

Displayed Affective Behavior between Intimate Partner Violence Types during Non-Violent Conflict Discussions

Daniel J. Friend¹ · Renay P. Cleary Bradley² · John M. Gottman³

Published online: 3 October 2016

© Springer Science+Business Media New York 2016

Abstract Little is known about how situationally violent (SV) couples differ from both characterologically violent (CV) and distressed, non-violent (DNV) couples in terms of their displayed affective behaviors during conflict. This study addressed this question by conducting secondary data analysis of two datasets (Jacobson and Gottman 1998 and Bradley et al. *Journal of Couple & Relationship Therapy*, 10(2), 97–116, 2011), examining displayed affective behaviors among these groups. We hypothesized that the SV group would present a midpoint of affect between the other two groups, displaying more negative behaviors than the DNV group, but less than the CV group (and vice versa for positive behaviors). A MANOVA was utilized to compare displayed affective behaviors coded from observational analysis of a conflict discussion. Results show that the SV group displayed more positive and less negative affective behaviors than CV group. Few differences were seen between the SV and DNV groups. This suggests that these two groups are similar in terms of their displayed affective behaviors during conflict.

Keywords Intimate partner violence · Situational violence · Observed conflict · Affective behavior · SPAFF

Research on intimate partner violence (IPV) has shown not only varying types among perpetrators of IPV (Holtzworth-

Munroe and Stuart 1994; Gottman et al. 1995), but various types of IPV (Johnson 2006a, b). Several differences in these IPV types are related to the motivations for relationship violence and the kind of violent behavior experienced (Johnson 1995; Jacobson and Gottman 1998; Johnson 2006a, b). In particular, a key distinction has been made between severe, frequent violence with a clear victim and perpetrator (characterological violence; CV) and mutual, low-level, infrequent violence (situational violence; SV) (Johnson and Ferraro 2000). These two types of IPV also differ in the intrinsic motivations associated with the violence. Research has shown that CV tends to occur in the context of patriarchal attitudes and is intended to dominate, manipulate, and control the victim (Johnson 2006a, 2006b). Conversely, SV appears to most often occur because of a lack of both partners' conflict management skills rather than the need to dominate, or control, one's partner (Kelly and Johnson 2008).

The delineation of IPV types has been of great importance in determining the type of treatments most effective for those affected. Specifically, CV couples are typically treated using a traditional Duluth model of treatment (Pence and Paymar 1990), which is, treatment focused on changing patriarchal attitudes and the violence-supporting beliefs of perpetrators, whereas SV couples are often treated conjointly with a focus on relationship and conflict management skills (Stith et al. 2004; Simpson et al. 2008; Bradley et al. 2011; Bradley and Gottman 2012). Such varied forms of treatment appear to be appropriate due to the varying characteristics of these two types of IPV.

Previous research has examined the differences in affective communication patterns (or displayed emotions and behavior during conflict discussions) between CV couples and those that are distressed non-violent couples (i.e., couples who report similar levels of relationship dissatisfaction but do not report IPV). This work has shown that these groups show very

✉ Daniel J. Friend
dfriend@mathematica-mpr.com

¹ Mathematica Policy Research, 111 East Wacker Drive, Suite 920, Chicago, IL 60601, USA

² Center for Applied Research Solutions, Santa Rosa, CA, USA

³ The Gottman Institute, Seattle, WA, USA

different interaction patterns and displays of affect during non-violent conflict, with CV couples displaying more psychologically aggressive behaviors, such as contempt (Jacobson et al. 1994). These psychologically aggressive behaviors have been linked with a propensity toward severe IPV (Jacobson et al. 1994; Jacobson and Gottman 1998). Although the differences between CV couples and distressed non-violent (DNL) couples have been explored, the concept of SV is newer, by comparison, and has not yet been examined as thoroughly as other couple IPV types. This work is needed because SV couples could present a potential midpoint on the continuum of IPV typologies, falling below CV, but above DNL couples in terms of violent behaviors and affective communication during conflict.

Because treatment options differ for the various IPV types, it is important to understand how SV couples' affective communication patterns differ from their CV and DNL counterparts. This is important because to distinguish as treatment for SV may focus on communication and conflict management techniques; understanding affective communication patterns may help improve treatment. Furthermore, affective communication patterns have been shown to influence couple functioning in non-violent couples (Gottman et al. 2002). By examining the differences between these three groups, we can begin to understand how affective communication impacts functioning across the types.

IPV Types

Though research has been conducted with perpetrators of IPV (Holtzworth-Munroe and Stuart 1994; Gottman et al. 1995; Tweed and Dutton 1998), comparatively little research has been published on the types of IPV (Carlson and Jones 2010; Stith et al. 2012). The studies that have examined potential IPV types have focused on the motives, contexts, and patterns seen within relationship violence (Johnson 2006a, b). The works of Johnson (1995), Johnson and Ferraro (2000), and Kelly and Johnson (2008) present a body of research outlining the distinctions among IPV typologies. In these articles there are four distinct types of IPV: (1) CV, (2) SV, (3) violent resistance, and (4) separation-instigated violence. Although Johnson specifies four types, only characterological and situational violence will be addressed in this paper (see Kelly and Johnson (2008) for a complete review of all IPV types).

CV, also referred to as intimate terrorism or coercive controlling violence, presents what many think of as traditional IPV. This type of IPV is consistent with the Power and Control Wheel pattern (Pence and Paymar 1993), where severe emotional, psychological, and physical violence are used to dominate, control, and manipulate a romantic partner. This type of violence also has a clear victim and a clear perpetrator, with the victim experiencing high, frequent amounts of anxiety and

fear (Ferraro 2013). Violence is typically perpetrated by a male partner against a female victim(s). CV perpetrators are also likely to have violence-supporting and patriarchal attitudes (Leone et al. 2007). Additionally, these perpetrators are likely to have antisocial or borderline personality traits (Holtzworth-Munroe and Stuart 1994; Jacobson and Gottman 1998; Kelly and Johnson 2008). Johnson (2006a, b) found that this group accounts for the majority of IPV cases (68–79 %) seen in community-based organizations serving IPV victims (e.g., domestic violence shelters) and the justice system.

SV, or common couples' violence, is the most common type of IPV. SV is violence engaged in the context of conflicts that escalate into physical aggression. In these instances, the low-level violence is seen as a viable means to an end of conflict or disagreement, due to couples' poor conflict management skills (Johnson 2006a, b; Bradley et al. 2011). The physical aggression seen here consists of low-level reciprocal (both partners are both victim *and* perpetrator) violence that occurs at a low frequency (Johnson and Leone 2005). SV is not associated with controlling and dominating behaviors. Additionally, couples do not exhibit fear or anxiety in response to low-level violence (Jacobson and Gottman 1998). SV perpetrators do not exhibit the personality characteristics seen in characterologically violent men, such as domination and manipulation (Kelly and Johnson 2008). This type of violence is also unlikely to increase in frequency or intensity over time (Jacobson and Gottman 1998) and is likely to stop, particularly after relationship dissolution (Johnson and Ferraro 2000). These couples are less likely to seek formal IPV assistance (e.g., IPV shelters) compared to CV couples (Leone et al. 2007), but are more likely to be seen in therapeutic settings (Bograd and Mederos 1999; Simpson et al. 2007; Todahl et al. 2008; Bradford 2010). Johnson (2006a, b) found that this type of violence comprised 89 % of violence in a general community sample, with 11 % being classified as characterological. Conversely, SV accounted for only 29 % of a court-identified sample (Kelly and Johnson 2008), as opposed to 68–79 % of CV observed in a similar sample mentioned above (Johnson 2006a, b).

Affective Behavior and IPV

Observed affective behaviors during relationship conflicts are linked to relationship satisfaction or dissolution. Gottman and colleagues have reported several patterns of behaviors that are predictive of relationship satisfaction and dissolution (Gottman et al. 1998; Gottman 1999; Gottman et al. 2002). Based on this research, a high ratio of positive-to-negative affective displays during conflict is indicative of healthy, satisfied, and stable relationships (Gottman and Levenson 1992). Also, four distinct forms of negative affect during conflict

have been identified as precursors to relationship dissolution. High frequencies of contempt, criticism, defensiveness, and stonewalling were found to be highly predictive of relationship dissolution (Gottman et al. 1998; Gottman 1999; Gottman et al. 2002). These observed patterns of relationship conflicts have been the foundation of Gottman-method relationship therapy focusing on healthy relationship and conflict management skills (Gottman 1993).

Affective behaviors have also been studied in the context of IPV. CV couples differ significantly from DNV couples in terms of relationship conflict style (Jacobson et al. 1994; Gottman et al. 1995). Jacobsen and colleagues (Jacobson et al. 1994) observed that CV couples display different affective behavior patterns during non-violent conflict discussions. Specifically, men and women from the characterological group displayed more negative affective behaviors or psychological aggression, consisting of observable anger, contempt, belligerence, defensiveness, and domineering behaviors. They also found that when coupled together, these displayed affective behaviors were indicative of future violence (Jacobson and Gottman 1998). Jacobsen and Gottman et al. (1998) hypothesized that these negative displayed affective behaviors indicate a propensity for IPV.

Affective behaviors and conflict have also been studied in SV couples. In a recent study, Stith et al. (2011) used a qualitative analysis to examine SV couples and the dynamics of their relationships through semi-structured interviews with each partner. They found several factors (i.e., stressors and vulnerabilities) that coalesced to create a unique adaptive process for situationally violent couples. Specifically, they found that personality traits (e.g., being “quick tempered”) and communication and problem-solving deficits, compounded by stressors, such as life changes (e.g., loss of employment), appeared to create certain adaptations to resolving relationship conflict. These adaptations included withdrawal (emotional or physical) from conflict, compliance, and the need for control, all of which led to the inevitable escalation of conflict to low-level mutual violence. Also documented by this research was the nature of the escalation, ranging from oral arguments to yelling and name-calling to minor acts of bilateral violence (Stith et al. 2011). Although this research provides some insight into the affective behavior of SV couples during conflict, it lacked a comparison to a non-violent group.

Current Study

We sought to add to the body of literature on IPV and affective behaviors by examining affective behaviors displayed during conflict across three groups: CV, SV, and DNV. We conducted secondary data analysis from two existing studies. The first study (Study 1), conducted by Bradley et al. (2011), involved the recruitment of low-income situationally violent couples

for a psychoeducational workshop to reduce situational violence (see Bradley et al. 2011 and Bradley and Gottman 2012). Couples from this study were selected based on the results of an experimental screening instrument designed to identify SV couples (Friend et al. 2011). The second study (Study 2), conducted by Jacobsen and colleagues [Jacobson et al. 1994; see also (Gottman et al. 1995; Coan et al. 1997; Jacobson and Gottman 1998; Waltz et al. 2000)], involved the assessment of DNV and CV couples. For Study 2, the couples were placed into IPV categories based on self-reports from a survey about current relationship violence. All couples in both studies participated in a videotaped 15-min discussion about an area of disagreement (conflict discussion) so that affective behaviors and interaction patterns could be observed and coded. For this study, we compared individuals in SV relationships from Study 1 with the individuals in DNV and CV relationships from Study 2 to test the following hypotheses:

1. Individuals in the SV group will display more negative affective behaviors than the DNV group and less than the CV group. Those affective behaviors associated with a propensity towards violence (i.e., contempt, defensiveness, domineering, belligerence, and anger) will vary the most between the groups.
2. Individuals in the SV group will display less positive affective characteristics than the DNV group and more than the CV group.

Method

We conducted secondary data analysis of two studies of violent couples: a randomized clinical trial of a psychoeducational workshop for SV couples (Study 1) and data from another cross-sectional study comparing CV and DNV couples (Study 2). The methods for each study and our comparison methods are described below.

Study 1

Only a brief description of participants, procedures, and measures relevant to the current paper are presented below because the procedures for Study 1 have been described in full elsewhere (Bradley et al. 2011; Friend et al. 2011; Bradley and Gottman 2012).

Participants The Western Institutional Review Board (WIRB) reviewed and approved all recruitment, screening, procedures, and materials. Couples were recruited from the greater Seattle area (i.e., King and Pierce Counties). Recruitment focused on referrals from community-based organizations offering services and support to low-income couples.

Eligibility for the study was based on the following criteria, couples must: 1) be romantically involved and in a committed relationship for at least one year; 2) be 18 years of age or older; 3) speak fluent English; 4) currently be experiencing situational violence; 5) have at least one child under age 12 living in the home; 6) have a combined income below the local county median for a family of three (\$73,000); 7) not be experiencing characterological violence, significant substance abuse issues, or having a positive screen for Antisocial Personality Disorder.

Our final sample consisted of 115 low-income couples (50 % males and females distributed evenly). Average age of the participants was 35 years (± 8) for males and 34 (± 8) for females.

Conflict Discussions All couples enrolled into the study completed an in-home assessment consisting of a conflict discussion. In-home assessments were conducted by a masters-level interviewer, who facilitated the conflict discussion with the couples. Couples were compensated \$10/h (per person) after completion of the assessment.

Interviewers started the conflict discussion by first asking couples to fill out an Areas of Disagreement form (Gottman et al. 1977), which instructed partners to individually rate their relationship on a series of commonly reported problem areas that couples face (e.g., household chores, finances, sex, childcare). Partners were asked to individually rank the degree to which each problem was an issue in their relationship and for how long. Each form was then shared with the interviewer, who used the ratings to identify potential topics for the conflict discussion. Topics were chosen based on their potential for stimulating a meaningful discussion about a currently relevant disagreement. After choosing potential topics, the interviewer administered the “Play-by-Play” interview. The goal of the play-by-play interview was to prime the couple for the discussion. Each partner was asked to share their explanation for why each topic was (or was not) an issue for them, while the other partner was asked to sit quietly and not speak. Once each partner shared their views, the interviewer instructed them to begin the discussion and left the area. Discussions ensued for 15 min and were videotaped. Upon conclusion of this discussion, the interviewer debriefed the couple about their conversation to help them de-escalate and to ensure safety. Although 115 couples engaged in the conflict discussion, two discussions were lost due to equipment failure; thus, data from only 113 couples were included in analyses.

Observed Affective Behavior The Specific Affect Coding System (SPAFF; Gottman 2014) was used to code all conflict discussions. Coding was performed by trained research assistants who were blinded to the hypotheses of the current work. The coding system is used to categorize specific affective and communication patterns displayed by each partner during the conflict discussion. The system combines facial expressions (based on Ekman and Friesen’s Facial Action Coding System;

(Ekman and Friesen 1978), vocal tone, and speech content, to characterize the communication patterns being displayed. Coders viewed each videotaped conflict discussion and coded each partner’s displayed behavior on a second-by-second basis. This is performed individually for each partner on specialized coding software (Noldus Information Technology, 2006) that uses keystrokes to signal the start and stop time for each behavior displayed.

SPAFF coders categorize behaviors using five positive codes (interest, validation, affection, humor, joy), ten negative codes (disgust, contempt, belligerence, domineering, anger, tension, tense humor, defensiveness, whining, sadness, stonewalling), and a neutral code [For a full review of these codes, please see Gottman (2002)]. “Validation” and “Domineering” codes are additionally subcategorized into high- and low- distinctions (i.e., high domineering and low domineering) for a total of 20 possible codes. Twenty-five percent (25 %) of the observational data was double-coded to assess reliability. Reliability for the SPAFF coding was determined using second-by-second agreement of coders throughout the 15-min conversation. Cohen’s kappa, which controls for agreement by chance, and provides a single reliability index for the entire coding system (Bakeman and Gottman 1997), was computed. Videos with kappas less than .5 were re-coded by a third coder. Coders with consistently low kappas went through a retraining, supervision, and had more videos double coded to ensure reliability and coding scheme alignment. For all coders, the average kappa was .518 and the average free marginal kappa was .607. These reliability values are comparable to those typically reported for SPAFF coding (Coan and Gottman 2007). The frequency of each of these behaviors was determined by summing the number of seconds each behavior was exhibited throughout the 15-min discussion (note that all codes/behaviors are mutually exclusive).

Study 2

Only a brief description of participants, procedures, and measures relevant to the current paper are presented below because the procedures for Study 2 have been described in full elsewhere (see Jacobson et al. 1994; Gottman et al. 1995; Jacobson and Gottman 1998).

Participants and Procedures CV and DNV participants were selected from this sample ($N = 93$ couples). All participants were 18 years of age or older, able to speak and write English, and legally married. Couples were categorized into the CV group ($n = 61$) or the DNV group ($n = 33$) based on their score from the Conflict Tactics Scale (CTS; Straus 1979). Couples in the CV group were classified as such based on the wife’s CTS report of her husband’s behavior, which indicated severe frequent violence. The DNV group had matched scores to the

CV group on a relationship satisfaction measure. One couple from each group did not have valid SPAFF data and was excluded from the analysis (CV: $n = 60$ couples; DNV: $n = 32$ couples).

Several DNV cases appeared to have the presence of some situational violence. A total nine males and four females (across nine couples) reported instances of low-level intimate partner violence. Since Study 2 was conducted before the introduction of Johnson's typologies, couples were classified into their groups based on a more traditional concept of IPV. Couples from this study were classified into the CV group based on the wife's report of the following: (1) six or more episodes of low-level violence (e.g. pushing, slapping), or (2) two or more episodes of high-level violence (e.g., hitting with a closed fist) or (3) one episode of potentially lethal violence (e.g., choking). As a result, couples could report infrequent low levels of violence and still be classified as distressed non-violent; whereas, couples from Study 1 were classified as SV based on this type of disclosure. Upon examination of DNV groups CTS scores, we do in fact see some couples (both males and females) reporting extremely low-levels of non-severe bilateral violence (e.g., a singular instance of shoving or throwing an object within the past year). Data analysis was conducted with these cases in the DNV group and then repeated after removing them.

Couples participated in a laboratory assessment during which they engaged in a conflict discussion. The procedure was identical to the one described above for Study 1, with one exception. Characterologically violent couples in Study 2 were subject to additional procedures, including lethality and safety assessments, and referrals (for wives) to IPV resources and individual and legal counseling. Wives were then contacted two weeks later to inquire about potential violence precipitated by their participation in the study. One woman indicated that violence may have been related to involvement in the study.

Observed Affective Behavior The affective behavior was coded based on a previous version of SPAFF. The versions between the two studies are similar with the one exception, that is, the "Domineering" and "Validation" codes were not previously categorized into high and low behaviors. To reconcile this discrepancy, Study 1's high and low codes were summed to create one "Domineering" and one "Validation" variable. Additionally, this coding system used an apparatus called the Affect Wheel. Study 2 coders observed the conflict discussion and coded each partner individually, while moving the wheel to the corresponding code. One couple from each of the groups (CV and DNV) did not have usable data for the current study.

In the end, both systems produced 900 codes for all 900 s of a given observation. Code frequency was then determined by the number of seconds spent in behavior for each code over

the 15-min discussion. Cohen's kappa for the Study 2 SPAFF data was found to be .89 with generalizability coefficients for individual codes ranging from .80 to .87.

Data Analysis

All data was verified and checked for normality prior to analysis. A of multivariate analysis of variance (MANOVA) with simple contrasts was used to compare the three groups. The SV group from Study 1 served as the comparison group for the simple contrasts. Gender was also included as a factor in our MANOVA.

Results

The results for the MANOVA showed a significant effect for IPV type ($\lambda = .53$, $F(24, 738) = 9.91$, $p < .001$; partial $\eta^2 = .27$) and gender ($\lambda = .92$, $F(12, 369) = 2.73$, $p < .01$; partial $\eta^2 = .08$). No significant type and gender interaction was seen ($\lambda = .95$, $F(24, 738) = .74$, $p > .05$; partial $\eta^2 = .02$). Since there was no significant interaction, the contrast results below only describe the type-level findings. The differences between males and females in terms of displayed affective behavior have been described elsewhere (e.g., Gottman 1999). Table 1 reports the group effects sizes for this analysis. Figures 1–3 show the means for the types and the results of the simple contrasts. Tables 2–3 report the descriptive statistics for the types broken out by gender.

Comparisons between SV and CV

Simple contrasts showed significant differences between the groups for the following variables: humor ($p < .001$), affection ($p < .01$), validation ($p < .01$), interest ($p < .001$), contempt ($p < .001$), tension ($p < .001$), belligerence ($p < .001$), and defensiveness ($p < .001$). In terms of the negative affect (contempt, tension, belligerence, and defensiveness), the CV group displayed more of these behaviors than did the SV group, with the exception of tension. The SV group was coded as displaying more tension than the CV group. For positive affect (humor, affection, validation, interest), SV participants used more positive affect than did CV participants, with the exception of humor. CV participants used humor more frequently than did SV participants. The lack of a significant gender by group interaction was supported by examining the group means by each gender. The patterns seen at the group-level were consistent across the genders, with both males and females displaying the pattern described above. No instances of either sadness or whining were coded for males in the SV group; consequently these codes were not included in the analysis.

Table 1 MANOVA Intimate Partner Violence Type Effect Sizes for Displayed Affective Behaviors

	Neutral	Humor	Affection	Validation	Interest	Anger	Contempt	Tension	Domineering	Belligerence	Defensiveness	Stonewalling
Partial η^2	.005	.080	.022	.021	.089	.012	.055	.238	.004	.048	.127	.001

Comparisons between SV and DNV

Simple contrasts showed significant differences between the groups for the following variables: humor ($p < .001$), affection ($p < .05$), interest ($p < .001$), tension ($p < .001$), belligerence ($p < .001$), and defensiveness ($p < .001$). In terms of the negative affect (tension, belligerence, and defensiveness), the SV group displayed more tension did the DNV group; however, the DNV group displayed more belligerence and defensiveness than SV group did. For positive affect (humor, affection, interest), SV participants used more affection and validation than did DNV participants; however, DNV participants used more humor than SV participants did. The lack of a significant gender by group interaction was supported by examining the group means by each gender. The patterns seen at the group-level were consistent across the genders, with both males and females displaying the pattern described above.

Reclassification of DNV Cases

An identical analysis was then re-run with the nine DNV couples who were potentially misclassified removed. The results from the overall MANOVA were still significant for IPV type ($\lambda = .53, F(24, 704) = 10.85, p < .001$; partial $\eta^2 = .27$) and gender ($\lambda = .91, F(12, 351) = 2.86, p < .01$; partial $\eta^2 = .09$). No significant type and gender interaction was seen ($\lambda = .94, F(24, 738) = .74, p > .05$; partial

$\eta^2 = .03$). SV couples still showed the same significant differences from the new DNV group as they did in the original classification for all variables with the exception of belligerence. DNV participants still displayed more belligerence than SV participants, but this was no longer significant ($p > .05$).

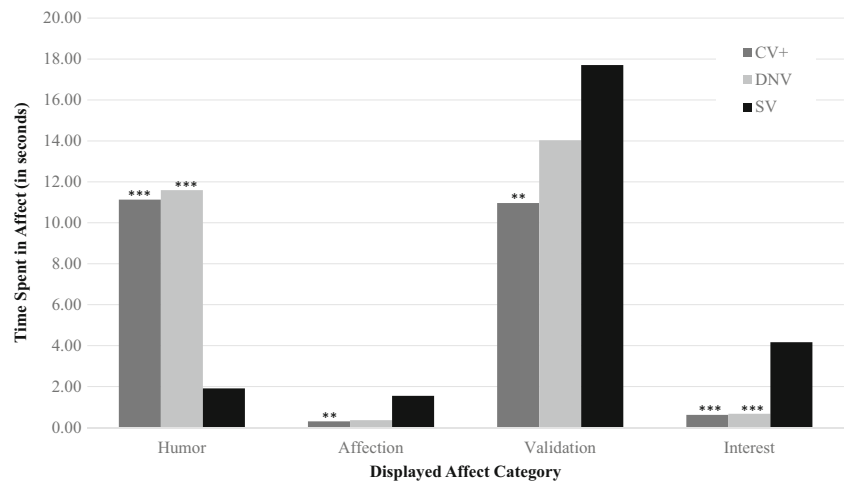
Discussion

The purpose of this study was to examine the potential differences in displayed affective behavior between individuals in SV relationships compared to those individual in more severe CV relationships and those in DNV relationships. Overall, our results supported the hypothesis that the affective behavior of situationally violent participants fall on a continuum between that of characterologically violent and distressed non-violent participants. Contrary to our hypothesis, it appears that SV participants are less distinguishable from DNV participants. Our gender by type interaction was not significant, suggesting that the patterns in affective behavior were similar across the genders within each group.

SV and CV

Our hypothesis that the SV group would differ from the CV group was supported. We found significant differences in both

Fig. 1 Mean time spent in displayed positive affect for intimate partner violence types

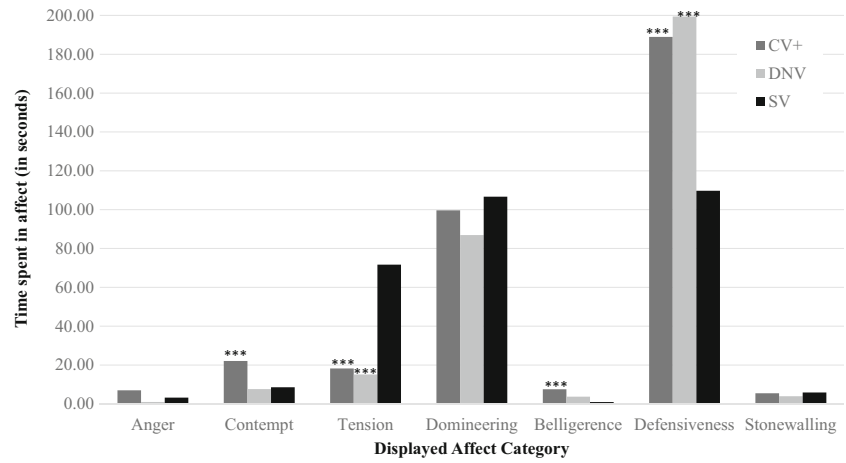


+ CV= Characterologically Violent Group; DNV = Distressed Non-Violent Group; SV= Situationally Violent Group

*** Significantly different from the SV group at $p < .001$

** Significantly different from the SV group at $p < .01$

Fig. 2 Mean time spent in displayed negative affect for intimate partner violence types



+ CV= Characterologically Violent Group; DNV = Distressed Non-Violent Group; SV= Situationally Violent Group
 *** Significantly different from the SV group at $p < .001$
 ** Significantly different from the SV group at $p < .01$

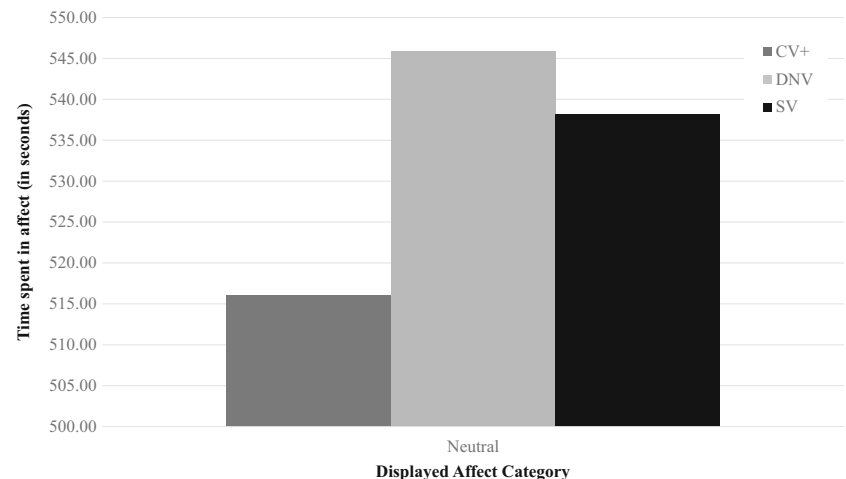
positive and negative affective behaviors. In terms of negative affect, SV participants displayed lower rates of observable affective behaviors linked to the propensity toward severe IPV. Specifically, significantly lower uses of contempt, belligerence, defensiveness, and tension were seen in the SV group when compared to the CV group.

These results are consistent with Johnson’s (2001) IPV typologies. Violence amongst SV couples is thought to arise when conflicts escalate and, due to poor conflict management skills, low-level violence is used to end the conflict. Jacobsen and Gottman (Jacobson et al. 1994; Gottman et al. 1995; Jacobson and Gottman 1998) first compared CV to DNV couples and found that CV couples displayed significantly more anger, contempt, belligerence, defensiveness, and domineering behavior. By coupling Jacobsen and Gottman’s research with Johnson’s typologies, we would expect that the CV group would use these behaviors more frequently than the

SV group during non-violent conflict discussions. Indeed, three (contempt, belligerence, and defensiveness) of these five behaviors were used at a significantly higher frequency in the CV group. Anger, although more frequent in the CV group, was not statistically significant.

Domineering behavior was also not significantly different between the groups; however, the SV group displayed more domineering behavior than the CV group. This may be seen as contrary to what we would expect given Jacobson and Gottman (1998) findings mentioned previously; however, this might not be the case. Given that Jacobsen and Gottman observed domineering behavior, coupled with other frequent expression of volatile affective behavior (e.g., contempt and defensiveness), domineering behavior alone may not solely account for violence escalation. Additionally, the higher frequency of domineering behavior was only seen in males; thus, the mutual display of domineering behavior by both partners

Fig. 3 Mean time spent in displayed neutral affect for intimate partner violence types



+ CV= Characterologically Violent Group; DNV = Distressed Non-Violent Group; SV= Situationally Violent Group

Table 2 Descriptive statistics for positive and neutral displayed affective behaviors by IPV type and gender

Gender	IPV Type		Neutral	Humor	Affection	Validation	Interest
Female	CV (n = 60)	Mean	502.38	11.25	0.32	13.18	0.23
		SD	141.08	20.14	1.30	24.59	0.81
		Min	188.00	0.00	0.00	0.00	0.00
		Max	833.00	87.00	7.00	150.00	5.00
	DNV (n = 32)	Mean	540.22	11.69	0.03	11.63	0.97
		SD	134.46	25.81	0.18	11.12	3.90
		Min	281.00	0.00	0.00	0.00	0.00
		Max	870.00	117.00	1.00	37.00	20.00
	SV (n = 113)	Mean	517.10	1.90	1.58	16.07	4.50
		SD	150.39	6.78	5.63	21.51	7.95
		Min	112.00	0.00	0.00	0.00	0.00
		Max	798.00	45.00	48.00	130.00	48.00
Male	CV (n = 60)	Mean	529.68	11.02	0.28	8.75	1.00
		SD	149.10	19.62	1.43	12.44	4.52
		Min	97.00	0.00	0.00	0.00	0.00
		Max	797.00	79.00	10.00	55.00	25.00
	DNV (n = 32)	Mean	551.47	11.50	0.69	16.44	0.38
		SD	112.28	25.36	3.21	20.41	1.77
		Min	341.00	0.00	0.00	0.00	0.00
		Max	831.00	110.00	18.00	93.00	10.00
	SV (n = 113)	Mean	559.27	1.92	1.52	19.35	3.83
		SD	152.23	7.49	3.86	26.16	6.69
		Min	147.00	0.00	0.00	0.00	0.00
		Max	849.00	51.00	17.00	166.00	38.00
Total	CV (n = 120)	Mean	516.03	11.13	0.30	10.97	0.62
		SD	145.18	19.80	1.36	19.53	3.25
		Min	97.00	0.00	0.00	0.00	0.00
		Max	833.00	87.00	10.00	150.00	25.00
	DNV (n = 64)	Mean	545.84	11.59	0.36	14.03	0.67
		SD	123.01	25.38	2.28	16.48	3.02
		Min	281.00	0.00	0.00	0.00	0.00
		Max	870.00	117.00	18.00	93.00	20.00
	SV (n = 226)	Mean	538.18	1.91	1.55	17.71	4.17
		SD	152.44	7.13	4.82	23.95	7.34
		Min	112.00	0.00	0.00	0.00	0.00
		Max	849.00	51.00	48.00	166.00	48.00

IPV Intimate Partner Violence, CV Characterologically Violent Group, DNV Distressed Non-Violent Group, SV Situationally Violent Group, SD Standard Deviation

in our current sample may be unique to situationally violent couples and not representative of escalation into characterological violence. Since this is the first study to compare these groups in this manner, more research is needed in order to fully understand potential group and gender difference in terms of relationship conflict style.

Jacobsen and colleagues (Jacobson et al. 1994) also found significant differences in the displayed levels of tension between CV and DNV couples. In their study, CV

female partners displayed more tension than their DNV counterparts. In the current study, we found the SV group displayed more tension as compared to the CV group. This finding was contrary to our hypothesis. Analyses revealed that the SV group consistently had higher rates of tension when compared to all other groups. One explanation for this difference could be the discrepancies in the two study's coding schemes. In Study 2, the code for tension was coupled with fear. In Study 1, tension was coded without

Table 3 Descriptive statistics for negative displayed affective behaviors by IPV type and gender

Gender	IPV Group		Anger	Contempt	Tension	Domineering	Belligerence	Defensiveness	Stonewalling	
Female	CV (n = 60)	Mean	8.93	23.48	15.20	113.73	4.33	182.27	3.85	
		SD	35.09	42.76	21.10	151.80	9.94	133.62	12.15	
		Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Max	253.00	228.00	110.00	629.00	60.00	525.00	67.00	
	DNV (n = 32)	Mean	1.81	9.03	16.19	117.13	1.66	170.38	0.06	
		SD	7.36	16.41	23.51	147.08	4.43	98.48	0.25	
		Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Max	39.00	78.00	116.00	450.00	19.00	353.00	1.00	
	SV (n = 113)	Mean	3.53	9.88	73.58	120.77	0.92	101.00	6.21	
		SD	8.41	19.19	57.80	121.12	3.19	104.27	29.57	
		Min	0.00	0.00	2.00	0.00	0.00	0.00	0.00	
		Max	50.00	117.00	305.00	621.00	26.00	569.00	276.00	
Male	CV (n = 60)	Mean	5.07	20.67	21.27	85.57	10.68	195.63	7.12	
		SD	27.56	31.56	50.27	136.13	25.28	128.46	32.11	
		Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Max	206.00	119.00	355.00	654.00	155.00	496.00	188.00	
	DNV (n = 32)	Mean	0.13	6.19	14.13	56.69	5.78	228.47	7.78	
		SD	0.34	11.40	31.60	98.23	22.79	132.93	42.56	
		Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Max	1.00	41.00	178.00	351.00	128.00	495.00	241.00	
	SV (n = 113)	Mean	2.94	7.23	69.81	92.59	0.97	118.42	5.47	
		SD	11.88	16.67	64.47	99.33	2.58	94.91	19.15	
		Min	0.00	0.00	3.00	0.00	0.00	0.00	0.00	0.00
		Max	120.00	112.00	416.00	480.00	11.00	409.00	142.00	
Total	CV (n = 120)	Mean	7.00	22.08	18.23	99.65	7.51	188.95	5.48	
		SD	31.48	37.45	38.51	144.26	19.39	130.69	24.23	
		Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Max	253.00	228.00	355.00	654.00	155.00	525.00	188.00	
	DNV (n = 64)	Mean	0.97	7.61	15.16	86.91	3.72	199.42	3.92	
		SD	5.24	14.09	27.65	127.75	16.42	119.68	30.11	
		Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
		Max	39.00	78.00	178.00	450.00	128.00	495.00	241.00	
	SV (n = 226)	Mean	3.23	8.56	71.69	106.68	0.95	109.71	5.89	
		SD	10.27	17.98	61.12	111.41	2.89	99.86	25.45	
		Min	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00
		Max	120.00	117.00	416.00	621.00	26.00	569.00	276.00	

IPV Intimate Partner Violence, CV Characterologically Violent Group, DNV Distressed Non-Violent Group, SV Situationally Violent Group, SD Standard Deviation

the fear qualifier; therefore, this code captured behaviors associated with anxiety (i.e., nervous ticks or laughter, the tightening or pulling of the lips) not necessarily fear. The addition of the fear component in Study 2 may have led to the undercoding of anxious behavior and provides a partial explanation for the differences between the groups.

For positive affective behaviors, our hypothesis was supported. Overall, we found the SV group displayed more positive affect during conflict discussions than the CV group.

Although the gender by group interaction was not significant, male partners in the SV group displayed more affection, interest, and validation than CV males. SV females showed significantly more interest than CV females. SV females did not display more affection.

From a clinical perspective, these findings suggest that SV couples may have a solid base for healthy relationship skills. For these couples, violence is thought to escalate from poor conflict management techniques. It

follows that clinicians may be successful at reducing violence by bolstering and nurturing the existing use of positive affect and providing better conflict resolution skills (i.e., reducing the use of contempt, criticism, defensiveness, and stonewalling).

The CV group had significantly higher rates of displayed humor when compared to the SV group. In fact, all groups from Study 2 showed the same pattern with respect to humor. These findings are contrary to our hypothesis. We hypothesized that the SV group would use more humor than CV, but less than the DNV group. Several factors may contribute to this finding. The ranges for the Study 2 groups are much higher than those for Study 1 groups. One possibility for this could be coder error. Coders in both studies may have under or over coded humor. For instance, sarcasm, although humorous in nature, is generally coded as contempt as its intent is to convey disrespect. The use of sarcasm could have been misinterpreted by some coders as genuine humor. The same may be said for the coding of nervous laughter; some may have mistaken it as use of humor rather than tension.

SV and DNV

Findings between the DNV and SV groups were somewhat contrary to our hypothesis. We hypothesized that the SV group would display less positive affective behaviors and more negative ones when compared to the DNV group. The SV group only differed significantly from the DNV group in the use of defensiveness, tension, interest, and affection. The SV group were observed as being less defensive and using less humor than the DNV group. The SV group were also shown to display more interest and tension.

As mentioned above, while others have compared the CV and DNV groupings, this is the first study to compare an SV group to a DNV group in terms of observed affective behavior. Based on Jacobsen and Gottman's work (Jacobson and Gottman 1998) and in accordance with Johnson's typologies (2001), we would expect that the SV group would fall on a continuum somewhere between the CV and DNV group, specifically on those behaviors linked with the propensity towards severe IPV. When examining these variables (defensiveness, contempt, anger, belligerence, and domineering), similar rates of contempt, anger, and belligerence were seen between the SV and DNV groups. We hypothesized, however, that the SV group would display more of these behaviors than the DNV group but less than the CV group.

Although not statistically significant, both partners from the SV group displayed more domineering behavior than the DNV group. Again, although Jacobson and Gottman (1998) found that domineering behavior was coupled with other

frequent expressions of psychological aggression; domineering behavior alone may not solely account for violence escalation. Therefore, even if significant, these difference may not be crucial in the distinction between the groups.

In terms of positive affect, we again see a similar pattern. Both SV and DNV groups expressed similar levels of positive affect. Again, we hypothesized that the SV group would show less positive affect than the DNV group but more than the CV group.

Taken together, the results show that based on positive and negative affective behavior patterns, the SV groups more closely resemble the DNV group. This lends support to the conjoint treatment of SV couples. If their relationship conflict style more closely matches that of DNV couples, then they would better benefit from more traditional couples therapy rather than standard IPV treatment.

As with our CV group comparison, this the first study to compare these groups; more research is needed to fully understand potential group and gender differences during conflict. Of particularly of interest is research examining how the interaction patterns and conflict management styles of SV couples differ from that of DNV couples so that the escalation to low-level conflict is viewed as viable.

Limitations

There are several limitations of this study. The first limitation comes from the variations in the coding methodology. In Study 2, observational data was coded on a slightly different version of the SPAFF coding system, consisting of fewer codes and a slight difference in the coding requirements for tension. The earlier system also used an apparatus known as the "affect wheel," on which coders turned the dial between the positive and negative codes as observed codes were displayed. The differences between the SPAFF versions used is minimal (e.g., the splitting of the domineering and validation code into high and low categories in the version used in Study 1), but it is impossible to tell what measurement error may have been introduced by collapsing codes in Study 1 to match Study 2 or by the use of keystrokes to capture codes instead of using the affect wheel. This measurement error may account for the over and under expression of some codes. It would be ideal to recode the Study 2 with the Study 1 system; however, resources for this were not available for this study.

Sample differences are also a limitation. Study 1 contained a mixture of married and non-married cohabitating couples, while Study 2 consisted of only married couples. Study 1 also specifically targeted low-income couples, while Study 2 did not. Study 1 also completed the conflict discussion within the couple's home. Study 2 completed the conflict discussion in a laboratory. The length of time in between these two study is long (~17 years). It is possible that unmeasured social and cultural factors changed between the two studies and

influenced behaviors of the couples. All of these factors introduce potential sample and methodological error into our study.

Conclusions

Our current results lends support to Johnson's (2001) types, with SV couples having demonstrably different conflict discussions than CV couples. These situationally violent relationship conflict styles are differentiated by a decrease in observed aggression (i.e., contempt, defensiveness, and belligerence), a decrease in tension, and an increased use of positive affect (i.e., affection, interest, and validation). In terms of displayed affective behavior, our results suggest that SV couples resemble DNV couples. Although affective behavior could differentiate between CV and SV couples, the SV couples did not significantly differ as hypothesized from the DNV group on observable relationship conflict style. This finding may be in part due to methodological confounders. Future research should be conducted to examine these groups more fully (including a more pure distressed non-violent group), specifically regarding displayed affective behavior to discover how communication patterns truly differ between DNV and SV couples and how conflict may evolve to the use of low-level violence.

Finally, this work lends support to recently developed conjoint treatment options for SV couples. If SV couples only differ from DNV couples in terms of self-reported IPV, then forms of couples therapy and psychoeducational workshops focusing on healthy relationship and conflict management skills would be more appropriate forms of treatment than traditional Duluth-based IPV options.

Compliance with Ethical Standards

Grants A portion of this study was supported by a grant (#900J2022) from the U.S. Department of Health and Human Services, Administration for Children and Families (ACF). The views expressed in this article do not necessarily reflect those of ACF.

References

- Bakeman, R., & Gottman, J. M. (1997). *Observing interaction: An introduction to sequential analysis*. Cambridge: Cambridge University Press.
- Bograd, M., & Mederos, F. (1999). Battering and couples therapy: Universal screening and selection of treatment modality. *Journal of Marital and Family Therapy*, 25, 291–312. doi:10.1111/j.1752-0606.1999.tb00249.x.
- Bradford, K. (2010). Screening couples for intimate partner violence. *Journal of Family Psychotherapy*, 21(1), 76–82. doi:10.1080/08975351003618650.
- Bradley, R. P. C., & Gottman, J. M. (2012). Reducing situational violence in Low-Income couples by fostering healthy relationships. *Journal of Marital and Family Therapy*, 38(s1), 187–198. doi:10.1111/j.1752-0606.2012.00288.x.
- Bradley, R. P. C., Friend, D. J., & Gottman, J. M. (2011). Supporting healthy relationships in low-income, violent couples: Reducing conflict and strengthening relationship skills and satisfaction. *Journal of Couple & Relationship Therapy*, 10(2), 97–116. doi:10.1080/15332691.2011.562808.
- Carlson, R. G., & Jones, K. D. (2010). Continuum of conflict and control: A conceptualization of intimate partner violence typologies. *The Family Journal*, 18(3), 248–254. doi:10.1177/1066480710371795.
- Coan, J. A., & Gottman, J. M. (2007). The specific affect coding system (SPAFF). *Handbook of emotion elicitation and assessment* (pp. 267–285) Oxford University Press, USA.
- Coan, J., Gottman, J. M., Babcock, J., & Jacobson, N. (1997). Battering and the male rejection of influence from women. *Aggressive Behavior*, 23(5), 375–388. doi:10.1002/(SICI)1098-2337(1997)23:5 < 375::AID-AB6 > 3.0.CO;2-H.
- Ekman, P., & Friesen, W. V. (1978). *The facial action coding system*. Palo Alto, CA: Consulting Psychologists Press.
- Ferraro, K. (2013). Gender matters in intimate partner violence. In B. L. Russell (Ed.), (pp. 133–149) Springer New York. doi:10.1007/978-1-4614-5871-5_9
- Friend, D. J., Bradley, R. P. C., Thatcher, R., & Gottman, J. M. (2011). Typologies of intimate partner violence: Evaluation of a screening instrument for differentiation. *Journal of Family Violence*, 26(7), 551–563. doi:10.1007/s10896-011-9392-2.
- Gottman, J. M. (1993). A theory of marital dissolution and stability. *Journal of Family Psychology*, 7(1), –57. doi:10.1037/0893-3200.7.1.57.
- Gottman, J. M. (1999). *The marriage clinic: A scientifically-based marital therapy*. New York, New York: WW Norton & Company.
- Gottman, J. M. (2014). *What predicts divorce?: The relationship between marital processes and marital outcomes*. New York, New York: Psychology Press.
- Gottman, J. M., & Levenson, R. W. (1992). Marital processes predictive of later dissolution: Behavior, physiology, and health. *Journal of Personality and Social Psychology*, 63(2), 221. doi:10.1037/0022-3514.63.2.221.
- Gottman, J.M., Notarius, C., Markman, H., & Mettetal, G. (1977). *Codebook for the CISS*. Urbana, IL: University of Illinois.
- Gottman, J. M., Jacobson, N. S., Rushe, R. H., & Shortt, J. W. (1995). The relationship between heart rate reactivity, emotionally aggressive behavior, and general violence in batterers. *Journal of Family Psychology*, 9(3), 227. doi:10.1037/0893-3200.9.3.227.
- Gottman, J. M., Coan, J., Carrere, S., & Swanson, C. (1998). Predicting marital happiness and stability from newlywed interactions. *Journal of Marriage and the Family*, 60(1), 5–22. doi:10.2307/353438.
- Gottman, J. M. (2002) *The mathematics of marriage: Dynamic nonlinear models*. Cambridge, MIT Press
- Gottman, J. M., Swanson, C., & Swanson, K. (2002). A general systems theory of marriage: Nonlinear difference equation modeling of marital interaction. *Personality and Social Psychology Review*, 6(4), 326–340. doi:10.1207/S15327957PSPR0604_07.
- Holtzworth-Munroe, A., & Stuart, G. L. (1994). Typologies of male batterers: Three subtypes and the differences among them. *Psychological Bulletin*, 116(3), 476. doi:10.1037/0033-2909.116.3.476.
- Jacobson, N. S., & Gottman, J. M. (1998). *When men batter women: New insights into ending abusive relationships*. New York, New York: Simon and Schuster.
- Jacobson, N. S., Gottman, J. M., Waltz, J., Rushe, R., Babcock, J., & Holtzworth-Munroe, A. (1994). Affect, verbal content, and psychophysiology in the arguments of couples with a violent husband.

- Journal of Consulting and Clinical Psychology*, 62(5), 982. doi:10.1037/0022-006X.62.5.982.
- Johnson, M. P. (1995). Patriarchal terrorism and common couple violence: Two forms of violence against women. *Journal of Marriage and the Family*, 57(2), 283–294. doi:10.2307/353683.
- Johnson, M. P. (2001). Conflict and control: Symmetry and asymmetry in domestic violence. In A. Booth, A. C. Crouter, & M. Clements (Eds.), *Couples in conflict* (pp. 95–104). Mahwah: Lawrence Erlbaum.
- Johnson, M. P. (2006a). Violence and abuse in personal relationships: Conflict, terror, and resistance in intimate partnerships. The Cambridge handbook of personal relationships (pp. 557–576). New York, New York: Cambridge University Press.
- Johnson, M. P. (2006b). Conflict and control: Gender symmetry and asymmetry in domestic violence. *Violence Against Women*, 12(11), 1003–1018. doi:10.1177/1077801206293328.
- Johnson, M. P., & Ferraro, K. J. (2000). Research on domestic violence in the 1990s: Making distinctions. *Journal of Marriage and Family*, 62(4), 948–963. doi:10.1111/j.1741-3737.2000.00948.x.
- Johnson, M. P., & Leone, J. M. (2005). The differential effects of intimate terrorism and situational couple violence findings from the national violence against women survey. *Journal of Family Issues*, 26(3), 322–349. doi:10.1177/0192513X04270345.
- Kelly, J. B., & Johnson, M. P. (2008). Differentiation among types of intimate partner violence: Research update and implications for interventions. *Family Court Review*, 46(3), 476–499. doi:10.1111/j.1744-1617.2008.00215.x.
- Leone, J. M., Johnson, M. P., & Cohan, C. L. (2007). Victim help seeking: Differences between intimate terrorism and situational couple violence. *Family Relations*, 56(5), 427–439. doi:10.1111/j.1741-3729.2007.00471.x.
- Pence, E., & Paymar, M. (1990). Power and control: Tactics of men who batter: An educational curriculum. Minnesota Program Development Incorporated.
- Pence, E., & Paymar, M. (1993). Education groups for men who batter: The Duluth model. New York: Springer Publishing Company.
- Simpson, L. E., Doss, B. D., Wheeler, J., & Christensen, A. (2007). Relationship violence among couples seeking therapy: Common couple violence or battering? *Journal of Marital and Family Therapy*, 33(2), 270–283. doi:10.1111/j.1752-0606.2007.00021.x.
- Simpson, L. E., Atkins, D. C., Gattis, K. S., & Christensen, A. (2008). Low-level relationship aggression and couple therapy outcomes. *Journal of Family Psychology*, 22(1), 102. doi:10.1037/0893-3200.22.1.102.
- Stith, S. M., Rosen, K. H., McCollum, E. E., & Thomsen, C. J. (2004). Treating intimate partner violence within intact couple relationships: Outcomes of multi-couple versus individual couple therapy. *Journal of Marital and Family Therapy*, 30(3), 305–318. doi:10.1111/j.1752-0606.2004.tb01242.x.
- Stith, S. M., Amanor-Boadu, Y., Strachman Miller, M., Menhusen, E., Morgan, C., & Few-Demo, A. (2011). Vulnerabilities, stressors, and adaptations in situationally violent relationships. *Family Relations*, 60(1), 73–89. doi:10.1111/j.1741-3729.2010.00634.x.
- Stith, S. M., McCollum, E. E., Amanor-Boadu, Y., & Smith, D. (2012). Systemic perspectives on intimate partner violence treatment. *Journal of Marital and Family Therapy*, 38(1), 220–240. doi:10.1111/j.1752-0606.2011.00245.x.
- Straus, M. A. (1979). Measuring intrafamily conflict and violence: The conflict tactics scales. *Journal of Marriage and the Family*, 41, 75–88.
- Todahl, J. L., Linville, D., Chou, L., & Maher-Cosenza, P. (2008). A qualitative study of intimate partner violence universal screening by family therapy interns: Implications for practice, research, training, and supervision. *Journal of Marital and Family Therapy*, 34(1), 28–43. doi:10.1111/j.1752-0606.2008.00051.x.
- Tweed, R. G., & Dutton, D. G. (1998). A comparison of impulsive and instrumental subgroups of batterers. *Violence and Victims*, 13(3), 217–230.
- Waltz, J., Babcock, J. C., Jacobson, N. S., & Gottman, J. M. (2000). Testing a typology of batterers. *Journal of Consulting and Clinical Psychology*, 68(4), 658. doi:10.1037/0022-006X.68.4.658.