were selected, eligible women read and signed an informed consent form in which the aims of the study were explained. Many women did not want to involve their children in the study.

Control subjects were recruited from an Italian university. Eligibility for participation in the control group included: (i) being 18 years of age or older, (ii) being married or cohabitating with a significant other, and (iii) absence of IPV. A specific questionnaire was developed to obtain this information.

Main Outcome Measures

We administered the following self-report questionnaires:

The 20-Item Toronto Alexithymia Scale (TAS-20) [56,57] is a 20-item self-report measure. Items are rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). In the TAS-20, it is possible to distinguish three factors: (i) difficulty modulating and identifying feelings (DIF), (ii) difficulty describing one's feelings to others (DDF), and (iii) externally oriented thinking (EOT). Cutoff scores are as follow: ≤ 50 = no alexithymia, 51–60 = borderline alexithymia, and ≥61 = alexithymia.

The Coping Orientation to Problems Experienced (COPE) [58,59] is a 60-item self-report questionnaire. Items are rated on a four-point Likert scale ranging from 1 (I usually don't do this at all) to 4 (I usually do this a lot). This instrument assesses the use of skills and strategies adopted to face stressful and difficult events. The COPE-Nuova Versione Italiana (NVI) explores 15 coping styles grouped into 5 large, essentially independent dimensions: social support (SS), avoidance strategies, positive attitude, problem solving (PS), and transcendent orientation.

The Beck Depression Inventory-II (BDI-II) [60,61] is a 21-item self-report questionnaire that assesses the severity of depression. Each item is rated on a four-point Likert scale ranging from 0 to 3, reflecting various degrees of symptom severity. The severity of depression is measured using the following cutoff scores: 0–13 = minimal depression, 14–19 = mild depression, 20–28 = moderate depression, and 29–63 = severe depression.

The Attachment Style Questionnaire (ASQ) [62,63] is a 40-item self-report measure rated on a six-point Likert scale ranging from 1 (totally disagree) to 6 (totally agree). Items are grouped into the following five dimensions: "confidence," "discomfort with closeness," "need for approval," "preoccupation with relationships," and "relationships as secondary."

Data Analysis

Data analyses were performed using SPSS 17 (SPSS, Inc., Chicago, IL, USA). Descriptive statistics for variables measured in this study were calculated for the two groups, and relationships between variables within groups were analyzed using Pearson's r. A series of multivariate analyses of variance (MANOVAs) were conducted to evaluate the potential effect of diagnostic status (IPV vs. no IPV) on the scores of all scales used in this research.

Results

Descriptive Statistics

Frequencies of TAS-20 scores showed that IPV subjects were classified as "borderline" and "alexithymic" more frequently than members of the control group, $\chi^2 = 17.71$, $P = 0.000$ (Table 1).

Comparison of means between the two groups showed a significant difference in TAS-20 scores, with the IPV group reporting a higher mean score (mean 52.9, standard deviation 16.6) than the control group (mean 41.1, standard deviation 1.67) ($P < 0.001$).

Table 1 Frequency distribution of the TAS-20 results for the two groups

TAS-20	IPV group	Control group
Alexithymia	32 (40%)	10 (12.5%)
Borderline alexithymia	12 (15%)	10 (12.5%)
No alexithymia	36 (45%)	60 (75%)

IPV = intimate partner violence; TAS-20 = 20-Item Toronto Alexithymia Scale

The two groups also displayed a statistically significant difference ($P < 0.001$) in BDI-II mean scores. In particular, the mean score of the control group was within the range of "minimal depression" (mean 9.95, standard deviation 8.74), while the mean score of the IPV group reached the lower limit of the score indicating "moderate depression" (mean 20, standard deviation 11.05). Furthermore, among IPV victims, 60 women (75%) scored over the cutoff for "minimal depression," responses for 18 (22.5%) were within the range for "severe depression." Cross-tabulation of BDI-II and TAS-20 scores showed a significant relationship between alexithymia and depression severity in two groups (control group, $\chi^2 = 40.9$, $P = 0.000$; IPV group, $\chi^2 = 22.1$, $P = 0.001$). We also found that among members of the IPV group displayed that among those diagnosed with severe depression, 14 were alexithymic, 4 were non-alexithymic, and none were classified as borderline. As shown in Table 2, women who experienced IPV show alexithymic traits and symptoms of severe depression more often than controls. On the contrary, among women who have not suffered IPV, the majority had neither alexithymic traits nor depressive symptoms.

Pearson's r Correlations

In the IPV group, Pearson's r coefficients showed significant positive correlations between BDI-II and TAS-20 total scores ($r = 0.372$, $P < 0.001$), as well as BDI-II scores and the DIF ($r = 0.352$, $P < 0.001$), DDF ($r = 0.327$, $P = 0.003$), and EOT ($r = 0.277$, $P = 0.13$) subscales on the TAS-20. Significant correlations also were found for depressive symptoms and the following dimensions of the ASQ: confidence ($r = –0.367$, $P < 0.001$), discomfort with closeness ($r = 0.338$, $P = 0.002$), relationships as secondary ($r = 0.375$, $P < 0.001$), need for approval ($r = 0.547$, $P < 0.001$), and preoccupation with relationships ($r = 0.388$, $P < 0.001$). As for correlations between the TAS-20 and ASQ in the IPV group, confidence was significantly and negatively associated with both the first and second factor of TAS-20 ($r = –0.308$, $P = 0.006$ and $r = –0.284$, $P = 0.011$, respectively), but not with the third ($r = –0.123$, $P = 0.277$). Conversely, the other ASQ dimensions showed significant and positive correlations with the total TAS-20 score and the three TAS-20 factors. Please also note that age did not correlate significantly with any of the variables under investigation.

Differently from the control group, in the IPV group, SS correlated significantly and positively ($r = 0.354$, $P < 0.001$) with the dimension preoccupation with relationships on the ASQ, but not with the secure attachment style factor. PS, which was lower in the IPV group, was positively and significantly correlated with confidence ($r = 0.313$, $P < 0.005$) and negatively correlated with need for approval ($r = –0.246$, $P = 0.028$) (Tables 3 and 4).

Comparison of Means (MANOVA)

A MANOVA, performed with ASQ factors as dependent variables and the group variable (IPV vs. control) as the independent variable, showed significant differences in mean scores for the following ASQ factors: confidence, discomfort with

Table 2 Cross-tabulation of BDI-II and TAS-20 scores

A. IPV group B. Control group	Severe depression	Moderate depression	Mild depression	Minimal depression	Total
Alexithymia					
A.	14 (17.5%)	10 (12.5%)	6 (7.5%)	2 (2.5)	32 (40%)
B.	4 (5%)	0 (0%)	2 (2.5%)	4 (5%)	10 (12.5%)
Borderline alexithymia					
A.	0 (0%)	4 (5%)	4 (5%)	4 (5%)	12 (15%)
B.	2 (2.5%)	4 (5%)	2 (2.5%)	2 (2.5%)	10 (12.5%)
No alexithymia					
A.	4 (5%)	6 (7.5%)	12 (15%)	14 (17.5%)	36 (45%)
B.	0 (0%)	4 (5%)	4 (5%)	52 (65%)	60 (75%)
Total					
A.	18 (22.5%)	20 (25%)	22 (27.5)	20 (25%)	80
B.	6 (7.5%)	8 (10%)	8 (10%)	58 (72.5%)	80

BDI-II = Beck Depression Inventory-II; IPV = intimate partner violence; TAS-20 = 20-Item Toronto Alexithymia Scale

Table 3 Correlation matrix for all variables in the IPV group

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
a. Confidence	—														
b. Discomfort with closeness	–0.349**	—													
c. Relationships as secondary	–0.498**	0.404**	—												
d. Need for approval	–0.590**	0.335**	0.355**	—											
e. Preoccupation with relationships	–0.497**	0.506**	0.318**	0.625**	—										
f. TAS-20	–0.287**	0.393**	0.375**	0.427**	0.470**	—									
g. DIF	–0.308**	0.402**	0.312**	0.521**	0.544**	0.901**	—								
h. DDF	–0.284**	0.346**	0.424**	0.267*	0.315**	0.882**	0.676**	—							
i. EOT	–0.123	0.245*	0.242*	0.258*	0.305**	0.817**	0.573**	0.655**	—						
j. Social support	–0.045	0.115	0.032	0.158	0.354**	0.152	0.331**	–0.028	0.002	—					
k. Avoidance strategies	–0.375**	0.051	0.450**	0.283*	0.005	0.541**	0.491**	0.486**	0.427**	0.087	—				
l. Positive aptitude	0.514**	–0.019	–0.072	–0.385**	–0.383**	–0.112	–0.152	–0.088	–0.021	0.012	0.166	—			
m. Problem solving	0.313**	–0.201	–0.101	–0.246*	–0.212	–0.185	–0.138	–0.085	–0.286*	0.101	–0.161	0.547**	—		
n. Transcendent orientation	0.165	0.127	–0.017	–0.069	0.109	0.039	0.044	0.074	0.113	0.076	–0.230*	–0.069	–0.090	—	
o. Depression	–0.376**	0.338**	0.375**	0.547**	0.388**	0.372**	0.352**	0.327**	0.227*	0.140	0.315**	–0.335**	–0.070	0.368**	—

*Correlation is significant at the 0.05 level (two tailed)
**Correlation is significant at the 0.01 level (two tailed)
DDF = difficulty describing one's feelings to others; DIF = difficulty modulating and identifying feelings; EOT = externally oriented thinking; IPV = intimate partner violence; TAS-20 = 20-Item Toronto Alexithymia Scale

Table 4 Correlation matrix for all variables in the control group

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
a. Confidence	—														
b. Discomfort with closeness	–0.189	—													
c. Relationships as secondary	–0.191	0.344**	—												
d. Need for approval	–0.100	0.557**	0.464**	—											
e. Preoccupation with relationships	–0.107	0.487**	0.479**	0.549**	—										
f. TAS-20	–0.538**	0.340**	0.475**	0.488**	0.328**	—									
g. DIF	–0.462**	0.304**	0.387**	0.405**	0.297**	0.902**	—								
h. DDF	–0.412**	0.393**	0.281*	0.518*	0.277*	0.783**	0.598**	—							
i. EOT	–0.478**	0.121	0.382**	0.265*	0.225*	0.675**	0.450**	0.327**	—						
j. Social support	0.372**	0.081	–0.173	0.070	0.396**	–0.260*	–0.174	–0.242*	–0.148	—					
k. Avoidance strategies	–0.445**	0.393**	0.507**	0.636*	0.256*	0.700**	0.657**	0.541**	0.447**	–0.325**	—				
l. Positive aptitude	0.326**	0.223	–0.174	–0.026	–0.164	–0.101	–0.028	–0.022	–0.336**	0.263*	–0.155	—			
m. Problem solving	0.292**	0.077	0.027	0.130	0.016	–0.157	–0.218	–0.039	–0.198	0.435**	–0.237*	0.514**	—		
n. Transcendent orientation	–0.026	–0.101	0.055	0.225*	0.203	0.143	0.184	0.025	0.071	0.027	0.149	–0.269*	–0.096	—	
o. Depression	–0.421**	0.446**	0.336**	0.372**	0.154	0.654**	0.600**	0.531**	0.357*	–0.267*	0.697**	–0.037	–0.273**	0.066	—

*Correlation is significant at the 0.05 level (2-tailed)
**Correlation is significant at the 0.01 level (2-tailed)
DDF = difficulty describing one's feelings to others; DIF = difficulty modulating and identifying feelings; EOT = externally oriented thinking; TAS-20 = 20-Item Toronto Alexithymia Scale

Table 5 Differences in ASQ mean scores (MANOVA)

	M	SD	*F*(1)	*P*
Confidence				
IPV group	29.82	5.52	11.82	0.001
Control group	32.73	5.14		
Discomfort with closeness				
IPV group	40.13	8.45	20.16	0.000
Control group	34.78	6.48		
Relationships as secondary				
IPV group	15.38	5.20	0.795	0.374
Control group	14.58	6.10		
Need for approval				
IPV group	19.65	6.13	4.97	0.027
Control group	17.47	6.20		
Preoccupation with relationships				
IPV group	29.25	8.38	10.57	0.001
Control group	25.42	6.35		

Pillai's trace ($P = 0.000$); Wilks' lambda ($P = 0.000$); Hotelling's trace ($P = 0.000$); Roy's largest root ($P = 0.000$)
ASQ = Attachment Style Questionnaire; IPV = intimate partner violence; MANOVA = multivariate analysis of variance

Closeness, and preoccupation with relationships. There was an overall main effect of group, Wilks' lambda (λ) = 0.85, F (5, 154) = 5.55, $P = 0.000$, partial eta squared (η^2) = 0.15.

The IPV group reported higher scores on discomfort with closeness and preoccupation with relationships, two of dimensions related to insecure attachment (avoidant style and insecure/ambivalent style). Conversely, a significantly higher number of women in the control group showed a secure attachment style (represented by the dimension confidence) (Table 5).

Group differences between TAS-20 factor scores and BDI-II total scores also were significant. A MANOVA revealed a significant multivariate main effect, F (5, 154) = 8.08, $P = 0.000$, Wilks' λ 0.79, partial $\eta^2 = 0.21$ (Table 6).

Finally, comparisons between mean scores obtained by the two groups on the five dimensions of COPE-NVI revealed significant differences for the SS and problem solving dimensions. There was an overall main effect of group, F (5, 154) = 4.73, $P = 0.000$, Wilks' λ 0.87, partial $\eta^2 = 0.13$ (Table 7).

Conclusions

Results of this study emphasize the prevalence of an insecure attachment style and alexithymic and depressive traits among female victims of IPV when compared with a group of non-victims.

Results also suggest a high incidence of difficulties with affective regulation (as measured by the TAS-20, especially its first factor) in IPV victims, whose mean TAS-20 score was "borderline" for alexithymia. Conversely, the mean TAS-20 total score for the control group indicates no alexithymia. The presence of alexithymic traits in the IPV group could be considered as linked to the traumatic experience of the violence suffered. It also is related to internal working models typically associated with insecure attachment style [64], which, as it is well acknowledged, develop beginning in infancy [65]. The difference between the two groups is marked by more depressive symp-

Table 6 Differences in TAS-20 and BDI-II mean scores (MANOVA)

	M	SD	*F*(1)	*P*
TAS-20				
IPV group	52.95	16.7	22.15	0.000
Control group	41.15	14.97		
DIF				
IPV group	18.85	8.14	18.77	0.000
Control group	13.6	7.15		
DDF				
IPV group	14.52	5.85	14.48	0.000
Control group	11.20	5.18		
EOT				
IPV group	19.58	5.14	9.46	0.002
Control group	16.75	6.4		
BDI-II				
IPV group	19.50	11.06	36.7	0.000
Control group	9.95	8.75		

Pillai's trace ($P = 0.000$); Wilks' lambda ($P = 0.000$); Hotelling's trace ($P = 0.000$); Roy's largest root ($P = 0.000$)
BDI-II = Beck Depression Inventory-II; DDF = difficulty describing one's feelings to others; DIF = difficulty modulating and identifying feelings; EOT = externally oriented thinking; IPV = intimate partner violence; MANOVA = multivariate analysis of variance; TAS-20 = 20-Item Toronto Alexithymia Scale

Table 7 Differences in COPE mean scores (MANOVA)

	M	SD	*F*(1)	*P*
Social support (SS)				
IPV group	32.40	5.64	6.27	0.013
Control group	30.02	6.33		
Avoidance strategies (AS)				
IPV group	26.47	5.51	0.419	0.519
Control group	25.85	6.65		
Positive attitude (PA)				
IPV group	29.45	5.35	3.04	0.083
Control group	30.87	4.97		
Problem solving (PS)				
IPV group	28.53	4.82	11.09	0.001
Control group	30.98	4.46		
Transcendent orientation (TO)				
IPV group	22.28	4.36	1.62	0.204
Control group	21.43	4.06		

Pillai's trace ($P = 0.000$); Wilks' lambda ($P = 0.000$); Hotelling's trace ($P = 0.000$); Roy's largest root ($P = 0.000$)
COPE = Coping Orientation to Problems Experienced; IPV = intimate partner violence; MANOVA = multivariate analysis of variance

toms in victims of IPV than controls, and the correlation between depression and alexithymia is significant. In comparison to the control group, alexithymia, depressive symptoms, and an insecure attachment style were negatively correlated with the ability to cope with stress for women in the IPV group [66–71]. In our study, we found that victims of IPV had more difficulty with PS. From these data, we suppose that inadequate coping strategies could be correlated with a higher prevalence of IPV victimization. Unfortunately, few research studies have investigated whether inadequate coping strategies increases risk of IPV victimization. From a developmental perspective, we suppose that insecure attachment style (probably associated with early traumatic experiences) can contribute to difficulty modulating emotions (characteristic of alexithymia). In addition, this difficulty could increase vulnerability to IPV and contribute to the development of depressive symptomatology.

Limitations of our study include its correlational design and the use of only self-report measures to gather information on outcome variables. Further limitations are the significant differences in the average age between two groups and the nonevaluation of both the duration of the physical violence and seriousness of violence. In addition, we did not consider the distinction between primary alexithymia (or personality trait associated to early relationships caregiver-infant) and secondary alexithymia (as a defense of traumatic experience). Future research on IPV should make this distinction and should also evaluate the causal relationship among variables considered in our study. According to our view, there is also a need to explore the role of other factors: for instance, it might be important to know the role of personality functioning and social representation. Finally, we do not know what the role of children may be in the relational dynamics between offender and victim.

Outcomes of our study support the necessity of psychological interventions for IPV victims focused on affect regulation. In addition to focusing on the violence suffered, such interventions should work on the development of emotional abilities to manage and cope with stress.

Corresponding Author: Giuseppe Craparo, PhD, Kore University of Enna, Enna, Italy. Tel: 39 0935536536; Fax: 39 0935536943; E-mail: giuseppe.craparo@unikore.it

Conflicts of Interest: The authors report no conflicts of interest.

Statement of Authorship

Category 1

(a) Conception and Design
Giuseppe Craparo

(b) Acquisition of Data
Giuseppe Craparo; Vincenza Cannella

(c) Analysis and Interpretation of Data
Giuseppe Craparo; Alessio Gori

Category 2

(a) Drafting the Article
Giuseppe Craparo; Alessio Gori

(b) Revising It for Intellectual Content
Giuseppe Craparo; Alessio Gori; Irene Petruccelli; Chiara Simonelli

Category 3

(a) Final Approval of the Completed Article
Giuseppe Craparo; Alessio Gori; Irene Petruccelli; Vincenza Cannella; Chiara Simonelli

References

1 World Health Organization. World health report: Reducing risk, promoting healthy life. Geneva: WHO; 2002:230.
2 Krantz G, Garcia-Moreno C. Glossary on violence against women. J Epidemiol Community Health 2005;59:818–21.
3 Gottman JM, Jacobson NS, Rushe RH, Shortt JW, Babcock JC, La Taillade JJ, Waltz J. The relationship between heart rate reactivity, emotionally aggressive behavior, and general violence in batterers. J Fam Psychol 1995;9:227–48.
4 Babcock JC, Jacobson NS, Gottman JM, Yerington TP. Attachment, emotional regulation, and the function of marital violence: Differences between secure, preoccupied and dismissing violent and nonviolent husbands. J Fam Viol 2000;15:391–409.
5 Ehrensaft MK, Cohen P, Johnson JG. Development of personality disorder symptoms and the risk for partner violence. J Abnorm Psychol 2006;115:474–83.
6 Hamberger LK, Hastings JE. Personality correlates of men who abuse their partners: A cross-validation study. J Fam Viol 1986;1:323–41.
7 Tweed RG, Dutton DG. A comparison of impulsive and instrumental subgroups of batterers. Violence Vict 1998;13:217–30.
8 Babcock JC, Canady B, Graham KH, Schart L. The evolution of battering interventions: From the dark ages into the scientific age. In: Hamel J, Nicholls T, eds. Family therapy for domestic violence: A practitioner's guide to gender-inclusive research and treatment. New York: Springer; 2007:215–44.
9 Dutton DG. Rethinking domestic violence. Vancouver: UBC; 2006:426.
10 Holtzworth-Munroe A, Stuart GL. Typologies of male batterers: Three subtypes and differences among them. Psychol Bull 1994;116:476–97.
11 American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 5th edition. Arlington: American Psychiatric Association; 2013:947.
12 Keltner D, Kring AM. Emotion, social function, and psychopathology. Rev Gen Psycho 1998;2:320–42.
13 Norlander B, Eckhardt CI. Anger, hostility, and male perpetrators of intimate partner violence: A meta-analytic review. Clin Psychol Rev 2005;25:119–52.

14 Bowlby J. Attachment and loss. Vol. 2, Separation anxiety and anger. London: Hogarth; 1973:456.
15 Fonagy P. Male perpetrators of violence against women: An attachment theory perspective. J Appl Psychoan Stu 1999;1:7–27.
16 Back SM, Post RD, D'Arcy G. A study of battered women in a psychiatric setting. Women Ther 1982;1:13–26.
17 Pico-Alfonso MA, Echeburúa E, Martinez M. Personality disorder symptoms in women as a result of chronic intimate male partner violence. J Fam Viol 2008;23:577–88.
18 Shields NM, Resick PA, Hanneke CR. Victims of marital rape. In: Ammerman R, Hersen M, eds. Treatment of family violence. New York: Wiley; 1990:165–82.
19 Hathaway SR, McKinley JC. Minnesota multiphasic personality schedule. Minneapolis: University of Minnesota Press; 1943.
20 Khan FI, Welch TL, Zillmer EA. MMPI-2 profiles of battered women in transition. J Pers Assess 1993;60:100–11.
21 Martinez M, Garcia-Linares MI, Pico-Alfonso MA. Women victims of domestic violence: Consequences for their health and the role of the health system. In: Klein R, Wallner B, eds. Conflict, gender, and violence. Vienna: Studien-Verlag; 2004: 55–73.
22 Parrott DJ, Giancola PR. A further examination of the relation between trait anger and alcohol-related aggression: The role of anger control. Alcohol Clin Exp Res 2004;28:855–64.
23 Fals-Stewart W, Leonard KE, Birchler GR. The occurrence of male-to-female intimate partner violence on days of men's drinking: The moderating effects of antisocial personality disorder. J Consult Clin Psychol 2005;73:239–48.
24 Foran HM, O'Leary KD. Problem drinking, jealousy, and anger control: Variables predicting physical aggression against a partner. J Fam Viol 2008;23:144–8.
25 Manna G, Faraci P, Como MR. Factorial structure and psychometric properties of the Sensation Seeking Scale—Form V (SSS-V) in A sample of Italian adolescents. EJOP 2013;9:276–88.
26 Marcus RF. Patterns of intimate partner violence in young adult couples: Nonviolent, unilaterally violent, and mutually violent couples. Violence Vict 2012;27:299–314.
27 Donohew RL, Hoyle RH, Clayton RR, Skinner WF, Colon SE, Rice RE. Sensation seeking and drug use by adolescents and their friends: Models for marijuana and alcohol. J Stud Alcohol 1999;60:622–31.
28 Kalichman SC, Simbayi LC, Jooste S, Cain D, Cherry C. Sensation seeking, alcohol use, and sexual behaviors among sexually transmitted infection clinic patients in Cape Town, South Africa. Psychol Addict Behav 2006;20:298–304.
29 Zhan W, Shaboltas AV, Skochilov RV, Krasnoselskikh TV, Abdala N. History of childhood abuse, sensation seeking, and intimate partner violence under/not under the influence of a substance: A cross-sectional study in Russia. PLoS ONE 2013;8:e68027. doi: 10.1371/journal.pone.0068027.
30 Bensley L, Van Eenwyk J, Wynkoop Simmons K. Childhood family violence history and women's risk for intimate partner violence and poor health. Am J Prev Med 2003;25:38–44.
31 Bancroft L, Silverman J. The batterer as parent: Addressing the impact of domestic violence on family dynamics. Thousand Oaks, CA: Sage; 2002:240.
32 Tjaden P, Thoennes N. Extent, nature, and consequences of intimate partner violence: Findings from the National Violence Against Women Survey. Department of Justice, National Criminal Justice Reference Service: Washington, DC, 62pp, 2000.
33 Caetano R, Field CA, Ramisetty-Mikler S, McGrath C. The 5-year course of intimate partner violence among White, Black, and Hispanic couples in the United States. J Interpers Violence 2005;20:1038–57.
34 Jasinski JL. Physical violence among Anglo, African American, and Hispanic couples: Ethnic differences in persistence and cessation. Violence Vict 2001;16:479–90.
35 Campbell JC. Health consequences of intimate partner violence. Lancet 2002;359:1331–6.
36 Heru AM. Intimate partner violence: Treating abuser and abused. Adv Psychiatr Treat 2007;13:376–83.
37 Watts C, Zimmerman C. Violence against women: Global scope and magnitude. Lancet 2002;359:1232–7.
38 Cavanaugh CE, Messing JT, Petras H, Fowler B, LaFlair L, Kub J, Agnew J, Fitzgerald S, Bolyard R, Campbell JC. Patterns of violence against women: A latent class analysis. Psychol Trauma 2012;4:169–76.
39 Woods SJ. Prevalence and patterns of posttraumatic stress disorder in abused and postabused women. Ment Health Nursing 2000;3:309–24.
40 Stuart GL, Moore TM, Gordon KC, Ramsey SE, Kahler CW. Psychopathology in women arrested for domestic violence. J Interpers Violence 2006;21:376–89.
41 Coker AL, Smith PH, Bethea L, King MR, McKeown RE. Physical health consequences of physical and psychological intimate partner violence. Arch Fam Med 2000;9:451–7.
42 Norwood A, Murphy C. What forms of abuse correlate with PTSD symptoms in partners of men being treated for intimate partner violence? Psychol Trauma 2012;4:596–604.
43 Craparo G, Faraci P, Rotondo G, Gori A. The impact of event scale—revised: Psychometric properties of the Italian version in a sample of flood victims. Neuropsychiatr Dis Treat 2013;9:1427–32.
44 Franzoni E, Gualandi S, Caretti V, Schimmenti A, Di Pietro E, Pellegrini G, Craparo G, Franchi A, Verrotti A, Pellicciari A. The relationship between alexithymia, shame, trauma, and body image disorders: Investigation over a large clinical sample. Neuropsychiatr Dis Treat 2013;9:185–93.
45 Meston CM, Lorenz TA, Stephenson KR. Effects of expressive writing on sexual dysfunction, depression, and PTSD in women with a history of childhood sexual abuse: Results from a randomized clinical trial. J Sex Med 2013;10:2177–89.
46 Catellini G, Lo Sauro C, Lelli L, Godini L, Vignozzi L, Rellini AH, Faravelli C, Maggi M, Ricca V. Childhood sexual abuse moderates the relationship between sexual functioning and eating disorder psychopathology in anorexia nervosa and bulimia nervosa: A 1-year follow-up study. J Sex Med 2013;10: 2190–200.
47 Babcock JC, Roseman A, Green CE, Ross JM. Intimate partner abuse and PTSD symptomatology: Examining mediators and moderators of the abuse-trauma link. J Fam Psychol 2008;22:809–18.
48 Krause ED, Kaltman S, Goodman LA, Dutton MA. Longitudinal factor structure of posttraumatic stress symptoms related to intimate partner violence. Psychol Assess 2007;19:165–75.
49 Golding JM. Intimate partner violence as a risk factor for mental disorders: A meta-analysis. J Fam Viol 1999;14:99–132.
50 Cattaneo L, Bell M, Goodman L, Dutton M. Intimate partner violence victims' accuracy in assessing their risk of re-abuse. J Fam Viol 2007;22:429–40.
51 Johnson DM, Zlotnick C, Perez S. The relative contribution of abuse severity and PTSD severity on the psychiatric and social morbidity of battered women in shelters. Behav Ther 2008;39:232–41.
52 Perez S, Johnson DM. PTSD compromises battered women's future safety. J Interpers Violence 2008;23:635–51.
53 Taft CT, Vogt DS, Mechanic MB, Resick PA. Posttraumatic stress disorder and physical health symptoms among women seeking help for relationship aggression. J Fam Psycho 2007; 21:354–62.

54 Bremner JD. Acute and chronic responses to psychological trauma: Where do we go from here? Am J Psychiatry 1999; 156:349–51.
55 Taylor GJ, Bagby RM, Parker JDA. Disorder of affect regulation: Alexithymia in medical and psychiatric illness. Cambridge: Cambridge University Press; 1997:240.
56 Bagby RM, Parker JDA, Taylor GJ. The twenty-item Toronto alexithymia scale—I. Item selection and cross-validation of the factor structure. J Psychosom Res 1994;38:23–32.
57 Bressi C, Taylor GJ, Parker JDA, Bressi S, Brambilla V, Aguglia E, Allegranti S, Bongiorno A, Giberti F, Bucca M, Todarello O, Callegari C, Vender S, Gala C, Invernizzi G. Cross validation of the factor structure of the 20-item Toronto alexithymia scale: An Italian multicenter study. J Psychosom Res 1996;41:551–9.
58 Carver CS, Scheier MF, Weintraub JK. Assessing coping strategies: A theoretically based approach. J Pers Soc Psychol 1989;56:267–83.
59 Sica C, Magni C, Ghisi M, Altoè G, Sighinolfi C, Chiri LR, Franceschini S. Uno strumento aggiornato per la misura degli stili di coping: Il Coping Orientation to the Problems Experienced—Nuova Versione Italiana (COPE-NVI). Psic Cognitiva 2008;14:37–63.
60 Beck AT, Steer RA, Brown GK. Manual for the beck depression inventory–II. San Antonio, TX: Psychological Corporation; 1996.
61 Ghisi M, Flebus GB, Montano A, Sanavio E, Sica C. Beck depression inventory-II. Italian edition. Firenze: Giunti Editore; 2006:79.
62 Feeney JA, Noller P, Hanrahan M. Assessing adult attachment. In: Sperling MB, Berman WH, eds. Attachment in adults: Clinical and developmental perspectives. New York: Guilford; 1994:128–52.
63 Fossati A, Feeney JA, Donati D, Donini M, Novella L, Bagnato M, Acquarini E, Maffei C. On the dimensionality of the attachment style questionnaire in Italian clinical and nonclinical participants. J Soc Pers Relat 2003;20:55–79.
64 Giannini M, Gori A, De Sanctis E, Schuldberg D. A comparative analysis of attachment: Psychometric properties of the PTI Attachment Styles Scale (ASS). J Psy Int 2011;21:363–81.
65 Bowlby J. Attachment and loss. Vol. 1, Attachment. New York: Basic Books; 1969:236.
66 Coker AL, Weston R, Creson DL, Justice B, Blakeney P. PTSD symptoms among men and women survivors of IPV: The role of risk and protective factors. Violence Vict 2005;20: 625–43.
67 Gori A, Giannini M, Socci S, Luca M, Dewey D, Schuldberg D, Craparo G. Assessing social anxiety disorder: Psychometric properties of the Italian Social Phobia Inventory (I-SPIN). Clin Neuropsyc 2013;10:37–42.
68 Hedtke KA, Ruggiero KJ, Fitzgerald MM, Zinzow HM, Saunders BE, Resnick HS, Kilpatrick DG. A longitudinal investigation of interpersonal violence in relation to mental health and substance use. J Consult Clin Psychol 2008;76:633–47.
69 Johnson DM, Zlotnick C. Hope for battered women with PTSD in domestic violence shelters. Prof Psychol Res Pract 2009;40:234–41.
70 Matlow RB, DePrince AP. The influence of victimization history on PTSD symptom expression in women exposed to intimate partner violence. Psychol Trauma 2012;4:596–604.
71 Thomas R, DiLillo D, Walsh K. Pathways from child sexual abuse to adult depression: The role of parental socialization of emotions and alexithymia. Psychol Viol 2011;1:121–35.