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A Proximal Change Experiment Testing Two Communication Exercises With Intimate Partner Violent Men

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This study tests the immediate impact of two interventions for intimate partner violent (IPV) men in affecting behavioral and emotional change during arguments with their partners. Couples with an abusive male partner ($N=100$) discussed an area of conflict twice, interrupted by a brief intervention. Men were randomly assigned to receive (a) an editing-out-the-negative skills training, (b) an accepting influence skills training, or (c) a time-out. IPV men in both skills-training conditions showed greater decreases in aggressive feelings than IPV men in the time-out condition based on their self-report and observed affective behavior. Women also reported feeling less aggressive when their husbands were assigned to one of the skills-training conditions as compared to the control (time-out) condition. Results suggest that IPV men can learn to adopt new communication skills and that they do appear to have a positive impact on the emotional tone of their arguments. Clinically, communication skills training may be a useful addition to battering intervention programs, although these skills may need to be taught to both men and women involved in violent relationships.

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INTIMATE PARTNER VIOLENCE (IPV) is highly prevalent in the United States. Each year, women experience about 4.8 million intimate partner-related physical and sexual assaults (Tjaden & Thoennes, 2000). Among the 2.1 million incidents of family violence reported to police annually, approximately 36% result in an arrest (U.S. Department of Justice, 2005). The majority of men arrested for domestic violence are court mandated to attend a battering intervention program (Stuart, Temple, & Moore, 2007). Current interventions target changing men's cognitions (Wexler, 2000) or patriarchal ideology and sexist beliefs (Pence & Paymar, 1993). Unfortunately, randomized clinical trials reveal that current approaches to treatment of IPV do not appear to be effective in preventing recidivism (Babcock, Green, & Robie, 2004). Given that our current approaches are limited, more research is needed on developing new interventions or curricula designed to end IPV (Stuart, 2005).

However, the field is at an impasse, unsure of how to improve battering interventions. While randomized clinical trials are informative, it is unclear what new strategies should be tested in these costly and time-consuming studies. Research has found that intimate partner abusers tend to have deficits in prosocial communication skills (Waltz, Babcock, Jacobson, & Gottman, 2000). Yet rarely is improving communication within the relationship a treatment target of battering intervention programs. Because IPV is tied to entrenched patterns of conflict between two persons, perhaps interventions targeting couples' communication is

warranted (Stith, Rosen, McCollum, & Thomsen, 2004).

Couples therapy for violent couples is controversial, as it implies that the victim shares part of the blame for the relationship problems. Despite the fact that many states mandate against couples' therapy for IPV (Healey, Smith, & O'Sullivan, 1998), researchers have found promising results using couples' interventions (Stith & McCollum, 2009). Couples' therapy has been shown to improve relationship satisfaction among couples with low levels of partner violence, without placing them at increased risk (Simpson, Atkins, Gattis, & Christensen, 2008). Behavioral couples therapy has been found to be effective with alcohol abusers (O'Farrell, Murphy, Stephan, Fals-Stewart, & Murphy, 2004) and drug abusers (Fals-Stewart & Clinton-Sherrod, 2009) in reducing IPV. Couples therapy appears to be as effective as men-only groups at reducing violence over the 1-year follow-up (Brannen & Rubin, 1996; O'Leary, Heyman, & Neidig, 1999), although controlled studies find neither couples nor men-only groups to be particularly effective in stopping violence (Dunford, 2000). Couples' therapy may be superior for abusers with a history of substance abuse (Brannen & Rubin, 1996) and has the added benefit of improving relationship communication (O'Leary et al., 1999), which may mediate the relation between stress and violence (Foshee et al., 2008; Marshall, Weston, & Honeycutt, 2000). Therapy administered in a multicouple group format also shows promise in reducing IPV recidivism (Stith et al., 2004). Couples' interventions, even those not specifically targeting domestic violence, may be safe with violent couples and effective at preventing escalation of future violence.

The current study uses a methodological innovation called "proximal change experiments" (Gottman, Ryan, Swanson, & Swanson, 2005) to provide preliminary data for building a new communication skills treatment package for IPV. Also called "microtrials" (Howe, Beach, & Brody, 2010), these experiments are designed to test the effect of an intervention on a proposed mediator of an outcome. Before implementing costly randomized clinical trials of novel interventions, specific therapeutic techniques can be tested experimentally to assess whether they produce immediate behavior change. If so, it may be a useful adjunct to an intervention; in this case, a technique to implement as part of a new battering intervention program.

Observational research has found several communication problems that occur between violent couples during conflict (Burman & Margolin, 1993; Cordova, Jacobson, Gottman, Rushe, & Cox, 1993). Two particularly problematic communication patterns are escalating negativity and rejection of influence.

Couples with a partner-violent husband show patterns of negative reciprocity but not positive reciprocity. That is, whereby they are less likely to reciprocate positive affect from their partners (Jacobson et al., 1994), violent couples are more likely to continue a negative interaction pattern as compared to nonviolent couples matched on levels of relationship dissatisfaction (Cordova et al., 1993). They also use highly negative, aggressive behaviors, such as contempt, belligerence, and domineering, more often than nonviolent couples during conflict discussion (Burman & Margolin, 1993; Jacobson et al., 1994). Thus, teaching partner-violent men communication alternatives to negative reciprocity and negative escalation may be clinically useful.

Men who use physical violence toward their partner also tend to reject influence from their partner. Coan, Gottman, Babcock, and Jacobson (1997) identified a behavioral pattern present in IPV men whereby they do not just reciprocate low-level negative expressions of sadness, anger, or a complaint but up the ante and reply with a more aversive behavior, such as contempt, belligerence, or defensiveness. IPV men take the argument to another level by not only reciprocating the level of negativity they receive from their spouse, but by invalidating their partner's concerns and escalating the intensity of the argument. The abusive husband's inability to accept influence from his partner is thought to be a core dynamic of violent relationships, in that the violent husband's unwillingness to accept influence from his wife represents a drive to maintain power in the relationship (Coan et al., 1997). The intimate partner abuser may not accept influence from his partner because to do so may be perceived as a concession of power on his part. A sexist ideology of an "honor code" may underlie this communication behavior, such that any acceptance of influence from a woman, either positive or negative, may be construed as "unmanly" or as an affront to his beliefs about acceptable dynamics of a relationship (p. 385). Thus, teaching violent men to accept influence from their partner may be a treatment target for battering interventions.

COMMUNICATION EXERCISES FOR NONVIOLENT COUPLES

Gottman (1998) developed a treatment manual and accompanying audiotapes to help nonviolent couples, including exercises designed to teach both editing out the negative and accepting influence. The *editing-out-the-negative* exercise teaches men

to substitute their immediate negative response with a more neutral one. This exercise is designed to prevent the startup of an argument and also break the cycle of negative reciprocity. The *accepting influence* exercise emphasizes searching for the "kernel of truth" of their partner's argument with which they can agree. Accepting influence means recognizing that parts of the partner's statements are valid. The woman's angry tone is reconceptualized as emphasizing the importance of what she is saying rather than as an attack. The goal of the accepting influence exercise is to teach compromise and how to deescalate an argument.

PRESENT STUDY

While both of these exercises (editing out the negative and accepting influence) have demonstrated promising results with nonviolent couples (Ryan & Gottman, 2004), to date they have not been applied to violent couples. It was hypothesized that IPV men could learn and apply the communications skills of editing out the negative and accepting influence (Gottman, 1998), and that this would lead to a change in both partners' positive and aggressive feelings and behaviors in the subsequent conflict discussion. Using proximal change experiments in a laboratory setting, we attempted to establish whether the application of these new skills is feasible and able to affect immediate behavior change.

Method

PARTICIPANTS

Couples were recruited for the current study as part of a larger project ($N = 134$) on psychophysiological responding of intimate partner abusers. Participants responded to ads in free local newspapers, as well as flyers posted around the Houston area. The ads read "Couples experiencing conflict needed to participate in a research study" and described the basic requirements: must be married or living together as if married for at least 6 months, at least 18 years of age, and able to speak and write English proficiently. Female partners were contacted by phone by trained undergraduate interviewers who administered the violence subscale of the Conflicts Tactics Scale-2 (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) to determine eligibility in the study. To meet preliminary telephone screening, female partners had to report (a) at least two incidents of male-to-female aggression in the past year, or (b) report no relationship violence ever and score less than 4 out of 7 on the Dyadic Adjustment Scale (Spanier, 1976) Item 31: "On a scale from 1 to 7 where 1 is (*very unhappy*), 4 is (*happy*), and 7 is (*perfectly happy*), where would you rate your present relationship?" Men's relationship satisfaction was free to vary. In total, 381 people were screened for the study. Of them, 144 did not meet inclusion criteria, 91 refused to participate, and 12 were scheduled three or more times and repeatedly "no showed." Final group assignment was based on the woman's report of her partner's violence and the man's report of his own violence on the longer CTS2 (Straus et al., 1996) administered in the lab. Couples were classified as IPV ($n = 112$) or distressed nonviolent (DNV; $n = 22$) on the basis of either partner reporting an act of male-to-female violence in the past year on the CTS2. The study consisted of two data collection sessions on different days; only IPV couples who participated in both sessions were included in the current analyses ($n = 100$). Participants were paid $40 to $50 each for their participation; an additional $10 was awarded to each if they came on time for their first scheduled appointment. Figure 1 summarizes the flow of participants from assessment to follow-up and analysis.

OVERVIEW OF PROCEDURES

Questionnaire, psychophysiological, and observational data were collected from both the male and female partners. Men participated in two sessions totaling approximately 6 hours of participation, while their female partners participated in one 3-hour session. During the assessment, couples were separated to complete a questionnaire packet and then reunited for the videotaped conflict discussions. The Play-by-Play Interview (Hooven, Rushe, & Gottman, 1996) was administered in order to clarify an actual conflict area in their relationship. Men were randomly assigned to receive an editing out the negative intervention, accepting influence intervention, or a control/time-out condition. Couples were then asked to sit quietly for a 4-minute eyes-open baseline, then to engage in two 7.5-minute conflict discussions interrupted by the intervention or placebo task. Both partners were asked to complete the About That Discussion (ATD) questionnaire after each conflict discussion. Finally, participants were interviewed separately and debriefed.

Play-by-Play Interview

A Play-by-Play Interview (Hooven et al., 1996) was administered to each couple to determine two areas of conflict in their relationship. The interview helps couples identify areas of disagreement in their marriage. Couples independently ranked how much difficulty they experienced across 10 areas common to marital discord, on a scale of 0 to 100,

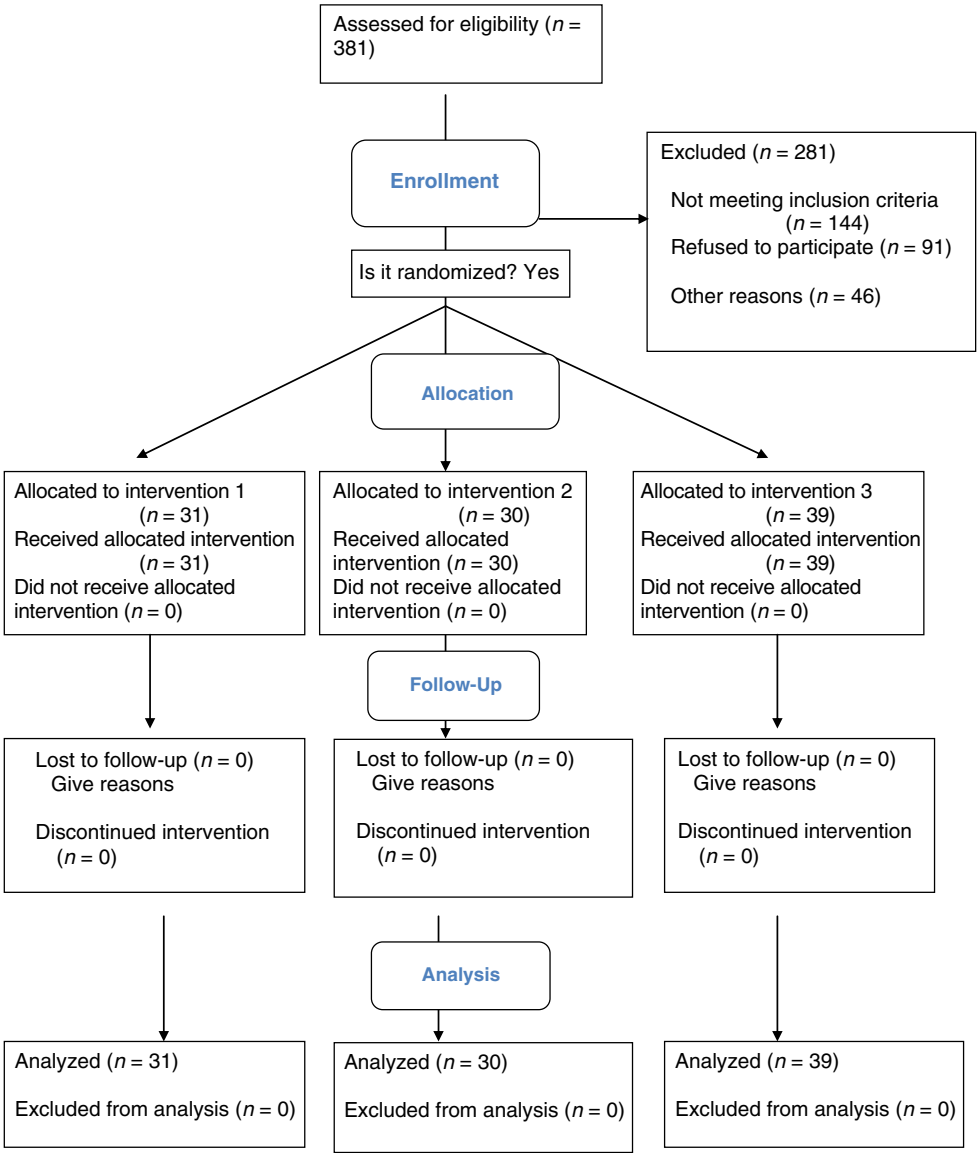

FIGURE 1 The Consort E-Flowchart.

using a modified Knox Problem Solving Inventory (Knox, 1971). After clarifying two topics of discussion, couples were asked to sit quietly for a 4-minute baseline, then to start to discuss the topics. After 7.5 minutes, a graduate student interrupted the discussion. While the female partner listened to music on headphones, the graduate student administered one of the interventions or the control condition with the male. If the male was randomly selected to receive the control/time-out condition, he also listened to music for 8 minutes, with instructions to relax. Both men and women listened to Dave Mathews' Band, *Crash*, selected for its broad appeal and nonaggressive, relaxing qualities.

Editing Out the Negative Intervention

In the editing out the negative intervention, a graduate student coached the man on how to tailor his next discussion to reflect this skill. This semi-scripted, face-to-face intervention lasted, on average, 5 minutes. The skill was explained as follows:

> When someone makes a complaint or says something negative, the immediate response is to get defensive and say something negative right back. That just keeps an argument going, back and forth, getting more and more negative over time. But I'm going to ask you to try not to do that, to "edit out the negative" in your immediate response…

Then, the male participant listened to an audiotape employing a listen–learn–practice format (Gottman, 1998) with further explanation and three scenarios in which the male was asked to generate responses reflecting the lesson taught. For example, one of the editing out the negative scenarios says:

> You and your wife have been living on a budget that you carefully planned. You manage the finances and you are tired of managing all of that responsibility alone. You tell her that you'd like her to pay the bills for a change. She says, "Well, I'm just not going to do it. You keep doing it." You say, "... [TONE plus 30-second pause for articulation]."

Participants articulated out loud and then heard an exemplar statement after each of the three scenarios. A graduate student further coached the man to practice the communication skill in the upcoming argument without informing his partner of what and why he was doing it. Both interventions lasted approximately 8.5 minutes. The researcher then removed the female's headphones and instructed the couple to continue the conversation they were having prior to the intervention, for an additional 7.5 minutes.

Accepting Influence Intervention

Men assigned to the accepting influence intervention were coached by a graduate student on how to tailor their next discussion to reflect accepting influence. This semiscripted, face-to-face intervention lasted on average, 5 minutes. The male participant then listened to an audiotape providing further explanation of accepting influence, followed by three scenarios in which the male was asked to articulate aloud (practice) responses reflecting the lesson taught. For example, one accepting influence scenario says:

> You and your wife argue a lot over who has the final word in major decisions. Recently you both decided that the car needs a new engine, but no further plans were made. Since your brother is able to get a good deal on a new engine you call him and tell him to go ahead and buy one for you. Your wife overhears your conversations and says, "You don't have any right to make that decision without me. And besides, you did it in a sneaky way." You say "... [TONE plus 30-second pause for articulation]."

Again, after each situation, the tone marks the beginning of a 30-second pause in which the men were instructed to articulate aloud what they would say in that situation, if trying to accept influence from their partner. Afterward, men heard an exemplar statement demonstrating accepting influence.

Time-Out/Control Condition

To rule out effects due to time, interruption, and distraction from the initial argument causing positive changes to the subsequent argument, approximately one-third of the men were randomly assigned to a time-out, which served as a control condition. The experimenter would then read the following: "OK, now I'd like you to sit back and relax. What we're going to do now is just ask you to relax, take a few deep breaths, and listen to some music. Try not to think about the discussion you just had. Now I'm going to play this tape of some music for you." This may be conceptualized as a laboratory proxy for the time-out procedure (Wexler, 2000, pp. 50–58) whereby men are told to take a break and walk away from the argument for a period of time, although they did not physically leave the room due to movement constraints of the psychophysiological recording devices. The time-out lasted 8 minutes.

Specific Affect Coding System

The two 7.5-minute conflict discussions were videotaped and coded later by a team of 10 trained coders using the Specific Affect Coding System (SPAFF; Gottman, McCoy, Coan, & Collier, 1996). Coders were blind to condition and had to achieve an inter-rater reliability κ of .70 or higher on a series of test tapes coded by a trained graduate student reliability coder. Kappas were checked periodically over the 8 months of coding to make sure that reliability remained consistent. Weekly meetings were held to review SPAFF and discuss any problems or questions arising from coding. The conflict discussions were coded using the Video Coding Station (Long, 1998), which allows data entry synchronized with the video time code. Twenty-five percent of the tapes were coded by a second coder to calculate reliability. SPAFF categorizes 16 emotions based on facial affect, vocal tone, body language, and content of speech. For the current study, SPAFF codes were collapsed into verbal aggression and positive categories. Four codes—belligerence, contempt, domineering, and disgust—were combined into a global verbal aggression category, $\kappa = .91$. *Belligerence* involves asking rhetorical questions that have no answers, sticking one's chin forward, and provoking an altercation. *Contempt* includes eye rolling, name-calling, and put-downs. *Domineering* is coded by

Table 1
Men's Demographics by Condition

Variable	Placebo/Time Out ($n=31$)		Accepting Influence ($n=30$)		Editing Out the Negative ($n=39$)		$F(2, 97)$
	M	*SD*	*M*	*SD*	*M*	*SD*	
Age	30.10	(11.12)	30.16	(7.28)	33.82	(9.86)	1.74
Education level	3.84	(1.72)	4.48	(1.71)	4.00	(1.81)	1.10
Income ($)	24,445	(15,614)	31,647	(26,208)	35,119	(62,019)	0.56
Length of relationship	45.56	(33.35)	41.14	(19.94)	50.86	(39.16)	0.76
Male–female physical aggression, men's report	14.00	(28.12)	22.21	(35.35)	12.25	(16.61)	1.26
Male–female physical aggression, women's report	15.99	(22.05)	16.88	(20.41)	23.32	(28.36)	0.96

Note. Range: 1 = attended high school (did not graduate) to 6 = college graduate. All *F*s are *ns*, $p > .10$.

glowering (forehead forward), long-winded speech, interrupting, finger-pointing, and staccato speech. *Disgust* includes wrinkling the root of the nose or saying something like "That's disgusting." The positive SPAFF codes of validation, humor, interest, affection, and joy were summed into one global positive category, $\kappa = .92$. The neutral code and low-level negative codes (anger, stonewalling, tension/fear, sadness, defensiveness, whining) were not analyzed in this study.

About That Discussion

A project-designed, 36-item Likert-type scale entitled "About That Discussion" (ATD) was administered to both men and women after each 7.5-minute discussion. This project-designed scale assesses self-report and collateral report of negative and positive feelings about the previous discussion. The ATD questionnaire was given to the couple twice to assess change in self-reported affect as a result of the experimental manipulations. The positive scale was comprised of five items: affection, in-control, happy, interested, and joyous. The aggressive scale was comprised of four items: angry, disgusted, jealous, and vengeful. Items about sadness, fear, worry, and hurt were excluded. All items were rated about current feelings, on a scale of 1 (*not at all*) to 5 (*a great deal*). The two scales derived from this measure showed adequate internal consistency: self-reported positive affect, $\alpha = .77$, self-reported aggressive affect, $\alpha = .82$. Collateral reports of perceptions of partners' feelings were not analyzed here.

Safety Measures

Female participants were informed of the nature of the experiment via telephone, before coming into the lab, and were asked not to participate if they anticipated increased violence from their partner. The participants were debriefed separately to assess danger potential and develop a safety plan, if needed. Both male and female participants were given an adjective checklist to assess their emotional states. Participants endorsing any negative emotions other than "feeling somewhat negative" were interviewed on their likelihood of becoming violent in the near future. All participants were given referrals for community resources including, but not limited to, counseling services, domestic violence shelters, and drug and alcohol treatment. Finally, follow-up phone interviews were conducted 1 week after participation with female participants to ensure that participation did not result in a violent incident. No participant reported violence due to participation in the study.

Analyses

Four repeated-measure, mixed-model MANOVAs were conducted, with the three conditions serving as a between-subjects factor and time (pre- vs. postintervention) as a within-subject factor. For the first two MANOVAs, the two positive and aggressive affect scales derived from the ATD measure were entered as dependent variables, for men's and women's self-reports separately. For the second pair of MANOVAs, the SPAFF composite variables of positive and aggressive behaviors were entered as the dependent variables, again for men and women separately. The primary analyses of interest were the Two-Way Condition × Time and the Three-Way Condition × Time × Affect interactions.[1] Planned post-hoc contrasts tested whether each active intervention differed from the control condition in terms of affecting behavior change.

Results

DEMOGRAPHICS

Table 1 shows the demographic/background variables on the 100 participants who were assigned to one of the three interventions. There were no differences between men assigned to the three conditions on any of the background variables:

[1] MANOVAs were separated by gender as there was inadequate sample size and power to test a four-way interaction including gender.

age, education level, length of relationship, family income, or frequency of male-perpetrated violence as reported by the male or female partner (omnibus $F(4, 12) = 0.33$, *ns*, all univariate *F*s *ns*). Men's average age was 31.58 ($SD = 9.67$) years; average education level was 4.10 ($SD = 1.75$) on a scale of 1 to 5, 4 indicating some college. Average annual gross family income was $30,769.15 ($SD = 4,209$). Length of current relationship averaged 3.83 ($SD = 2.71$) years. Using the CTS2 midpoint scoring method (Straus et al., 1996), on average, men in the study committed 19.12 ($SD = 24.36$) acts of physical violence in the past year as reported by their female partners on the CTS2 (range = 0–100 acts), and self-reported 15.78 ($SD = 27.02$) physically aggressive acts against their mates in the past year (range = 0–177 acts). The majority (66%) of the sample were nonmarried cohabitants. There were no differences in marital status by condition, $\chi^2(df = 2, n = 100) = 3.25$, *ns*. There were also no group differences on ethnicity, $\chi^2(df = 8, n = 99) = 13.27$, *ns*. The majority of the sample were African American (47.5%) with the remaining as Hispanic (18.2%), Caucasian (26.3%), Asian (2%), and 6.1% identifying as Native American or "other." The racial composition of Houston is Caucasian (49.3%), Hispanic or Latino origin (37.4%), African American (25.3%; U.S.Census Bureau, 2000). Thus, African Americans were overrepresented in the current study, perhaps due the lab being located in a historically African American, innercity ward.

SELF-REPORTED AFFECT CHANGE

A repeated measure MANOVA with repeated contrasts was performed to investigate whether men in the editing out the negative, accepting influence, or control/time-out conditions changed differentially in terms of self-reported positive and aggressive feelings. Means and *SD*s are presented in Table 2. The analysis provided information regarding a test of levels (i.e., *M* due to condition), a test of flatness (i.e., *M* due to time), and a test of parallelism (i.e., Condition × Time × Affect interaction). Collapsing across experimental time, there was no *M* due to condition, $F(2, 97) = 1.83$, *ns*. A test of flatness revealed a significant *M* due to time, $F(1, 97) = 8.12$, $p < .01$, and the tests of parallelism revealed a significant Condition × Time × Affect interaction, $F(2, 97) = 3.16$, $p < .05$. Examination of the two-way interactions revealed no significant changes in positive affect but rather significant changes in self-reported aggressive feelings between the three conditions. This two-way interaction effect with aggressive affect is displayed graphically in Figure 2. Men in both the accepting influence and

Table 2
Means, Standard Deviations, and *F* Statistics of Self-Report and Observed Positive and Aggressive Affects Pre- and Postintervention

Variable	Time Out/Control ($n = 31$)				Accepting Influence ($n = 30$)				Editing Out the Negative ($n = 39$)				Condition × Time Interaction	Condition × Time × Affect Interaction
	Pre		Post		Pre		Post		Pre		Post		$F(2, 97)$	$F(2, 97)$
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*		
Men's Report														3.16*
Positive	2.90	(0.79)	2.81	(.081)	2.89	(1.15)	2.72	(0.85)	2.88	(0.79)	2.67	(0.78)	0.22	
Aggressive	6.44	(3.25)	6.84	(3.37)	7.46	(3.04)	5.97	(2.72)	6.67	(2.99)	5.44	(1.85)	3.70*	
Women's Report														3.80*
Positive	2.65	(0.84)	2.37	(0.75)	2.47	(0.98)	2.38	(1.11)	2.75	(0.93)	2.65	(0.81)	0.70	
Aggressive	6.61	(2.59)	6.42	(2.34)	7.94	(3.50)	6.00	(2.53)	7.24	(3.08)	5.80	(1.98)	3.44*	
Men's Observed														4.10*
Positive	6.77	(6.20)	7.55	(8.37)	6.50	(9.12)	11.53	(9.85)	7.51	(7.91)	13.54	(10.60)	3.38*	
Verbal aggression	8.70	(9.80)	7.74	(7.17)	12.80	(9.50)	6.47	(8.19)	8.26	(7.98)	4.39	(6.15)	3.37*	
Women's Observed														1.16
Positive	5.97	(6.80)	5.55	(5.92)	6.00	(10.23)	6.70	(9.12)	9.41	(11.53)	9.46	(9.31)	0.23	
Verbal aggression	12.87	(9.54)	11.13	(11.05)	16.00	(13.07)	11.67	(11.46)	10.05	(7.46)	5.64	(5.44)	1.49	

Note. $^*p < .0$.

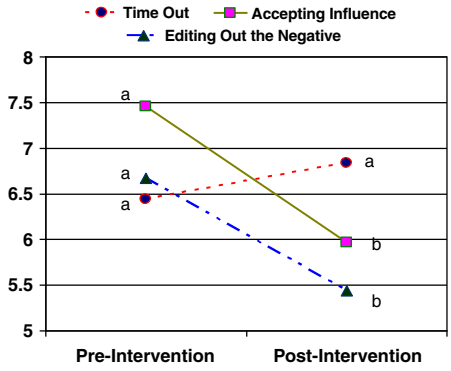

FIGURE 2 Men's self-reported aggressive affect over Time × Condition. *Note.* Points with different subscripts are significantly different, pairwise *t*-test $p<.05$.

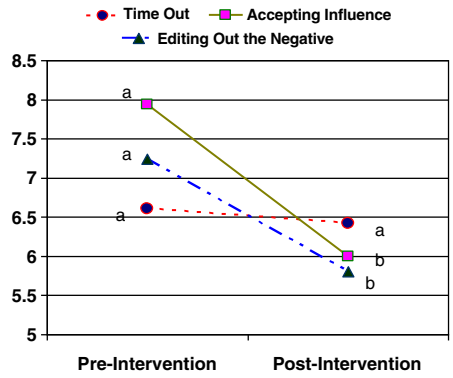

FIGURE 3 Women's self-reported aggressive affect over Time × Condition. *Note.* Points with different subscripts are significantly different, pairwise *t*-test $p<.05$.

editing out the negative conditions reported decreased aggressive affect in the second couples' interaction, whereas men in the control/time-out condition did not, $F(2, 97)=3.37$, $p<.05$, $\eta^2=.071$ (see Figure 2). A planned contrast testing the differences in slopes between the time-out versus the accepting influence condition was significant, $t(97)=-2.67$, $p<.05$, and marginal for men in the editing out the negative condition, $t(97)=-1.49$, $p<.07$.

A second repeated measure MANOVA was performed to test the three-way interaction of women's self-reported positive and aggressive feelings before and after their partners' exposure to an intervention (see Table 2). There was no significant *M* due to condition, $F(2, 97)=1.04$, *ns*. A test of flatness revealed a significant *M* due to time, $F(1, 97)=24.91$, $p<.01$, and the tests of parallelism revealed a significant Condition × Time × Affect interaction, $F(2, 97)=3.80$, $p<.05$. As with the analyses of the men's self-report data, this significant three-way interaction was pulled by significant changes in women's aggressive feelings, $F(2, 97)=3.44$, $p<.05$, $\eta^2=.056$; there were no significant changes in women's self-reported positive feelings by condition, $F(2, 97)=0.70$, *ns*, $\eta^2=.002$. This significant Two-Way Condition × Time interaction effect is displayed graphically in Figure 3. Women whose partners were exposed to either the accepting influence or editing out the negative conditions reported decreased aggressive affect in the second interaction, whereas women whose partners were in the control/time-out condition reported about the same amount (see Figure 3). Only the two active conditions showed decreased women's aggression over time. Planned contrasts revealed a significant difference in slopes between time-out versus accepting influence, $t(97)=-2.53$, $p<.05$, and a trend for editing out the negative, $t(97)=-1.92$, $p<.06$.

ANALYSIS OF SPAFF

A third repeated measure MANOVA was performed to test the three-way interaction of changes in men's observed positive and aggressive behaviors, based on SPAFF ratings, following exposure to the interventions. The nontransformed SPAFF mean frequency counts and *SD*s are presented in Table 2. The numbers represent a frequency count of the number of onsets of the positive or aggressive affect displays. Box–Cox transformations were conducted to correct the skewness of the SPAFF variables prior to being entered into the MANOVA. There was no significant *M* due to condition, $F(2, 97)=1.05$, *ns*. A test of flatness revealed no *M* due to time, $F(1, 97)=0.06$, *ns*. Most importantly, the test of parallelism revealed a significant Condition × Time × Affect interaction, $F(2, 97)=4.10$, $p<.05$. This interaction effect is displayed visually in Figures 3 and 4. Changes were observed in both men's positive, $F(2, 97)=3.38$, $p<.05$, $\eta^2=.014$, and aggressive affect, $F(2, 97)=3.37$, $p<.05$, $\eta^2=.054$,

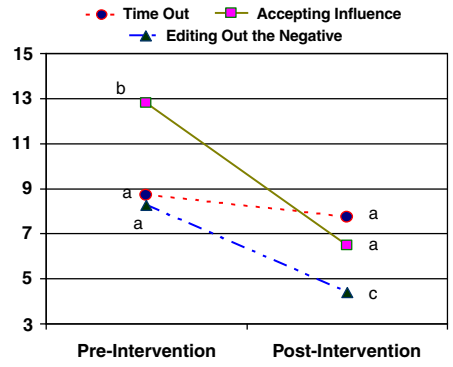

FIGURE 4 Men's observed verbal aggression over Time × Condition. *Note.* Points with different subscripts are significantly different, pairwise *t*-test $p<.05$.

following the interventions. Only men in the two active intervention conditions showed a significant decrease in aggression over time (see Figure 4). The planned contrast testing the difference in slopes between time-out versus accepting influence was significant, $t(97) = -2.59$, $p < .05$, but the slopes of the time-out versus the editing out the negative condition were not significantly different, $t(97) = -1.49$, *ns*, suggesting that accepting influence was a more powerful intervention in producing change in aggression than editing out the negative (see Figure 4). In addition, while men's positive affect increased in all conditions over time, the Condition × Time interaction was significant for change in men's positive affect, $F(2, 97) = 3.38$, $p < .05$. Planned contrasts showed that the difference in slopes between the control versus accepting influence conditions was marginal, $t(97) = 1.90$, $p < .06$, whereas the control versus the editing out the negative condition were significantly different in increasing men's positive affect displays, $t(97) = 2.50$, $p < .05$. Men in both the editing out the negative and accepting influence conditions tended to show greater increases in observed positive affect as compared to men in the time-out condition (see Figure 5).

Finally, women's observed behavior was entered into the fourth MANOVA. Means and *SD*s are reported in Table 2. There was no significant *M* due to condition, $F(2, 97) = 0.87$, *ns*. However, there was a significant *M* due to time, $F(1, 97) = 15.04$, $p < .001$, and a significant Time × Affect interaction, $F(1, 97) = 11.82$, $p < .01$. With regard to observed affect, women showed decreased aggressive affect, $F(2, 97) = 24.17$, $p < .001$, and no change in positive affect, $F(2,97) = 0.23$, *ns*, over time in all conditions. In this case, the test of parallelism did not reveal a significant Condition × Time × Affect interaction, $F(2, 97) = 1.16$, *ns*, or significant Two-Way Condition × Time interaction. Women's observed aggression appeared to decrease over time regardless of which exercise their partner completed.

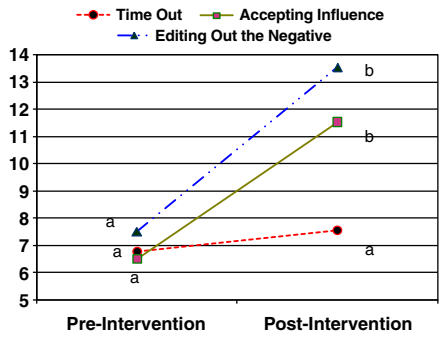

FIGURE 5 Men's observed positive affect over Time × Condition. *Note.* Points with different subscripts are significantly different, pairwise *t*-test $p < .05$.

Discussion

The purpose of the present study was to examine violent men's success in applying a new technique during a conflict discussion with their partner. It was hypothesized that IPV men could apply the communications skills of editing out the negative and accepting influence (Gottman, 1998), leading to a change in both partners' positive and aggressive feelings and behaviors. Results suggest that both active interventions led to a decrease in men's aggressive affect in the subsequent argument as compared to men in the control (time-out) condition. Men who were administered one of the skills-training exercises were also observed to display increased positive affect during the subsequent discussion with their partner, although this was not reflected in their self-reported positive feelings. Female partners of men in either of the active interventions reported a greater decrease in aggressive feelings in the second conflict discussion, although this was not captured in their behavior observed in the lab.

This study provides preliminary evidence to suggest that skills-based intervention techniques may be effective in changing destructive relationship conflict in couples experiencing IPV. Although the "time-out" is one of the most widely taught behavioral strategies to decrease IPV (Sonkin, Martin, & Walker, 1985; Wexler, 2000), a brief, relaxing break during the conflict discussion appeared to have little impact on changing the aggressiveness of the subsequent argument. In fact, according to men's self-report, they felt more aggressive after a time-out. Accepting influence appeared to be especially effective in improving the subsequent conflict discussion by reducing men's observed verbal aggression and men's and women's self-reported felt aggression. Editing out the negative, on the other hand, appeared to be especially powerful in increasing men's positive behavior toward their partner.

Although men in the skills-training conditions demonstrated more positive and less aggressive behavior, as expected, neither men nor women reported feeling more positive after the second conflict discussion. Thus, the interventions may be more effective in reducing aggressiveness than in increasing positive sentiments. While the men were behaving in a more positive manner, they may not have been feeling happy. Perhaps this is due to the fact that they continued to discuss the same issue identified to be a problem in their relationship. In

any case, a reduction in the caustic, aggressive behaviors and feelings would seemingly be beneficial in preventing harmful fights.

Given the observed reduction in men's verbal aggression, communication skills training may be a useful adjunct in men's-only battering intervention programs. While it was hypothesized that the editing out the negative and accepting influence exercises would lead to a change in both partners' positive and aggressive behavior, the interventions appeared to have a greater effect on the men than on the women. This is not surprising considering that female participants were not taught the skills and were unaware of what their partners were coached to do. This suggests that, for communication patterns to change, perhaps both partners need to be taught the new communication skill. Although couples therapy for partner violence is controversial, perhaps interventions teaching communication skills in a couples format is warranted (Babcock, Canady, Graham, & Schart, 2007). Because violence is often tied to poor communication skills and problem-solving techniques during arguments between two persons (Stith et al., 2004), couples therapy may prove more effective than standard men's-only battering intervention groups. Future studies should examine the impact of teaching both partners accepting influence and editing out the negative on aggressiveness and violence.

LIMITATIONS

The frequency of men's violence reported in this community sample (about 19 violent acts in the past year, based on men's self-report) is thought to be comparable to that of court-mandated offenders. For example, Vega and O'Leary's study (2007) of men recruited from a battering intervention program reported 11 violent acts on the CTS2 upon intake. Although the range of IPV appears to be similar, the sample was recruited from the community using newspaper ads and is not representative of clinical or forensic populations of IPV perpetrators or victims. Ethics and safety concerns prevent conducting such experiments with court-mandated men or women seeking shelter. While the ethnic diversity of the sample is a strength of the current study, results may not generalize to other, less-diverse populations. The small sample size impeded the four-way interaction analyses testing the effect of gender. However, proximal change experiments should not require large sample sizes, as the effect sizes should be large enough to reveal immediate behavior change, assuming that any distal effects will be weaker. Several significant three-way interactions did emerge, suggesting a sufficient effect of the interventions in affecting proximal behavior change, although the resulting effect sizes were small. Only women's observed behavior change failed to reach statistical significance in the current study. It is possible that the interventions, administered only to the men and excluding the women, led to confusion or anger for some women. For example, in one case, a woman expressed suspicion about the sudden onset of her husband's new behavior, as it was markedly different from his typical discussion style. In turn, women's reactions may have affected the rate at which the men chose to use the new technique. Although overall IPV men appeared to adopt the skills taught, perhaps some men assigned to one of the interventions had difficulty learning or refused to implement the communication techniques. For example, one participant directly stated that he "would not use the skill simply because he was instructed to do so." We did not explore predictors of men's willingness to engage in the exercises in the current study.

Although the control condition contained elements of a time-out, it differed in that music is not typically used as a distraction technique, the men did not physically leave the room, and it was of shorter duration than a standard time-out. Men in this placebo/control condition may have ruminated about their previous argument during this time-out procedure and may have not had ample time to sufficiently cool down from the first argument, as is required for a good time-out. Although time-out procedures vary, in the best curricula men are taught to use anger-reducing self-talk (Rosenbaum & Leisring, 2002; Wexler, 2000) and both partners are taught many steps to curtail burgeoning arguments (Deschner & McNeil, 1986; Rosen, Matheson, Stith, McCollum, & Locke, 2003; Rosenbaum & Leisring, 2002). Thus, the control condition may not be a sufficient proxy for state-of-the art time-out training.

The biggest limitation in the current study is the lack of a follow-up outside the lab. This study examined only immediate behavior after the intervention was introduced. For communication skills to be successful, they must continue to be employed during conflict discussions at home. Whether this communication technique would continue to be used outside the laboratory setting remains unknown. In addition, whether increasing violent men's acceptance of partner influence or decreasing verbal aggressiveness functions to reduce partner violence remains unknown. It is unclear the extent that laboratory results on verbal aggression generalize to more severe aggression, including violence, outside the lab. To prove that

these exercises are useful adjuncts to battering interventions, the use of these skills must be related to decreased relationship conflict and violence over time in a longitudinal study.

FUTURE RESEARCH

Future research should examine both proximal and distal change following brief communication exercises. Teaching men to continue to use the techniques outside the laboratory setting and longitudinally evaluating its sustained effects on deescalating a conflict discussion is a logical next step. Longer, more intensive interventions may be required to have significant carryover effects. Teaching these skills to the female partners or simply making them aware of the technique being taught to their partner may also increase the effectiveness of the interventions. Perhaps conjoint approaches are more effective in decreasing couples' conflict than individual communications skills training. Of course, including women in an intervention for IPV is not intended to imply that the women are to blame for their partner's violence. Testing change in specific communication patterns as a meditator between stress or anger and IPV is another important step, as there is little scientific evidence showing that improved communication skills are causally related to a reduction in violence. Other techniques, such as emotional regulation, anger management, and cognitive techniques designed for changing attitudes toward women, can be tested in this microtrial format. Future research can examine whether these exercises are more effective when administered to both partners, if they carry over to deescalating conflicts outside the laboratory, if they only work for specific types of violent couples, and, most importantly, if they affect a reduction in intimate partner abuse over time.

CLINICAL IMPLICATIONS

Quickly teaching partner-violent men how to accept influence and edit out their immediate negative responses appears to be feasible and able to affect immediate behavior change. For as many as 50% of IPV couples, the violence is not due to characterological flaws of the batterer but rather to "situational violence" (Babcock et al., 2007). Situational violence is likely to be part of a coercive family cycle that contains the characteristics of negative reciprocity, rapid escalation, and lack of withdrawal rituals from the escalating arguments (Jacobson & Gottman, 1998)—habitual patterns of conflict that these couples do not know how to break. While we are not suggesting that brief communication exercises are sufficient to stop domestic violence, perhaps incorporating communication skills-training exercises into existing battering intervention programs or designing new interventions exclusively for situationally violent couples that center on couples' communication skills may improve the efficacy of battering interventions.

Methodologically, whereas randomized clinical trials focus on achieving distal behavior change from a multicomponent treatment package, preliminary experiments such as this one can test proximal changes resulting from a specific technique. While the ultimate goal of interventions is to produce permanent positive changes in behavior, we can test the promise of specific techniques by first determining if the technique (a) can be efficiently applied to a given population, and (b) can affect immediate behavior change in an appropriate context. This kind of empirical support for specific techniques can serve as building blocks in the development of new empirically supported interventions with difficult populations. Rather than developing new intervention packages from theory, perhaps we can build new intervention packages empirically, from the laboratory up.

References

Babcock, J. C., Canady, B., Graham, K. H., & Schart, L. (2007). The evolution of battering interventions: From the Dark Ages into the Scientific Age. In J. Hamel & T. Nicholls (Eds.), *Family therapy for domestic violence: A practitioner's guide to gender-inclusive research and treatment* (pp. 215–244). New York: Springer.

Babcock, J. C., Green, C. E., & Robie, C. (2004). Does batterers' treatment work?: A meta-analytic review of domestic violence treatment outcome research. *Clinical Psychology Review*, *23*, 1023–1053.

Brannen, S., & Rubin, A. (1996). Comparing the effectiveness of gender-specific and couples groups in a court-mandated spouse abuse treatment program. *Research on Social Work Practice*, *6*(4), 405–424.

Burman, B., & Margolin, G. (1993). America's angriest home videos: Behavioral contingencies observed in home reenactments of marital conflict. *Journal of Consulting and Clinical Psychology*, *61*(1), 28–39.

Coan, J., Gottman, J. M., Babcock, J., & Jacobson, N. (1997). Battering and the male rejection of influence from women. *Aggressive Behavior*, *23*, 375–388.

Cordova, J. V., Jacobson, N. S., Gottman, J. M., Rushe, R., & Cox, G. (1993). Negative reciprocity and communication in couples with a violent husband. *Journal of Abnormal Psychology*, *102*, 559–564.

Deschner, J. P., & McNeil, J. S. (1986). Results of anger control training for battering couples. *Journal of Family Violence*, *1*, 111–120.

Dunford, F. W. (2000). The San Diego Navy experiment: An assessment of interventions for men who assault their wives. *Journal of Consulting and Clinical Psychology*, *68*, 468–476.

Fals-Stewart, W., & Clinton-Sherrod, M. (2009). Treating intimate partner violence among substance-abusing dyads:

The effect of couples therapy. *Professional Psychology: Research and Practice*, *40*, 257–263.

Foshee, V., Karriker-Jaffe, K., Reyes, H., Ennett, S., Suchindran, C., Bauman, K., et al. (2008, June). What accounts for demographic differences in trajectories of adolescent dating violence? An examination of intrapersonal and contextual mediators. *Journal of Adolescent Health*, *42*(6), 596–604.

Gottman, J. M. (1998). *Relationship exercises for effective and loving marital communication*. Washington, DC: Gottman Institute.

Gottman, J. M., McCoy, K., Coan, J., & Collier, H. (1996). The Specific Affect Coding System (SPAFF). In J. M. Gottman (Ed.), *What predicts divorce? The measures* (pp. SPAFF1–-SPAFF169). Mahwah, NJ: Erlbaum.

Gottman, J., Ryan, K., Swanson, C., & Swanson, K. (2005). Proximal change experiments with couples: A methodology for empirically building a science of effective interventions for changing couples' interaction. *Journal of Family Communication*, *5*(3), 163–190.

Healey, K., Smith, C., & O'Sullivan, C. (1998). *Batterer intervention: Program approaches and criminal justice strategies*. Report to the National Institute of Justice, Washington, DC.

Hooven, C., Rushe, R., & Gottman, J. M. (1996). The Play-by-Play Interview. In J. M. Gottman (Ed.), *What predicts divorce? The measures*. Mahwah, NJ: Erlbaum.

Howe, G. W., Beach, S., & Brody, G. (2010). *Microtrial methods for translating gene–environment interactions into preventive intervention trials*. Manuscript submitted for publication.

Jacobson, N. S., & Gottman, J. M. (1998). *When men batter women: New insights into ending abusive relationships*. New York: Simon & Schuster.

Jacobson, N. S., Gottman, J. M., Waltz, J., Rushe, R., Babcock, J. C., & 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), 982–988.

Knox, D. (1971). *Marriage happiness: A behavioral approach to counseling*. Champaign, IL: Research Press.

Long, J. (1998). *The video coding station: Reference guide*. Caroga Lake, NY: Long.

Marshall, L., Weston, R., & Honeycutt, T. (2000). Does men's positivity moderate or mediate the effects of their abuse on women's relationship quality? *Journal of Social and Personal Relationships*, *17*, 660–675.

O'Farrell, T., Murphy, C. M., Stephan, S. H., Fals-Stewart, W., & Murphy, M. (2004). Partner violence before and after couples-based alcoholism treatment for male alcoholic patients: The role of treatment involvement and abstinence. *Journal of Consulting and Clinical Psychology*, *72*, 202–217.

O'Leary, K. D., Heyman, R. E., & Neidig, P. H. (1999). Treatment of wife abuse: A comparison of gender-specific and conjoint approaches. *Behavior Therapy*, *30*, 475–506.

Pence, E., & Paymar, M. (1993). *Education groups for men who batter: The Duluth model*. New York: Springer.

Rosen, K. H., Matheson, J. L., Stith, S. M., McCollum, E. E., & Locke, L. D. (2003). Negotiated time-out: A de-escalation tool for couples. *Journal of Marital and Family Therapy*, *29*, 291–298. doi:10.1111/j.1752-0606.2003.tb01207.x

Rosenbaum, A., & Leisring, P. (2002). Group intervention programs for batterers. *Journal of Aggression, Maltreatment & Trauma*, *5*(2), 57–71. doi:10.1300/J146v05n02

Ryan, K., & Gottman, J. M. (2004). Who improves and who does not in long-term follow up in psycho-educational and couples therapy. Unpublished manuscript.

Simpson, L., Atkins, D., Gattis, K., & Christensen, A. (2008). Low-level relationship aggression and couple therapy outcomes. *Journal of Family Psychology*, *22*, 102–111.

Sonkin, D. J., Martin, D., & Walker, L. E. A. (1985). *The male batterer: A treatment approach*. New York: Springer-Verlang.

Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and the Family*, *38*, 15–28.

Stith, S. M., & McCollum, E. E. (2009). Couples treatment for psychological and physical aggression. In K. D. O'Leary & E.M. Woodin (Eds.), *Psychological and physical aggression in couples: Causes and interventions* (pp. 233–250). Washington, DC: American Psychological Association. doi:10.1037/11880-011

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. Implications of research with diverse families [Special issue]. *Journal of Marital & Family Therapy*, *30*, 305–318.

Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The Revised Conflict Tactics Scale (CTS2). *Journal of Family Issues*, *17*(3), 283–316.

Stuart, G. L., Temple, J. R., & Moore, T. M. (2007). Improving batterer intervention programs through theory-based research. *Journal of the American Medical Association*, *298*, 560–562.

Stuart, R. B. (2005). Treatment for partner abuse: Time for a paradigm shift. *Professional Psychology: Research and Practice*, *36*, 254–263.

Tjaden, P., & Thoennes, N. (2000). *Extent, nature, and consequences of intimate partner violence: Findings from the National Violence Against Women Survey* (Publication No. NCJ 181867). Washington, DC: Department of Justice.

U.S. Census Bureau. (2000). Houston (city) quick facts. Available at http://quickfacts.census.gov/qfd/states/48/4835000.html

U.S. Department of Justice, Bureau of Justice Statistics. (2005). Family violence statistics. Available at http://www.ojp.usdoj.gov/bjs/pub/pdf/fvs04.pdf

Vega, E., & O'Leary, K. (2007). Test–retest reliability of the Revised Conflict Tactics Scales (CTS2). *Journal of Family Violence*, *22*, 703–708. doi:10.1007/s10896-007-9118-7

Waltz, J., Babcock, J. C., Jacobson, N. S., & Gottman, J. M. (2000). Testing a typology of batterers. *Journal of Consulting and Clinical Psychology*, *68*, 658–669.

Wexler, D. B. (2000). *Domestic Violence 2000: Group leader's manual*. New York: W.W. Norton.

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