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ORIGINAL ARTICLE

Proactive and Reactive Violence among Intimate Partner Violent Men Diagnosed with Antisocial and Borderline Personality Disorder

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Abstract Personality disorder features have been an important basis of many batterer typologies (Babcock et al. J Fam Violence 15:391–409, 2000; Holtzworth-Munroe and Stuart Psychol Bull 116:476–497, 1994), most notably Antisocial and Borderline Personality Disorders. Aggression that partner violent men commit has also been found to be heterogeneous, motivated by the need to control (proactive) or enacted out of emotion (reactive). In the present study, men who were physically abusive towards their female partner (N=124 couples) were administered the SCID-II diagnostic interview for Antisocial (ASPD) and Borderline Personality Disorder (BPD). It was hypothesized that partner violent men diagnosed with ASPD would show highest levels of proactive violence whereas men diagnosed with BPD (alone or comorbidly with ASPD) were expected to be reactively violent. Results suggest that violence perpetrated by men with different personality disorders differs in its function. Within the context of intimate relationships, BPD/comorbid men appear to use violence more reactively, while ASPD men tend to use violence both proactively and reactively. Implications for treatment are discussed.

Keywords Proactive violence · Reactive violence · Partner violence · Personality disorders

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Introduction

A recent meta-analysis of batterers' treatment found that current interventions are largely ineffective (Babcock et al. 2004). One potential reason for this discouraging finding is that distinct treatments may be needed for different "types" of aggression (Merk et al. 2005). Indeed, researchers in the area of intimate partner violence (IPV) have hypothesized that "a systematic examination of how and why different men use violence against their wives…. could lead to increases in therapy effectiveness" (Holtzworth-Munroe and Stuart 1994, p. 476). The distinction between use of proactive and reactive violence is a promising avenue for treatment matching. Understanding antecedents, motives, and functions of partner violence may prove to be valuable in designing the appropriate treatment for a particular batterer.

Researchers now acknowledge that intimate partner abusers constitute a heterogeneous group. As a result, there has been much effort recently to distinguish subtypes of men who batter women (Gottman et al. 1995; Babcock et al. 2000; Hamberger and Hastings 1986; and Holtzworth-Munroe and Stuart 1994). Such efforts have been referred to as "the zeitgeist in partner-violence research" (Chase et al. 2001, p. 567). Notable overlap exists in typologies proposed across research laboratories, and there appears to be some agreement about which variables are central to typologies of partner abusers.

Personality disorder (PD) is one dimension consistently used to subtype batterers. (Ehrensaft et al. 2006; Hamberger and Hastings 1986; Tweed and Dutton 1998). Some have argued that PD is not merely a correlate but an etiological factor in some men's perpetration of violence (Ehrensaft et al. 2006). In fact, violence of characterological batterers, who often exhibit personality dysfunction and tend to be

violent in all their intimate relationships, is thought to be one manifestation of their pathology (Babcock et al. 2007). Furthermore, while sexist beliefs have long been held as the primary predictor of wife abuse, more recent research indicates that PDs are more relevant predictors, with PD rates among partner-abusing men up to six times higher than rates among the general population (Dutton 2006). Antisocial and borderline personalities are among the most commonly referenced in partner violence research, and it has been suggested that both of these disorders be considered when investigating male-perpetrated, IPV (Holtzworth-Munroe and Stuart 1994).

In reviewing and synthesizing a number of batterer typologies, Holtzworth-Munroe and Stuart (1994) outlined a meta-typology of male batterers that has been tested and generally supported (Hamberger et al. 1996; Waltz et al. 2000; White and Gondolf 2000). According to Holtzworth-Munroe and Stuart, three batterer subtypes exist and exhibit different profiles, particularly in terms of psychopathology and severity of IPV. Borderline/dysphoric batterers, 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 (Holtzworth-Munroe and Stuart 1994).

In addition to their centrality in batterer typologies, ASPD and BPD represent DSM-IV (Diagnostic and Statistical Manual of Mental Disorders; American Psychiatric Association 2000) diagnoses with symptom patterns that are quite similar to descriptions of many partner abusers (Dutton 2006). 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 (American Psychiatric Association 2000). Batterers with BPD may lash out physically at their partners when they become distressed as a way to regulate negative emotions (Keltner and Kring 1998).

Other intimate partner abusers show patterns of antisocial behavior that do not appear to be linked to mood or abandonment fears. ASPD is characterized by manipulation of others for personal gain and persistent disregard for and aggression toward others, including romantic partners (American Psychiatric Association 2000). Antisocial individuals often lack empathy and tend to do whatever is necessary (e.g., hit, lie, con others) to get their own way (American Psychiatric Association 2000). Similarly, batterers with ASPD may use violence as an instrument to resolve conflict with their partners and to maintain power and control in their relationships (Babcock et al. 2000; Holtzworth-Munroe and Stuart 1994).

Proactive-Reactive Aggression

Just as partner abusers have been deemed a heterogeneous group requiring differentiation, so too has the aggression they commit. In addition to PD diagnoses, another factor that may help to differentiate subtypes of batterers is the motivation behind their IPV (Lohr et al. 2005). The proactive-reactive typology of aggression, based on motives and antecedents of violence and widely applied to the study of violent youths (Dodge and Coie 1987; Merk et al. 2005; Raine et al. 2006), has also been used to describe the violence of adult male batterers (Chase et al. 2001; Tweed and Dutton 1998). In fact, proactive and reactive aggression, while perhaps not explicitly identified as such, have already been used to describe the violence of different subtypes of batterers across a number of studies (Babcock et al. 2000; Gottman et al. 1995; Holtzworth-Munroe & Stuart 1994; Tweed and Dutton 1998).

Reactive Violence

Reactive aggression, also called impulsive, unplanned, hostile, expressive, affective, and hot-blooded (Ramirez and Andreu 2006), occurs in response to perceived provocation and in the presence of high arousal and anger (Bushman and Anderson 2001). Among violent offenders, reactive aggressors were more likely than those with a history of proactive aggression to report feeling provoked by their victim and experiencing anger during the offense (Cornell et al. 1996). A reactive batterer may respond aggressively during high states of arousal. For reactive batterers, physical aggression may also follow a perceived insult from his partner or the threat that his partner plans to leave, and this tendency may be augmented by personality styles that foster dependence, insecurity, anger, or emotional lability. Several studies have described the use of reactive violence by a subset of abusers in this way (Babcock et al. 2000; Chase et al. 2001).

For example, Tweed and Dutton (1998) identified an "impulsive" (reactive) batterer, who scored high on measures of antisocial and borderline personality and whose aggression was thought to be an attempt to counteract aversive arousal and negative affect. Gottman et al. (1995) identified a group of violent men based on heart rate ("Type 2" batterers) who evidenced increased physiological arousal during a conflict discussion with their partners. These men became increasingly hostile toward their partners during the

discussion and scored high on a measure of dependent personality, a trait commonly found among those with BPD. Similarly, in the first study to use sequential analysis of past violent events to examine the function of violence, Babcock and colleagues (2000) found that batterers whose attachment style was characterized as "preoccupied" responded violently when their wives attempted to withdraw or acted in self-defense during an altercation. Preoccupied attachment style is similar to BPD, as both manifest dependency, abandonment fears, and emotional lability. The aggression used by preoccupied batterers was hypothesized to function as a type of "emotional release" or "an expressive response to abandonment fears" (Babcock et al. 2000, p. 404, 406). All of the above typologies overlap with the Holtzworth-Munroe and Stuart subtype of borderline/dysphoric partner abusers. Their violence is thought to be reactive, unplanned, and they tend to exhibit hyperarousal, emotionality, and high levels of anger (Holtzworth-Munroe and Stuart 1994).

Proactive Violence

Unlike reactive aggression, proactive aggression is enacted without provocation, and in the absence of anger (Merk et al. 2005) or high autonomic arousal (Raine et al. 2006; Ramirez and Andreu 2006). Proactive aggression, also referred to as instrumental, premeditated, predatory, planned, and cold-blooded (Ramirez and Andreu 2006), is a goal-directed behavior, in which violence is a means to an end other than simply inflicting harm. For example, the proactive aggressor's goal might be to acquire goods, such as money or drugs, or to intimidate or dominate others (Merk et al. 2005; Ramirez and Andreu 2006; Vitaro and Brendgen 2005; Walters 2005). Characteristics of ASPD, including the inability to empathize and lack of remorse, are considered risk factors for proactive aggression (Kingsbury et al. 1997). Male batterers who enact proactive aggression often objectify their female partners and tend to view violence as an acceptable and appropriate mechanism for resolving conflict (Merk et al. 2005). For the proactive batterer then, violence may serve as a means of intimidating or controlling his partner or for getting his own way when conflict arises.

Many typology studies have described a proactive batterer subtype. In addition to the "impulsive" batterer, Tweed and Dutton (1998) described a proactive batterer, who scored high on a measure of antisocial personality and engaged in the most frequent and severe IPV. They hypothesized that the proactive batterer used violence to control his partner and that maintaining control over his partner was an essential part of the proactive batterer's concept of intimacy (Tweed and Dutton 1998). In describing the "generally violent/antisocial batterer," Holtzworth-Munroe and Stuart (1994) detailed a pattern of proactive violence, as these men are generally thought to be "using violence to resolve conflicts and solve problems" (p. 490). Similarly, Gottman and colleagues (1995) described a proactive subtype ("Type 1" batterers), who displayed hyporeactivity during a conflict discussion with their partners and scored high on a measure of ASPD. The Type 1 abuser was thought to "systematically use violence or its threat to create greater intimidation in their wives" (Gottman et al. 1995, p. 245). Babcock and colleagues' (2000) attachment typology of batterers found that men with a dismissing attachment style used "instrumental" violence to control their wives and scored high on a measure of ASPD. Using sequential analyses of descriptions of past violent incidents, instrumental IPV was coded as violence in response to wives making a demand or becoming defiant, challenging the husband's authority.

It is clear that while different terminology is used to describe different types of batterers, research consistently identifies subtypes of batterers who are thought to engage in more proactive versus more reactive forms of aggression. However, the proactive/reactive typology is not without controversy, as research indicates that these types of aggression are highly correlated and often occur within the same individual and/or aggressive act (Bushman and Anderson 2001; Walters 2005). Indeed, while reactive aggression frequently occurs in the absence of proactive aggression, it is less common to find proactively aggressive individuals with no history of reactive aggression (Cornell et al. 1996). Still, this typology has a sound theoretical basis and substantial empirical support (Chase et al. 2001; Merk et al. 2005). Exploratory and confirmatory factor analyses have consistently demonstrated that aggression is more adequately represented by a two-factor model (typically described in terms of proactive and reactive aggression) versus a single-factor (Poulin and Boivin 2000; Raine et al. 2006; Ramirez and Andreu 2006).

Current Study

This study represents an attempt to synthesize across some findings from the IPV literature by examining severity of IPV and the use of proactive versus reactive violence among men diagnosed with ASPD, BPD (either exclusively or comorbidly with ASPD; "BPD/comorbid"), and a control group of batterers not meeting diagnostic criteria for either diagnosis (a no-diagnosis control group; "ND/control"). We utilized both self and partner-report questionnaires to assess men's IPV and women's injuries. We also studied women's descriptions of violent incidents and examined the particular types of behaviors or events that preceded men's use of IPV, using sequential analysis.

We hypothesized that ASPD and BPD/comorbid men would be more severely violent toward their partners (and

cause more injuries) than ND/control-group men. Also, sequential analysis of interview data from female partners was analyzed in order to examine whether antecedents to men's IPV differed in couples in which the man was diagnosed with ASPD, comorbid for ASPD and BPD, or neither (i.e., ND/control). Based on past research, ASPD batterers were predicted to use violence proactively, as a way to control their partner, while BPD batterers were expected to be reactively violent in their relationships.

Methods

Participants

Participants responded to ads in free, local newspapers and flyers soliciting "couples experiencing conflict." Couples were required to be at least 18 years of age and to be married or living together as if married for at least 6 months. Female volunteers were contacted via telephone by trained undergraduate interviewers who administered the violence subscale of the Conflicts Tactics Scale (CTS; Straus 1979) to determine eligibility for the study. Women whose responses qualified the couple for participation were scheduled for an appointment for her and her partner to come in to the lab. Couples were preliminarily classified as domestically violent if the female partner reported at least one incident of male-to-female aggression in the past year over the telephone. Further classification was based on participant report of their own and their partner's physical violence on the longer CTS2 (the revised Conflict Tactics Scale; Straus et al. 1996). Couples were paid $10 per hour for their participation.

Overview of Procedures

Data were collected from both partners during an assessment period that lasted approximately 3 h. During the assessment, couples were separated to complete a series of questionnaires and were then interviewed independently by trained research assistants.

Safety Procedures

Safety procedures applied here were adapted from previous research (Babcock et al. 2005; Jacobson et al. 1994). Briefly, women were informed of the nature of the study via telephone and were asked not to participate if they anticipated increased aggression from their partner. Following the assessment, each participant was provided referrals for community resources and debriefed separately to assess danger potential and create a safety plan, if needed. Women were telephoned 1 week later to assess whether the laboratory experience caused any untoward events. In no cases did women report any violence due to participation in the study.

Measures

Intimate Partner Violence The Revised Conflict Tactics Scale (CTS2; Straus et al. 1996) was administered separately to men and women. The CTS2 is a widely used, 78-item questionnaire that assesses the frequency of male-to-female and female-to-male physically, sexually, and psychologically abusive acts and injuries in the past year. Preliminary internal consistencies of the CTS2 range from .79 to .95 (Straus et al. 1996). Internal consistencies of the three CTS2 subscales used in this study were .81 for minor violence, .76 for severe violence, and .60 for injury.

Personality Disorder To assess for ASPD and BPD among male participants, clinical psychology graduate students administered the structured clinical interview for DSM-IV Personality Disorders (SCID-II; First et al. 1997) individually to each man. All interviews were videotaped and a second graduate student trained in SCID assessments rescored the interviews for reliability. Interrater agreement between the first and reliability coder for was 80% agreement for BPD and 82% agreement for ASPD diagnoses.

Violent Incidents Women were individually administered a semi-structured clinical interview, which has been used in previous research (Jacobson et al. 1994), to assess their relationship and violence history. Women were asked to describe the most recent and the worst violent incidents in which male-to-female physical aggression occurred in their current relationship. Interviewers were instructed to allow participants to describe the step-by-step progression of each incident and to interrupt as necessary in order to clarify the sequence of events or elicit more detail. All interviews were videotaped. Trained research assistants later transcribed all violent incident descriptions into a list of behaviorally specific acts. Then a coding system, based on one used in previous studies (Babcock et al. 2000; Jacobson et al. 1994), was used to code each act. Acts were coded as fitting one of 30, mutually exclusive behaviors. These 30 codes were then collapsed into nine codes because of low frequency of occurrence, resulting in a final system of nine codes: prosocial, withdrawal, complaint, distress, dominance/belligerence, offensive violence, threat, verbal defense, and contextual/other (see Appendix) used for analyses. A subset of the videotaped interviews were randomly selected to be double coded and the interrater reliability for this final, nine-code system was kappa = 0.76. Coded event sequences were entered into a computer

program and sequential analysis was conducted to examine women's acts preceding men's violence. We investigated whether different antecedents (i.e., wife/girlfriend behaviors) preceded the violence of ASPD, BPD/comorbid, and ND/control batterers.

Analyses

Multivariate analysis of variance (MANOVA) was used to assess differences in severity of men's violence and partner injuries between ASPD, BPD/comorbid, and ND/control batterers. The "lag sequential method" (Bakeman and Gottman 1997) was used to conduct sequential analysis of coded interview data, using the General Sequential Querier (GSEQ; Bakeman and Quera 1995; Quera and Bakeman 2001) software program. Using the lag sequential method, the researcher identifies antecedent and consequent events of interest and looks for particular patterns or sequences of events in the data. In the present study, a man's initial act of violence (as described during the violent incident interviews) was considered the consequent event of interest and GSEQ was used to explore which wife behavior (antecedent event) preceded it. "Lag 1" behavior was of exclusive interest here, meaning that only the wife/girlfriend behavior immediately preceding the man's initial use of violence was investigated.

The GSEQ program provides adjusted residuals (with distributions approximating *z-scores*; Bakeman et al. 1995), which are used to assess for particular sequences of events. In this way, GSEQ can provide information about the probability of the consequent behavior of interest occurring after a specific antecedent behavior, controlling for chance. Specifically, adjusted residuals with a value greater than 1.96 or less than −1.96 are indicative of significant patterns (α=0.05) in the data (Bakeman et al. 1995). The significance of differences between groups can be assessed by computing the difference between z-scores for the groups in question using the following calculation: $z_{diff}=z_1-z_2 / \sqrt{2}$ (Babcock et al. 2000; Bakeman 1983).

Results

The final sample consisted of 124 couples in which at least one partner reported some male to female IPV in the past year. Just over 57% of the participants were African American, 24% were Caucasian, approximately 15% were Hispanic, and 4% were from other racial or ethnic backgrounds. The average age was 32 for men and 30 for women and the average family income was $27,392 per year. The overall sample was subdivided based on SCID-II diagnosis of Antisocial and Borderline Personality Disorder. Of the 124 domestically violent men with SCID data, approximately 67% (n=83) did not meet criteria for either personality disorder (i.e., the "ND/control group"), 14.5% (n=18) met criteria for Antisocial Personality Disorder (i.e., the "ASPD group"), and 18.5% (n=23) were diagnosed with Borderline Personality Disorder (alone or in combination with ASPD; "BPD/comorbid group"). Borderline and comorbid men were combined because of the small number of men (n=7) meeting diagnostic criteria exclusively for BPD in this sample of violent men. Demographic data was also examined by group; no significant differences were found (see Table 1).

Multivariate analyses of variance (MANOVAs) were performed to investigate differences between ASPD, BPD/comorbid, and ND/control batterers. Group differences in men's severity of violence and women's injuries were examined. Wives/girlfriends of ASPD and BPD/comorbid men reported significantly more instances of IPV and more injuries at the hand of their intimate partner as compared to wives/girlfriends of ND/control group men (see Table 1). Differences between ASPD and BPD/comorbid men were not significant, nor were there significant differences between any groups when men's reports of their own behavior were examined.

Because ASPD is, at least in part, a measure of antisocial behavior, additional analyses were run controlling for the potential confound of criminal history, in order to assess the extent to which group differences were related to personality pathology versus criminal history. First, ANOVAs tested whether the three groups differed significantly on men's criminal history. Men's criminal history was based on men's reports of the number of times they had been incarcerated. Results of this ANOVA indicated that, while there was an overall difference in men's criminal histories between the three groups ($F(2,116) = 4.15$; $p<.05$), the only significant group differences were between men in the ASPD versus ND/control group. Differences between ASPD and BPD/comorbid men cannot be attributed to differences in their criminal histories. Entering criminal history as a covariate in a MANCOVA, group differences in women's injuries ($F(3,104) = 3.44$; $p<0.05$) and severity of men's violence ($F(3,106) = 5.10$; $p<0.01$) remained. That is, controlling for men's criminal history, female partners of men in the ASPD and BPD/comorbid groups still reported significantly more injuries and more severe violence than partners of ND/control-group men. No significant differences between the ASPD and BPD/comorbid groups emerged. In addition, criminal history was not significantly related to women's injuries ($F(3,106) = 0.05$; ns) or to the severity of men's violence ($F(3,106) = 0.01$; ns), as reported by their partners.

In addition to questionnaire data, analyses were also performed on coded interview data. A total of 150 violent

Table 1 Demographics, men's partner violence, and women's injuries by group

	ASPD (n=18) Mean (SD)	BPD/comorbid (n=23) Mean (SD)	ND/control (n=83) Mean (SD)	F (2,121)
Age				
Men	30 (8.04)	35 (9.75)	32 (10.63)	1.13
Women	32 (10.11)	31 (8.44)	29 (9.50)	0.51
Family Income[1]	26,644 (24,215)	26,750 (22,675)	27,645 (21,948)	0.01
Men's Partner Assault[2]				
Men's report	25.53 (45.80)	23.91 (33.54)	11.92 (18.82)	2.51
Women's report	32.07 (39.63) $_a$	26.91 (31.00) $_a$	12.37 (15.17) $_b$	5.95**
Women's Injuries[3]				
Men's report	2.87 (3.44)	4.05 (6.09)	1.86 (4.11)	1.99
Women's report	8.20 (14.82) $_a$	6.71 (10.60) $_{ab}$	2.32 (4.48) $_b$	4.54*

[1] Gross yearly income, male and female earnings combined

[2] Intimate partner abuse subscale measured via the CTS-2 (Straus et al. 1996) reflects the number of male-to-female aggressive acts in the past year

[3] Injury subscale measured via the CTS-2 (Straus et al. 1996) reflects number of times women were injured at the hands of the current partner in the past year

$_{a, b,}$ Groups with shared subscripts do not differ significantly from each other

*p<.05; **p<.01; ***p<.001

incidents described by 80 women were analyzed. Sequential analysis was used to examine which wife/girlfriend behavior preceded their partner's use of mild and severe violence. Z-scores greater than 1.96 indicated that that men's violence, following a particular wife/girlfriend behavior of interest, was more likely to occur than one would anticipate based on chance alone. Z-scores less than −1.96 indicate that men's violence was less likely to follow the antecedent behavior than would occur by chance. Z-scores in excess of | 2.58| indicate significance at an alpha of .01.

Table 2 displays z-scores corresponding to antecedents to men's violence by group. ND/control-group batterers responded with *mild* violence (e.g., pushing, slapping, grabbing) to their partners' withdrawal (z=3.22; p<.01), violence (z=6.28; p<.01), and verbal threats (z=2.15; p<.05) and were less likely to become violent after their partners displayed distress (z=− 2.57; p<.05), or did something classified as "other"(e.g., substance use; z= −2.94; p<.01). Men in the ASPD group also tended to respond with mild violence to their partners' use of violence (z=3.41; p<.01) and were unlikely to become violent after "other," unrelated behaviors (z=−2.02; p<.05). In contrast, no wife/girlfriend behavior predicted men's mild violence in the BPD/comorbid group. Even women's use of violence, which was the common, significant predictor of mild violence for batterers in the ASPD and ND/control groups, did not predict BPD men's violence (z= 0.97; *ns*).

A different pattern emerged when sequential analysis was used to predict antecedents to men's use of *severe v*iolence toward their partners (e.g., choking, twisting the woman's neck, grabbing the back of her head and pushing the woman's face into a mirror). ND/control-group batterers responded with severe violence to their partners' complaints (z=2.35; p<.05). In contrast, ASPD batterers were severely violent after their wives/girlfriends engaged in a behavior categorized as dominance/belligerence (e.g., acted sarcastically, demanded something; z=2.58; p=.01). Finally, only BPD/comorbid batterers reacted with severe violence to women's displays of distress (z=4.36; p<.01).

To investigate whether there were significant differences in the antecedents to men's violence across the three groups, a difference of z-scores calculation was used: $z_{diff}=z_1-z_2 / \sqrt{2}$ (see Table 3). The differences comparing z-scores between BPD/comorbid and ND/control-group batterers in women's violence preceding men's mild violence was significant (z_{diff}= 3.75; p<.01), with ND/control-group batterers being significantly more likely than BPD/comorbid batterers to react violently to their partners' violence. Similarly, although both ASPD and ND/control-group batterers tended to react with mild violence to their partners' violence, ND/control-group batterers were significantly more likely to do so (z_{diff}=2.03; p<.05). ND/control men were also significantly more likely than ASPD men to react with mild violence when their partners attempted to withdraw (z_{diff}=2.26; p<.05). The difference between ND/control and BPD/comorbid batterers

Table 2 Z-scores associated with antecedents to men's use of mild and severe violence against their female partners

	ASPD		BPD/comorbid		ND/control	
Antecedents	Mild	Severe	Mild	Severe	Mild	Severe
(Women's Behaviors)						
Prosocial	−0.78	−0.16	−0.34	−0.33	−1.00	−0.63
Withdrawal	0.03	−0.33	1.31	1.03	3.22**	−0.93
Complaint	0.85	−0.33	0.41	−0.35	−0.42	2.35*
Distress	−0.69	−0.32	−0.94	4.36**	−2.57*	−0.56
Dominance/Belligerence	−0.45	2.58**	1.29	−0.80	0.33	1.32
Offensive Violence	3.41**	−0.23	0.97	−0.30	6.28**	1.78
Threat	1.02	−0.32	0.13	−0.26	2.15*	−0.55
Verbal Defense	0.69	−0.35	−1.23	−0.47	0.25	−0.79
Context/Other	−2.02*	−0.54	−1.67	−0.40	−2.94**	−0.74

*$p<.05$; **$p\leq.01$

was not significant for violence in response to partner's withdrawal ($z_{diff}=1.35$; *ns*).

With regard to severe violence, ASPD men were significantly more likely to become severely violent after their wives/girlfriends engaged in dominant or belligerent behavior as compared to BPD/comorbid men ($z_{diff}=2.39$; $p<.05$), who were actually unlikely to become severely violence in this situation (see Table 3). Finally, BPD/comorbid batterers were significantly more likely than both ASPD ($z_{diff}=-3.31$; $p<.01$) and ND/control ($z_{diff}=-3.48$; $p<.01$) batterers to react with severe violence after their partner exhibited distress. In fact, ASPD and ND/control batterers were *less* likely (i.e., negative z-scores) to become violent after their wives/girlfriends exhibited distress (see Table 2).

Discussion

These findings suggest that important differences exist in the partner violence perpetrated by men with with and without personality pathology. First, personality-disordered batterers in this study were significantly more violent toward their partners and inflicted more injuries than the non-diagnosed, control-group men. Additionally, the violence of men with different personality disorders appears to differ in its function. Within the context of an intimate relationship, BPD/comorbid men appear to engage largely in reactive violence, while ASPD men tend to use violence both proactively and reactively. Differences in the type of partner violence enacted by ASPD versus BPD/comorbid men was not attributable to differences in criminal history or IPV severity, as personality-disordered batterers were similar with regard to number of previous incarcerations, partner injury, and the amount of male-to-female violence in their current relationship.

How do findings of violence in reaction to women's belligerence or distress relate to proactive versus reactive aggression? Again, proactive or instrumental violence is thought to be a means to an end other than violence (e.g., control), whereas reactive or impulsive violence typically occurs in the presence of heightened affect or arousal and is an end in itself (Kingsbury et al. 1997). It was hypothesized that ASPD men would use proactive aggression while

Table 3 Differences between Z-Scores of ASPD, BPD/comorbid, and ND/control Batterers (Z_{diff})

	Mild Violence			Severe Violence		
Antecedents	1[1] vs. 2[2]	2 vs. 0[3]	1 vs. 0	1 vs. 2	2 vs. 0	1 vs. 0
(Women's Behaviors)						
Prosocial	−0.31	−0.47	−0.16	0.12	−0.21	−0.33
Withdrawal	−0.91	1.35	2.26*	−0.96	−1.39	−0.42
Complaint	0.31	−0.59	−0.90	0.01	1.91	1.90
Distress	0.18	−1.15	−1.33	−3.31**	−3.48**	−0.17
Dominance/Belligerence	−1.23	−0.68	0.55	2.39*	1.50	−0.89
Offensive Violence	1.73	3.75**	2.03*	0.05	1.47	1.42
Threat	0.63	1.43	0.80	−0.04	−0.21	−0.16
Verbal Defense	1.36	1.05	−0.31	0.08	−0.23	−0.31
Context/Other	−0.25	−0.90	−0.65	−0.10	−0.24	−0.14

[1] 1 = ASPD batterers
[2] 2 = BPD/comorbid batterers
[3] 0 = ND/control batterers
*$p<.05$; **$p<.01$

BPD/comorbid men would be more reactively violent. Women's descriptions of their partners' behavior during violent incidents appear to support this hypothesis, at least in part.

BPD/Comorbid Men and Their Use of Violence

While women's violence was the most consistent predictor of men's violence, it was not a significant predictor among BPD/comorbid men. Also, whereas suppression of mild violence of the other men could be predicted (i.e., significant, negative z-scores), the mild violence of BPD/comorbid batterers was not predictable based on their partner's behavior. There were no wife/girlfriend behaviors that were either more or less likely to precede the mild violence of their BPD/comorbid male partner than one would anticipate based on chance alone. Paradoxically, the erratic behavior which is common among individuals with BPD makes the unpredictability of these batterers' behavior somewhat predicable. These men, meeting criteria for a disorder in which (affective and interpersonal) instability and impulsivity are characteristic, behaved largely unpredictably during a fight with a romantic partner.

BPD/comorbid men reacted to their wives'/girlfriends' displays of distress (i.e., pleading, crying, or other displays of negative affect) with severe violence. This behavior was in stark contrast to ASPD and ND/control group men, who were actually unlikely to become violent following their partners' displays of distress. The BPD/comorbid men's aggressive reactions to their partners' distress may reflect these men's emotional dysregulation, further disrupted by their partner's emotional upset. Reactive aggression, which typically occurs in the context of negative affect (Holtzworth-Munroe and Stuart 1994), has been conceptualized as a way to "discharge arousal" (Kingsbury et al. 1997, p. 227). The present findings are consistent with previous research on reactive batterers, whose aggression has been described as one of "a set of actions designed to lower aversive internal tensions, including aversive arousal and the negative affect comprised of this arousal." (Tweed and Dutton 1998, pg. 227). Reactive aggression as a response to "heightened arousal or excessive stimulation" (Kingsbury et al. 1997) may be particularly likely to characterize the response of borderline individuals when presented with strong, negative affect. Thus, in the violent incidents described by their partners, the BPD/comorbid men in this study appear to have engaged in IPV in a predominantly reactive fashion.

ASPD Men and Their Use of Violence

ASPD men in the current sample appear to have enacted both proactive and reactive IPV during the incidents described by their wives/girlfriends. Specifically, the pattern of the ASPD men becoming violent in response to their female partner's violence likely represents men's reactive violence upon perceived provocation. Although violence here could be conceptualized as a way to control one's partner, violence following a verbal or physical attack is generally considered to be reactive in nature (Kingsbury et al. 1997). On the other hand, the sequence of female dominance or belligerence occurring just before a man's severe violence appears to indicate the use of proactive violence by ASPD men, as a way to control his partner's behavior, and this sequence of behaviors has previously been described in terms of proactive violence (Babcock et al. 2000). Proactive or instrumental aggression has been described as a tool used to intimidate or dominate others or a "self-serving strategy of social control" (Little et al. 2003, p. 130; Vitaro and Brendgen 2005).

These findings fit with past research, which has demonstrated the use of proactive violence by certain batterers as an attempt to "thwart perceived threats towards [their] authority" (Babcock et al. 2000). It has been proposed that the antisocial batterer may be preoccupied with maintaining control over his intimate partner, as control and domination of the woman may be central to the definition of intimacy for these men (Tweed and Dutton 1998). Men's use of proactive violence here to quash his partner's opposition or attempts at dominance make sense in light of the personality correlates of antisocial individuals, who may "stop at nothing to avoid being pushed around" (American Psychiatric Association 2000, p. 703). Finally, while it was predicted that ASPD men would be proactively violent, the finding that they also appeared to be reactively violent toward their partners is not surprising, considering the rarity of stand-alone, proactive aggression (Cornell et al. 1996; Merk et al. 2005).

Personality Disorders and Batterer Typologies

As others have suggested, personality disorders do appear to be an important factor in differentiating subtypes of batterers. Like the "Impulsive" batterer described by Tweed and Dutton (1998), BPD/comorbid men in the current study scored high on measures of both antisocial and borderline personality. Both groups also appear to be reactively violent, particularly within the context of a romantic relationship. Gottman et al's Type 2 batterers, who evidenced dependent personality traits, common in BPD, were found to be more physiologically reactive, particularly in the presence of negative affect (1995). This reactivity to negative affect was seen among BPD/comorbid men in the current study, who became violent following their partners' displays of distress. The preoccupied batterers described by Babcock and colleagues (2000) were also considered reactively aggressive, and their violence was thought to be

a type of "emotional release." Violence of the BPD/comorbid men was similar to that of Holtzworth-Munroe and Stuart's (1994) Borderline/Dysphoric (BD) batterer, who was described as "emotionally volatile" and whose violence tended to be "unplanned."

The ASPD batterers in the current study were similar to Tweed and Dutton's (1998) "Instrumental" batterer, who scored high on a measure of antisocial personality and appeared to use violence proactively, in order to maintain control over a female partner. These participants were also similar to the "Type 1" batterer described by Gottman and colleagues (1995), who scored high on a measure of antisocial personality and were thought to use physical aggression to control and/or intimidate their wives. The ASPD batterers in the current study also appeared similar to the "dismissing" batterers discussed by Babcock and colleagues (2000), who scored high on a measure of antisocial personality and who frequently became violent after their wives made a demand, became defiant, or challenged their husbands' authority. Finally, with regard to Holtzworth-Munroe and Stuart's (1994) meta-typology, ASPD batterers from the current study appear to be similar to the Generally Violent Antisocial (GVA) batterers discussed by these authors. Both groups of men scored high on a measure of antisocial personality and there is evidence that both use violence instrumentally, to resolve conflict or to control their partners.

Limitations

Analyses of couples' violent incidents were based on retrospective reports and thus subject to problems such as inaccuracy due to forgetting or distortion. There is some evidence, however, that semi-structured interviews that encourage subjects to report events in detail (the method used in the current study) may enhance accuracy of recall (Brewin et al. 1993). Also, participants were asked to describe both the worst and the most recent physical altercations with their current partner, and evidence suggests that memory is enhanced for recent as well as "unique and salient" events (Brewin et al. 1993, p. 92). Retrospective reporting may have allowed women to inadvertently combine across multiple experiences with their current partner so that their descriptions were partially a portrait of a specific occurrence of violence shaded with common themes from multiple violent incidents. This can actually be conceptualized as a positive effect of retrospective reporting in this case, since men's usual or typical behavior during partner violent incidents is the true phenomenon of interest here.

Sequential analysis of violent incidents in the current study examined "lag 1" behavior. Only wife/girlfriend behaviors immediately preceding men's violence were investigated. However, a man's decision to use violence with his partner may be related to a long chain of events, not just the one act immediately preceding the violence. Future examinations of sequential patterns of behavior during couples' violent incidents may benefit from aggregating across antecedent behaviors, examining additional "lags," and/or asking the participant (abuser or victim) about their perceptions of the cause of the violence. In this way, researchers can compare men's self-reported function of violence during a particular incident with his partner's perception of the function of his violence.

Clinical Implications

Situational triggers of men's violence were examined in the current study. Examination of antecedent wife/girlfriend behaviors is in no way intended to imply that women caused or are to blame for their partners' violence. However, through a functional analysis of men's intimate partner violence, we can begin to uncover some of the motives for violence among different types of batterers with the goal of designing specific treatments to address these motives. Treatment may be tailored to fit the needs of particular types of partner abusers. Additionally, as newer interventions for IPV have proposed including the female partner in treatment (Heyman and Schlee 2003; Stith et al. 2003), studies like this may help highlight potential target areas for violence prevention involving the woman, such as warning signs of violence for certain couples and appropriate safety and coping behaviors. At the same time, research may reveal that the violence of certain men (e.g., those diagnosed with BPD) is particularly unpredictable, thus requiring a very different set of intervention and prevention strategies with these men and their partners.

Consideration of the function of partner violence in terms of it being proactive or reactive may prove useful in terms of treatment matching with IPV adults. With aggressive youth, it has been proposed that proactive aggression is best treated with interventions that are highly operant in nature (e.g., changing the consequences, or awareness of consequences, of aggressive behavior), while reactive aggression may benefit most from interventions targeting anger management and social skills deficits (Brown and Parsons 1998; Merk et al. 2005). Perhaps the effectiveness of current batterer treatment programs could be augmented by increasing punishments and/or decreasing reinforcers of violent behavior for batterers using proactive IPV and targeting the hyperarousal and emotion dysregulation associated with reactive IPV. Furthermore, as reactive aggression has been found to be more pervasive, it may be important to provide treatments suitable to address this type of aggression for all batterers, adding interventions aimed at proactive violence as needed.

Finally, researchers in the area of IPV have suggested that Axis II pathology be explicitly assessed and addressed when studying or intervening with violent men (Holtzworth-Munroe and Stuart 1994; Waltz et al. 2000). Even if the categorical nature of personality disorders does not persist over time, correlates of these personality types should still be helpful in tailoring specific treatments to specific batterers. The assessment of BPD and ASPD does appear to predict differences in the function of intimate partner violence. New interventions addressing the different functions of violence of different types of men may prove promising.

Appendix

Violent Incident Description Codes—Modified 9-Code System

Prosocial: Request or Apology or Problem solve or Positive

Withdrawal: Ignore or Leave

Complaint: Criticize or Blame or Complain

Distress: Pleading or Distress or Cry

Dominance/Belligerence: Sarcasm or Rejection or Demand or Pursue or Scream/yell

Offensive Violence: Offensive violence, moderate or Offensive violence, potentially life-threatening

Threat: Verbal threat or Physical threat or Property damage

Verbal Defense: Verbal defense (stand-alone, high frequency code)

[1]Contextual/Other: Substance use or Defensive violence, moderate or Defensive violence, potentially life-threatening or Retaliatory violence, moderate or Retaliatory violence, potentially life-threatening, or other, non-related behaviors (e.g., 3rd party behavior).

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[1] (Women's) defensive and retaliatory violence are considered "other" here, as these acts, by definition, cannot precede men's initial use of violence

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