

DIFFERENTIAL UTILITY OF SKILLS-BASED INTERVENTIONS FOR  
PROACTIVE AND REACTIVE BATTERERS

A Dissertation  
Presented to  
The Faculty of the Department  
of Psychology  
University of Houston

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In Partial Fulfillment  
of the Requirements of the Degree of  
Doctorate of Philosophy

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Sheetal Kini  
August, 2015

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## ABSTRACT

The current study reexamines data from Babcock and colleagues (2011) proximal change experiment to discern the differential utility of communication skills-based interventions between Proactive and Reactive batterers. Given that communication styles and motivations for violence are markedly different for Reactive and Proactive batterers, the aim of this study was to conduct a preliminary treatment matching study for Proactive and Reactive batterers. We hypothesized that Proactive men would exhibit more positive emotional and behavioral change following the Accepting Influence intervention while Reactive men would exhibit more positive emotional and behavior change following the 'Editing out the Negative' intervention. Partners of Proactive and Reactive men were also hypothesized to exhibit similar patterns of behavioral and emotional changes. Results found that batterers were able to learn both skills equally well. While a series of MANCOVAs found no differences by type of batterers' response to different interventions, contrast analyses revealed a trend. Reactive batterers tended to feel less aggressive after completing the 'Editing out the Negative' intervention in comparison to the Proactive batterers who completed the 'Accepting influence' intervention ( $t = 1.49, p = .10$ ) and tended to exhibit less negative affect in comparison to Reactive batterers that completed the Accepting Influence intervention ( $t = 19.1, p = .03$ ). Partners of Reactive men who completed the 'Editing out the Negative' intervention also became significantly less aggressive compared to women whose partners completed the 'Accepting Influence' intervention ( $t = 4.67, p = 0.03$ ). Findings of the current study lend some support for tailoring interventions specific to batterer type and eliminating the 'one size fits all trend' for batterer intervention programs.

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## **Differential Utility of Skills-Based Interventions for Proactive and Reactive Batterers**

Intimate Partner Violence has become an epidemic in the United States, affecting nearly 12 million people each year. The annual costs of IPV have been estimated at \$5.8 billion (Bureau of Justice Statistics, 2012). Unfortunately, most of the women victims of IPV are re-victimized by the same offender, which speaks to the extent of recidivism and lack of effective treatment for IPV offenders (Bureau of Justice Statistics, 2012). In the past two decades, researchers have begun to recognize that abusers are heterogeneous in terms of their personality (Holtzworth-Munroe & Stuart, 1994) and the kind of violence they commit (Tweed & Dutton, 1998). However, intervention programs have yet to factor in these differences when assigning batterers to treatment programs.

Although battering intervention programs “offer great hope & potential for breaking the destructive cycle of violence” (US Attorney’s Task Force 1984), they are not highly effective (Babcock, Green & Robie, 2005; Eckhardt et al. 2013). Currently, men arrested for intimate partner violence are generally mandated to attend a Duluth Model or CBT battering intervention group (Babcock, Green & Robie, 2005; Healey, 1999). Both the predominant Duluth Model, which addresses attitudes and beliefs, and CBT interventions, which examine cognitions, have only small effects on stopping violence (Babcock, Green & Robie, 2005). It is noteworthy that although intimate partner violence exhibits a pattern of arising from arguments that escalate out of control, neither of these interventions addresses men’s communication skills. Moreover, the CBT and Duluth approaches have been applied indiscriminately to men arrested for domestic violence regardless of the factors perpetuating their violence (Babcock, Green & Robie, 2005). However, it now has become evident that this ‘the one size fits all’ approach to battering interventions is a limitation (Healey, 1999).

One way to improve outcomes may be to match treatment strategy to different types of batterers. The first step in tailoring battering interventions is to identify subtypes of batterers who differ on clinically relevant variables. Many researchers have proposed a variety of different typologies over the decades to classify batterers on common characteristics. For instance, researchers have typified batterers based on severity of violence (Saunders, 1992; Holtzworth-Munroe & Stuart, 1994), generality of violence (Saunders, 1992; Holtzworth-Munroe & Stuart, 1994), attachment styles (Babcock, Jacobson, Gottman & Yerington, 2000), personality, (Saunders, 1992; Holtzworth-Munroe & Stuart, 1994), and heart rate reactivity (Gottman, Jacobson, Rushe & Shortt, 1995). These typologies have used a variety of different correlates to understand the differences between batterers. However, in order to target and eliminate battering behaviors and formulate treatments, a typology that addresses differential functions of violence may be the most clinically relevant.

One typology that attends to antecedents and motivations for violence is the Proactive-Reactive classification (Chase, O'Leary & Heyman, 2001; Kini & Babcock, under review). This typology may be more clinically relevant than descriptive typologies of the men's character because it directly addresses the function of men's violence. According to Chase et al.'s (2001) classification, Proactive violence is intentional and instrumental, that is, violence motivated by obtaining an ulterior goal, like control, compliance, or submission. Reactive violence, on the other hand, involves impulsivity, self-defense from a perceived threat, and high affective arousal (Chase et al, 2001; Babcock, Heppner, Tharp, Sharp & Stanford, 2014). While Proactive aggression finds its roots in dominance and goal directed behavior, Reactive aggression develops out of perceived threat or provocation due to an inherent hostility attribution bias (Babcock et al, 2014; Chase et al, 2001).

Although Chase and colleagues were the first to introduce this typology to classify adult IPV batterers, the Proactive-Reactive typology was originally created to categorize childhood aggression by Dodge and Coie (1987) who explained it as a function of social-information processing. Dodge and colleagues (1996) explained that violent behaviors that happened as a result of children feeling “pushed” or provoked (Reactive aggression), perceived ambiguous social information in a negative way, thereby attributing a hostile or malicious intent to their peers’ actions and acting aggressively in revenge or to defend themselves. On the other hand, they explained that aggression that was “pulled” (Proactive aggression) due to expectation of a positive outcome, occurred when children perceived aggression to be a favorable act; one that helped them to achieve other ends by intimidating peers. Theoretically, it is noteworthy that the different motives of Proactive and Reactive aggression apply in the context of adult intimate relationships as well.

Research suggests that this typology can be applied to men who batter women and that meaningful differences can be found between Proactive and Reactive intimate partner abusers. Chase and colleagues (2001) found that Reactive batterers expressed significantly more anger and frustration during conflict with their partners than did Proactive batterers. On the other hand, Proactive batterers lacked anger but expressed the need for dominance much more than Reactives during a conflict discussion observed in the lab (Chase et al., 2001). Although Chase and colleagues explained these difference between Proactive and Reactive batterers on the basis of their affective and emotional arousal, they did not examine physiological differences during conflict between the batterers.

However, in a recent replication and extension of Chase et al.’s (2001) findings, Kini and Babcock (under review) found differences in physiological reactivity between Proactive and

Reactive batterers that are in accordance with Chase's findings. In this study, Reactive batterers exhibited greater heart rate reactivity during a conflict discussion as compared to Proactive batterers (Kini & Babcock, under review). This showed that Reactive batterers experience increased cardiovascular activity (increase HR) during an argument suggestive of their intense affective arousal and their inability to regulate it. Research has suggested that this results in Reactive batterers exhibiting overwhelming rage and sometimes violence. This is known as *flooding* (Gottman, 1994), and is presumably causally related to Reactive batterers lashing out at their partners. On the other hand, Proactive batterers who use violence intentionally in the absence of affective arousal do not exhibit such physiological arousal. Overall, patterns of affective and physiological arousal preceding physical violence have successfully been shown to be markedly different in Proactive and Reactive batterers. This is important to acknowledge, as these differences may be reflective of the distinct antecedents of their violent behavior.

Furthermore, research suggests that Reactive and Proactive men may have disparate styles of communicating and expressing emotions to their partners which may stem from qualitatively different attachment styles (Babcock et al, 2000). Research by Babcock and colleagues (2000) found that batterers, who engaged in Reactive forms of violence, exhibited a preoccupied style of attachment (e.g. more vulnerable to perceiving abandonment, jealousy and anger; inability to tolerate distance in the relationship). On the other hand, they found that batterers whose violence was instrumental and who used violence to assert control and dominance over their partners, i.e. Proactive violence, exhibited a dismissive attachment style (i.e. distance themselves in relationships, maintaining dominance over their partners).

It is noteworthy that these attachment patterns provide insight into batterers' styles of communication and expression of emotions as well as how they deal with conflict. Researchers



believe that insecurely attached individuals (i.e. preoccupied and dismissively attached) are unable to regulate their emotional arousal during a conflict that often results in either inhibition or exaggeration of emotional expression (Kobak & Hazan, 1991). With regard to Reactive and Proactive batterers, it may be inferred that while the former (Reactive) may exhibit an exaggerated expression and communication of negative emotions, the latter (Proactive) may exhibit an inhibition of emotional expression. This speculation is corroborated by the aforementioned data that echoed the differences in affective arousal between Proactive and Reactive batterers (Chase et al, 2001). In fact, research by Babcock and colleagues (2000) have shown that Reactively violent batterers exhibit more anger and belligerence while communicating with their wives and provocatively engage and elicit negative responses from them. Furthermore, it has been observed that if their wives attempt to diffuse the argument by disengaging from the discussion, Reactively violent husbands perceive this as a threat of abandonment and feel further provoked, resulting in an escalation of negativity between the partners.

On the other hand, it has been observed that Proactively violent batterers attempt to regulate their emotional discomfort by asserting dominance and rejecting influence by their partners (Babcock et al, 2000; Chase et al, 2001). Specifically, in the aforementioned study by Babcock et al (2000), researchers found Proactively violent husbands exhibiting a domineering communication style as defined by attempts “to force compliance, to get the other person to withdraw, retreat or submit to their view” (Gottman, 1995). It may be inferred that due to their controlling and dominating nature, Proactive partners may react to their wives’ defensiveness or rebellion during an argument by using violence instrumentally to reject their influence and to make them submit to their own view. Furthermore, it appears that Proactive batterers may be

unable to accept influence from their partners for the fear of appearing weak or wrong and further humiliated because of it (Babcock, Graham, Canady, Ross, 2011). Therefore, it may be inferred that in order to appear in control, Proactive batterers' communication/interaction styles often entail rejection and domination.

### **Matching Intervention Components to Specific Presenting Concerns**

Novel interventions, like communication skills training, may be particularly beneficial for certain types of batterers as this training addresses their styles of interpersonal functioning.

While research has found partner abusers to exhibit skill deficits in prosocial forms of communication that result in escalating negativity and rejection in the relationship (Waltz, Babcock, Jacobson, & Gottman, 2000; Babcock et al, 2000, Chase et al, 2001), communication skills training has rarely been targeted for IPV batterer interventions (Babcock et al, 2011).

However, one may speculate that interventions addressing the communication patterns that precede their conflict may have utility in decreasing aggression.

Recently, Babcock and colleagues (2011) studied the utility of applying communication skills-based techniques to bring about positive behavioral and emotional change in partner violent men. These techniques were developed by Gottman (1998) as a part of a treatment manual and have been used successfully with non-violent couples. In order to discern the effectiveness of these techniques, Babcock and colleagues (2011) used a "proximal change experiment" paradigm to observe immediate behavioral change in couples, following an intervention. Developed by Gottman, Ryan, Swanson & Swanson (2005), the premise of this experiment was to measure verbal and nonverbal communication exhibited by IPV men during two conflict discussions, one before and one after communication skills-training technique had been taught to the men. In essence, the goal of the paradigm was to test if positive changes in

men and women's behavior occurred during the second conflict discussion as compared to the first.

In this experiment, violent couples were randomly assigned to one of two communication skills training exercises or a control condition. The two techniques that were used in this study were the 'Editing out the Negative' and the 'Accepting Influence' techniques (Gottman, 1998). In the control condition, couples simply listened to music. Couples were asked to engage in two 7.5-minute conflict discussions interrupted by the intervention or placebo task while their facial affect and physiological responding was being recorded. Both partners were asked to complete a questionnaire after each conflict discussion which asked them about their thoughts and feelings about the previous conflict discussion. The results of Babcock and colleagues' (2011) study showed that overall, both communication skills training exercises resulted in increased positive feelings between partners and decreased feelings of aggression in the second conflict discussion. That is, violent men taught either how to 'Edit out the Negative' or 'Accept Influence' evidenced improved communication as compared to those men who received no intervention. While the interventions were generally effective, it is unknown whether the interventions were particularly effective for one type of batterer as compared to another.

The premise of the current study is that the two exercises may be differentially effective for Proactive and Reactive types of violent men. First, in the 'Editing out the Negative' technique, men are taught to substitute their immediate negative response with a more neutral one. This exercise is designed to prevent the harsh startup of an argument and also break the cycle of negative reciprocity. As aforementioned, a host of research has shown that Reactive batterers are vulnerable to this very cycle of negative reciprocity due to their preoccupied attachment styles, hostile attribution bias, as well as overall inability to regulate their affective

and physiological hyper arousal during a conflict (Babcock et al 2000; Chase et al,2001; Dodge & Coie, 1987). Furthermore, Reactive batterers are hyper attuned to perceiving provocation by their partners and their violence usually stems from their need to reciprocate negatively due to the aversive arousal and undesirable affect they experience (Cornell et al., 1996; Tweed& Dutton, 1998). Therefore, given that Reactive batterers are more vulnerable to negative reciprocity, we believe that an intervention technique such as ‘Editing out the Negative’ would ensure that batterers shift away from their typical immediate responding patterns to a more effortful, positive or neutral response.

On the other hand, the ‘Accepting Influence’ technique teaches men to search for parts of the partner’s statement that may seem truthful or which they may be able to validate. This exercise helps men to reframe their partner’s angry tone in order to help them focus on the content of what is said rather than hear it as an attack on their ego or a challenge to their credibility (Babcock et al.,2011). As mentioned earlier, Proactive partners experience significant discomfort when they feel that their authority is threatened or if they feel disrespected by their partner (Babcock et al., 2011; Chase et al., 2001). Given that Proactive batterers are motivated by need for dominance and control in the relationship and usually use violence to reject influence from their partners, we speculate that they may benefit from an intervention technique that teaches them how to accept influence of their partners. As such, we believe that experiencing a positive outcome from accepting their partner’s influence may help in decreasing the instrumentality of violence for such batterers’ altogether.

Overall, taken together, the literature has shown that Proactive and Reactive batterers differ on many significant clinical variables that result in their very different ways of communicating and expressing emotions as well as dealing with conflict. Babcock and

colleagues (2011) have already shown that employing communication skills as an intervention can be successful in regulating emotion by increasing positivity and decreasing feelings of aggression in a subsequent argument. Perhaps teaching different types of batterer appropriate communication skills that address their specific emotional needs may supplement efforts to reduce recidivism.

### **Current Study: Application of the Proximal Change Experiments Paradigm**

The current study reexamines data from Babcock and colleagues (2011) proximal change experiment to discern the differential utility of the techniques between Proactive and Reactive batterers. Given that communication styles and motivations for violence are markedly different for Reactive and Proactive batterers, the aim of this study is to conduct a preliminary treatment matching study for Proactive and Reactive batterers. We hypothesize that Reactive men will show more observed change in the way they interact with their partners, as well as report feeling less aggressive and more positive towards their partner after completing the ‘Editing out the Negative’ intervention whereas Proactive men will evidence more change in the ‘Accepting Influence’ conditions. Ultimately, the goal is to match efficient techniques to the specific population that would gain most from it. This study is the first step in moving away from the “one size fits all” trend, so that we can isolate particular intervention components that work best for specific batterer populations.

### **Hypotheses**

1: Both Reactive and Proactive batterers will be able to learn the ‘Editing out the Negative’ and the ‘Accepting Influence’ skill equally well. This is a manipulation check so that any differences

found on behavior or affect change between Reactive and Proactive batterers are not due to differential learning of the skills.

2: Proactive batterers will report feeling more positive and less aggressive following the application of the 'Accepting the Influence' intervention compared to the Reactive Batterers.

3: Reactive batterers will report feeling more positive and less aggressive towards their partner following the 'Editing out the Negative' intervention compared to the Proactive batterers

4: Female partners of Reactive batterers will report feeling less aggressive and more positive towards their male partners complete the 'Editing out the Negative' intervention compared to partners of Proactive batterers.

5: Female partners of Proactive batterers will report feeling less aggressive and more positive towards their male partners complete the 'Editing out the Negative' compared to the partners of Reactive Batterers.

6: Proactive batterers will exhibit greater improvements in communication with their partners following the application of the 'Accepting Influence' intervention compared to the Reactive batterers. These improvements will be demonstrated both in terms of appropriately exhibiting a less aggressive and more positive affect during subsequent conflict discussion with their partners.

7: Reactive batterers will exhibit greater improvements in communication with their partners following the application of the 'Editing out the Negative' intervention compared to the Proactive Batterers. These improvements will be demonstrated by them exhibiting less aggressive and more positive affect during subsequent conflict discussion with their partners.

8: Female partners of Proactive batterers will exhibit greater improvements in communication when their partners complete the 'Accepting the Influence' intervention in comparison to the

partners of Reactive batterers. These improvements will be demonstrated both in terms of appropriately exhibiting a less aggressive and more positive affect during subsequent conflict discussion with their partners.

9: Female partners of Reactive batterers will exhibit greater improvements in communication when their partners complete the 'Editing out the Negative' intervention in comparison to partners of Proactive batterers. These improvements will be demonstrated both in terms of appropriately exhibiting a less aggressive and more positive affect during subsequent conflict discussion with their partners.

### **Method**

Couples were recruited for the current study as part of a larger project (N=134) for 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” and were dropped. 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 completed in the lab. 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=81). 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.

## **Procedure**

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/timeout 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 project-designed About That Discussion (ATD) questionnaire after each conflict discussion. Subsequently, couples were interviewed separately about their history of domestic violence. During this interview, they were



asked to describe in a step-by-step way two past violent incidents where the man was violent towards the women (Jacobson et al., 1994). Both men and women were asked to describe the worst and the most recent incident of IPV. Finally the couple was debriefed and paid for their participation.

## Measures

**Conflict Tactics Scale-2 (CTS-2).** The CTS-2 (Straus, Hamby, Boney-McCoy, & Sugarman, 1995) is considered the gold standard to assess for domestically violent behavior within the past year. The CTS-2 is a 78-item self-report questionnaire that assesses the severity and frequency of physical, sexual, and psychological abuse committed by intimate partners. Five scales measure negotiation, psychological aggression, physical assault, sexual coercion, and injury. The CTS-2 was used to determine final group membership into nonviolent and domestically violent groups based on both male and female reports as well as determine frequency of men's IPV based on male and female reports. Internal consistencies on the CTS-2 ranged from .49 to .78.

**Proactive-Reactive Coding System.** Participants were individually administered a semi-structured clinical interview to assess their relationship and violence history (developed by Jacobson et al., 1994). As part of this interview, participants were asked separately to describe the most recent and the worst violent incidents in which male-to-female physical aggression occurred in their current relationship. The system used to code these narratives was based on two main dimensions; one being intentionality vs. impulsivity, and the other being heightened affective arousal or lack thereof during and after a conflict. The coding system created by Chase and colleagues provided a 'Proactive' criteria (intentionality & low affective arousal) and 'Reactive' criteria (impulsivity & high affective arousal). According to Chase, O'Leary &

Heyman (2001), in order to be coded as Proactive, meeting any of the Proactive criteria was sufficient, and it was also acceptable if the participant manifested some Reactive behavior as well. However, in order to be coded as Reactive, the participant had to meet the Reactive criteria, without exhibiting any signs of Proactive behavior (Chase et al, 2001; Kini & Babcock, under review).

**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, 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 semiscripted, 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 semi-scripted, face-to-face intervention lasted on average, 8 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 control condition 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  $\kappa$  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 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.

**Articulation skill.** As a manipulation check, Proactive and Reactive men ability to learn the two techniques was coded during their articulated response to the audiotaped relationship problems. During the skills training, men listened to three hypothetical situations then articulated aloud a response that was to demonstrate either 'Editing out the Negative' or 'Accepting Influence.' Videotaped articulations were coded by research assistants using a project-designed coding system. Each articulation was coded by two undergraduate research assistants and a graduate student coded 20% of the videos for reliability purposes. There were 11 items (articulation was on topic, positive in tone, soft, defensive, socially skillful, etc.) and were scored on a 6-point Likert scale (1=disagree strongly, 2=disagree, 3=disagree slightly, 4=agree slightly, 5=agree somewhat, 6=agree strongly). The total score of *articulation skill* was calculated by summing these 11 items.

## Results

In total, 478 potential participants responded to advertisements. Of these, 124 were screened into the project, attended both assessments, and were classified as IPV. Men's average age was 32 ( $SD = 10.2$ ), while women's average age was 30 (9.37). Their mean family income as reported by men was approximately \$28,000 per year ( $SD = 39,524.73$ ) and as reported by women was approximately \$31,000 per year ( $SD = 26,664.23$ ). One-quarter of the men did not graduate from high school and 12% were college graduates. Approximately 63% of the men

were African American, 20% were Caucasian, 14% were Hispanic, and 3% were from other racial or ethnic origins. Average length of the relationship was 4.15 years ( $SD = 3.38$ ). Of the 124 IPV couples, there were 81 couples that both completed the intervention exercises as well as the interview used to code batterers as Proactive/Reactive. Of these 81 batterers, 35 were Proactive and 46 were Reactive. Of the Proactive batterers, 13 were assigned to the Control Condition, 12 to the 'Accepting Influence' condition, and 10 to the 'Editing out the Negative' Condition. Of the Reactive batterers, 14 were assigned to the Control Condition, 13 to the 'Accepting Influence' condition, and 18 to the 'Editing out the Negative' Condition.

In order to determine the differential utility of each intervention for Proactive and Reactive batterers, one ANOVA and a series of MANCOVAs were used. The first hypothesis of this study was that both Reactive and Proactive batterers will be able to learn the 'Editing out negative' and the 'Accepting Influence' skill equally well. This was a manipulation check so that any differences found on behavior or affect change between Reactive and Proactive batterers would not be attributed to differential learning of the skills. Accordingly, a 2x2 ANOVA where Proactive/Reactive groups and condition ('Editing out the Negative' vs 'Accepting Influence') were the between subject independent variables. Their articulation skill scores for the 'Editing out the Negative' and the 'Accepting Influence' interventions were used as dependent variables. The results of this ANOVA indicated no significant differences between Proactive and Reactive batterers in their ability to learn the two exercises with an  $F = 0.028$  and  $p > 0.05$ .

The next step in our analysis was to determine the differential utility of the interventions to bring about emotional change. Therefore, in order to observe an interaction between intervention and batterer types, a new variable (labeled battererXcondition) was created with four levels: one for each combination of intervention and batterer type, i.e. Proactive batterers

that completed the 'Accepting Influence' condition, Reactive batterers who completed 'Accepting Influence', Proactive batterers that completed the 'Editing out the Negative', and Reactive batterers who completed 'Editing out the Negative'. Subsequently this variable was utilized to address our next set of hypotheses.

We predicted that Reactive batterers would report more positive and less aggressive feelings toward their partners following the 'Editing out the Negative' intervention while Proactive batterers would report similar changes following the 'Accepting Influence' intervention. In order to test this hypothesis, a MANCOVA using simple contrasts was employed. In this MANCOVA, our newly created variable *battererXcondition* was used as the independent variable, with scores of reported aggressive and positive feelings by the batterers after the intervention as dependent variables. Furthermore, the batterers' scores for reported positive and aggressive feelings towards their partners before the intervention were used as covariates. Additionally, this MANCOVA was run using simple contrasts in order to observe group differences between each of the 4 levels of the independent variable.

Multivariate analyses revealed no significant main effect of the *battererXcondition* variable in terms of group differences with regard to batterers reporting differential emotional change based on intervention,  $F(6,84) = .579$  and  $p = .76$ . Univariate analysis that examined dependent variables separately revealed no significant group differences in change in reported positive feelings ( $F(3, 42) = .145$   $p = .932$ ) or change in reported aggressive feelings ( $F(3, 42) = 1.09$   $p = .37$ ). However, the simple contrast analysis showed that there was a trend towards significance in reported aggression noted between two particular levels of the independent variable. Specifically, contrast analysis showed that Reactive batterers that completed the 'Editing out the Negative' intervention tended to report having less aggressive feelings towards



their partners in comparison to Proactive batterers completing the ‘Accepting Influence’ intervention ( $t(3) = 1.49, p = .10$ ).

This MANCOVA was then repeated using partner scores of reported positive and negative feelings to address our next set of hypotheses. We predicted that female partners of Proactive batterers would report feeling less negative and more positive towards their male partners when those partners completed the ‘Accepting Influence’ intervention compared to partners of Reactive batterers. Also, we predicted that female partners of Reactive batterers would report feeling less negative and more positive towards their male partners when those partners completed the ‘Editing out the Negative’ compared to the partners of Proactive Batterers.

Multivariate analyses revealed no significant main effect of the battererXcondition variable in emotional change,  $F(6,92) = 0.22, p = .969$ . Univariate analysis examining the dependent variables separately also revealed no significant group differences in change in reported positive feelings ( $F(3, 46) = 0.41, p = .750$ ) or change in reported negative feelings, ( $F(3, 46) = 0.02, p = .996$ ). Similarly, contrast analysis did not indicate any group differences for any of the dependent variables.

The next set of hypotheses was related to discerning changes in observed communication during conflict of the Proactive/ Reactive batterers following the two intervention exercises. The study predicted that Proactive batterers would exhibit greater improvements in communication (more positive, less negative, less aggressive affect) with their partners following the application of the ‘Accepting Influence’ intervention compared to the Reactive batterers; whereas the Reactive batterers would exhibit greater improvements in communication with their partners following the application of the ‘Editing out the Negative’ intervention compared to the

Proactive Batterers in the same condition. To test these hypotheses, a MANCOVA was run using simple contrasts with battererXcondition as the independent variable and SPAFF composite variables of positive, negative and aggressive behaviors during conflict (after the intervention) as dependent variables. Furthermore, SPAFF variables observed during conflict before the intervention were used as covariates.

Multivariate analyses revealed no main effect for group differences on SPAFF variables, ( $F(9,93) = 1.29, p = .251$ ). Univariate analysis revealed no significant differences between the four levels of the created interaction variable battererXcondition for exhibited positive  $F(3, 31) = 0.62, p = .61$ , negative ( $F(3, 31) = 1.86, p = .16$ ) or aggressive forms of communication, ( $F(3, 31) = 0.71, p = .55$ ). However, the simple contrast analysis showed that there was a significant difference in observed negativity between two specific levels of the independent variable. Specifically, the contrast analysis indicated that of all the batterers who completed the 'Editing out the Negative' condition, Reactive batterers exhibited significantly less negative forms of communication during conflict towards their partners specifically in comparison to the Proactive batterers. This difference between batterers was statistically significant with contrast estimate  $t(3) = 19.1, p = .03$ . However, no other significant contrasts were found.

Our final set of hypotheses was regarding changes in female partners' observed affect. We predicted that partners of Proactive batterers would exhibit greater improvements in communication following the 'Accepting Influence' condition while Reactive batterers would exhibit greater improvements following the 'Editing out the Negative' condition. To test these hypotheses, a MANCOVA was run entering women's observed positive, negative and aggressive SPAFF scores post intervention as DVs, the battererXcondition variable as IV, and the observed

SPAFF scores pre-intervention as covariates. Again, multivariate analyses revealed no main effect for group differences on this set of dependent variables,  $F(9,147) = 1.346, p = .218$ . Univariate analysis revealed no significant differences between the four levels of the created interaction variable *battererXcondition* on positive communication ( $F(3, 49) = 1.37, p = .26$ ) or exhibited negative ( $F(3, 49) = 0.64, p = .59$ ), or aggressive styles of communication ( $F(3,49) = 1.71, p = .18$ ). However, the simple contrast analysis showed that there was a significant difference in exhibited aggression between two specific levels of the independent variable. Specifically, the contrast analysis indicated that of all partners of Reactive batterers, women whose partners completed the 'Editing out the Negative' intervention became significantly less aggressive in communication in comparison to women whose partners completed the 'Accepting Influence' contrast estimate  $t(3) = 4.67, p = 0.03$ .

### **Discussion**

The purpose of the current study was to evaluate the differential utility of specific communication intervention exercises for Proactive and Reactive batterers. It was hypothesized that Proactive and Reactive men would exhibit change in their aggressive and positive feelings/behavior following interventions that catered to their specific presenting concerns with regard to IPV. Furthermore, this study attempted to determine if men who completed specific interventions would be able to demonstrate a change in positive and aggressive behavior/feelings in their partners, as well, even though she did not participate in the intervention

Given that batterers were learning both sets of intervention skills, it was important to ascertain that any differences in their behavior or feelings after the intervention were not attributed to their differential ability in learning the skills. As hypothesized, results revealed that there were no differences in batterer's ability to learn the skills. Given that this study re-

examined data from the original study (Babcock et al, 2011) , we knew that overall both intervention exercises were able to create positive behavioral and emotional change and decrease aggressive and negative affect in IPV men. The hypotheses of this study were rooted in the characteristics and precursors of Proactive and Reactive violence and the fact that the two subtypes of batterers expressed different ways of communicating during conflict. However, our predictions about Proactive and Reactive batterers differentially responding to the interventions were only partially supported.

With regard to batterers reporting on positive and aggressive feelings before and after an intervention, we predicted that Proactives would report more positive and less aggressive feelings after the ‘Accepting Influence’ exercise while Reactives would respond more to the ‘Editing out the Negative’ exercise. Indeed, we found that that the Editing Negative intervention was particularly successful in lowering aggression among Reactive men and their partners. However, the ‘Accepting Influence’ was not particularly helpful for the Proactive men. Perhaps a communication intervention that prevents the escalation of negativity was more helpful for Reactive batterers in lowering their aggressive feelings.

Another important focus of this study was to observe how men and women communicated during conflict and if specific interventions had differential impact those communication styles. We found that the ‘Editing out the Negative’ intervention led to Reactive batterers expressing less negative affect while in a conflict discussion with their partners compared to Proactive batterers that completed the same intervention. This finding confirmed our hypothesis about the applicability of the ‘Editing out the Negative’ intervention being particularly effective for Reactive batterers. Perhaps ‘Editing out Negative’ sentiments maps more directly to the presenting concerns of Reactive batterers. Reactive batterers have a tendency

to be impulsive, to easily perceive threat, and are prone to escalation of negativity (Chase et al., 2001). However, an intervention that teaches such men to substitute their impulsive immediate negative reaction for a neutral one may be particularly helpful to deescalate the negative feelings. Such an intervention may be less helpful for Proactive batterers who are usually provoked by feelings of insubordination or threat to their authority (Chase et al., 2001; Babcock et al, 2000).

Partners of Reactive batterers also benefited from the ‘Editing out the Negative’ intervention. Specifically, it was found that of all the partners of Reactive batterers, women whose partners completed the ‘Editing out the Negative’ intervention exhibited the least amount of aggressive communication. Thus it can be inferred that Reactive batterers who completed the ‘Editing out the Negative’ intervention decreased their own aggressiveness which in turn decreased their partner’s aggressiveness. This suggests a decrease in negative reciprocity (Cordova, Jacobson, Gottman, Rushe, & Cox, 1993). Negative reciprocity was a phrase coined by Cordova and colleagues to characterize the inclination of spouses or girlfriends (of IPV males) to perpetuate negative behavior in response to perceived negative behavior or communication from husbands/partners.

Contrary to former notions that women in romantic relationships play a passive role during conflict (Walker, 1984), findings suggest that in many studies, women tended to reciprocate negative behavior thereby eliciting similarly negative outbursts by their male counterparts. In fact, Cordova and colleagues (1993) suggested that on many occasions, negative reciprocity is what distinguished violent couples from non-violent albeit distressed couples (Cordova et al, 1993). In the current study, given that the ‘Editing out the Negative’ intervention was able to decrease this escalation and perpetuation of negative communication, it shows us that such an intervention could directly impact the occurrence of violence in Reactive batterers.

While not conclusive as to the differential utility of the interventions techniques for Proactive and Reactive batterers, the data suggests that Reactive forms of aggression are particularly responsive to communication exercises teaching positive reframing. Furthermore, it suggests that substitution of negative words can decrease observed and felt aggressiveness during conflict discussions.

It is interesting to note that these discrete findings may bolster the distinction between Proactive and Reactive batterers. Although some scholars criticize the Proactive-Reactive typology (Bushman & Anderson, 2001) for its overlapping criteria in determining a Proactive batterer vs. a Reactive batterer, it is important to examine the Chase and colleagues' (2001) original coding system. According to Chase et al. (2001), in order for a batterer to be coded as Reactive, he had to exhibit characteristics from a said "Reactive criteria", i.e. impulsivity and high affective arousal without exhibiting any characteristics from the "Proactive criteria", i.e. instrumentality of violence and the absence of affective arousal preceding the violent act. However, in order for a batterer to be coded as Proactive, a batterer was allowed to exhibit behaviors from both the aforementioned "Reactive criteria" as well as the "Proactive criteria". As such, it may be inferred that Chase and colleagues represented Reactive batterers as a characteriologically exclusive group.

Furthermore, findings from a study by Kini and Babcock (under review) corroborated the phenomenological exclusivity of Reactive batterers. This study attempted to dimensionalize the Proactive-Reactive typology to determine the presence of a 'Mixed Proactive-Reactive' group that was both Proactive and Reactive but failed to do so as results exhibited the confounding of the mixed and proactive groups, leaving the Reactive group as a characteriologically distinct group. In the same vein, the findings of the current study exhibit the differential responding of

Reactive batterers to a certain kind of intervention which may also imply their differential precursors of conflict. Therefore the current study's findings of responsiveness of Reactive batterers toward the 'Editing out the Negative' intervention, lends support for tailoring interventions specific to batterer type and eliminating the 'one size fits all trend' for batterer intervention programs.

### **Limitations and Future Directions**

One of the most significant limitations of this study is the small sample size. Given that this study attempts to test the differential utility of intervention techniques for different kinds of batterers in a proximal change paradigm, the analysis emphasizes the batterer type by intervention condition interactions for each type batterer. However, due to limited sample size and power to detect a two-way interaction, we created an interaction term and used one independent variable. However, that left us with smaller number of individuals per level of our independent variable, thereby significantly affecting our power to detect differences. The omnibus MANCOVAs and univariate ANOVAs revealed no significant differences in testing the batterer type by condition interaction. The follow-up contrasts were conducted in the absence of these significant "gate keeper" analyses and should be reviewed with caution. Exploring the contrasts should be considered preliminary and may be the result of inflated Type I error.

Another limitation of this study is that we only observed the change in reported feeling and affect immediately after the application of the intervention. Since we do not have follow-up data on the effectiveness of these techniques long-term, we cannot say that the interventions have a meaningful impact on behavior change. Studying the impact of these interventions on both communication skill and violence longitudinally is an area for future research. In the same vein, future studies that may replicate and extend this study may be interested in studying the utility of

attending multiple skills training sessions. One eight minute intervention may have limited impact on long-term behavior change.

Finally, another limitation of this study is that the communication interventions were only carried out with the male partners. Given that female partners may have also habituated to dysfunctional patterns of communication with their male partners, it may be of benefit to both partners if they each completed the same intervention, and then interacted using the principles learned from the intervention. This may help in capturing the interactional nature of verbal conflicts that arise prior to the physical aggression. This may be an avenue to explore in future intervention studies.

### **Clinical Implications**

Although decades of research have emphasized understanding different typologies of batterers, there has been a dearth of literature on the differential utility of specific intervention components for different types of batterers. Specifically, batterer interventions that have been applied thus far have been used indiscriminately across batterers (Babcock et al., 2005; Healey, 1999). Furthermore, although interventions have attempted to reeducate batterers about the inappropriateness of patriarchal attitudes and beliefs (the Duluth model) or rectify dysfunctional thought patterns (CBT), clinicians rarely address batterers' communication with their partners that usually precede violent behaviors.

Researchers studying Proactive and Reactive batterers have often referred to the importance of using anger-management for Reactive batterers and contingency management for Proactive batterers (Chase et al., 2001; Kini & Babcock, under review). In essence, the 'Editing out the Negative' and 'Accepting Influence' exercises focus on similar components of managing antecedents of violent behavior. While the 'Editing out the Negative' exercise aims at reducing



affective arousal and anger in Reactive batterers, the 'Accepting Influence' exercise focuses on helping Proactive batterers reconcile with their partner without perceiving a threat to their authority. Given that this study may have been partially successful in observing that adjusting different communication skills *in situ* is effective for different batterers based on the skill employed, these skills-based interventions may become consequential aspects of batterer-specific intervention programs in the future.

**Tables**Table 1. *Demographics by Gender*

<u>Variable</u>	<u>Male</u>		<u>Female</u>	
	Mean	(SD)	Mean	(SD)
Age	31.98	(10.2)	29.87	(9.37)
Family Income	28391.62	(39524.73)	31149.08	(26664.23)
Number of years in relationship	4.47	(4.23)	4.3	(4.78)
Men's IPV frequency in past year <sup>1</sup>	14.27	(26.6)	16.24	(23.05)

<sup>1</sup>Men's and women's reports of men's perpetration of IPV acts in the past year on the CTS-2.

Table 2.

*Results of the MANCOVA comparing changes in Reported Positivity and Aggression in batterers before/after the two intervention exercises were applied*

	Positivity After Intervention <i>F</i> (3, 42)	Aggression After Intervention <i>F</i> (3, 42)	Multivariate <i>F</i> (6,84)
Positivity pre- intervention (covariate) <sup>a</sup>	39.78	4.32	22.52
Aggression pre- intervention (covariate) <sup>b</sup>	.28	.63	.42
BattererXCondition (Independent variable) <sup>c</sup>	.15	1.09	.58
Adjusted $\eta^2$	.50	.14	

<sup>a</sup>Pillai's trace,  $V = .52$ ,  $F(2, 41) = 22.52$ ,  $p < 0.001$ , partial  $\eta^2 = .52$

<sup>b</sup>Pillai's trace,  $V = .02$ ,  $F(2,41) = .42$ ,  $p = .66$ , partial  $\eta^2 = .02$

<sup>c</sup>Pillai's trace,  $V = .08$ ,  $F(6,84) = .58$ ,  $p = .75$ , partial  $\eta^2 = .04$

Table 3. Contrast estimates and respective *p* values for pairwise comparison of batterers in the different conditions for their scores of reported positive and aggressive feelings on the ATD questionnaire during conflict #2

Variables	Level 1vs. Level 4	Level 2 vs. Level 4	Level 3 vs. Level 4
	Contrast Estimates (p value)	Contrast Estimates (p value)	Contrast Estimates (p value)
Positive Feelings	.06 (.76)	-.08 (.7)	.01 (.96)
Aggressive feelings	1.5 (.10)	.06 (.9)	.19(.87)

Level 1= Batterers who are Proactive and in the Accepting Influence condition

Level 2= Batterers who are Reactive and in the Accepting Influence condition

Level 3= Batterers who are Proactive and in the Editing out the Negative condition

Level 4= Batterers who are Reactive and in the Editing out the Negative condition

\*significant value at  $p < .05$

All values are adjusted for pre-intervention scores of reported positive and negative feelings during conflict #1

Table 4

Results of the MANCOVA comparing changes in Reported Positivity and Negativity in partners of batterers before/after the two intervention exercises were applied

	Positivity After Intervention <i>F</i> (3, 46)	Negativity After Intervention <i>F</i> (3, 46)	Multivariate <i>F</i>
Positivity pre-intervention (covariate) <sup>a</sup>	28.82	1.06	15.28
Negativity pre-intervention (covariate) <sup>b</sup>	1.51	3.9	3.33
BattererXCondition (Independent variable) <sup>c</sup>	.41	.02	.22
Adjusted $\eta^2$	.39	.002	

<sup>a</sup>Pillai's trace,  $V = .40$ ,  $F(2, 45) = 15.28$ ,  $p < 0.001$ , partial  $\eta^2 = .40$

<sup>b</sup>Pillai's trace,  $V = .13$ ,  $F(2,45) = 3.33$ ,  $p = .045$ , partial  $\eta^2 = .13$

<sup>c</sup>Pillai's trace,  $V = .03$ ,  $F(6,92) = .22$ ,  $p = .97$ , partial  $\eta^2 = .01$

Table 5. *Contrast estimates and respective p values for pairwise comparison of the scores of reported positive and negative feelings on the ATD questionnaire during conflict #2 of the partners of batterers in the different conditions*

Variables	Level 1 vs. Level 4	Level 2 vs. Level 4	Level 3 vs. Level 4
	Contrast Estimates (p value)	Contrast Estimates (p value)	Contrast Estimates (p value)
Positive feelings	.05 (.87)	-.01 (.98)	.38 (.3)
Negative feelings	.002 (.99)	.07 (.82)	-.02 (.96)

Level 1= Batterers who are Proactive and in the Accepting Influence condition

Level 2= Batterers who are Reactive and in the Accepting Influence condition

Level 3= Batterers who are Proactive and in the Editing out the Negative condition

Level 4= Batterers who are Reactive and in the Editing out the Negative condition

\*significant value at  $p < .05$

All values are adjusted for pre-intervention scores of reported positive and negative feelings during conflict #1

Table 6

*Results of the MANCOVA comparing changes in Observed Positivity, Negativity and Aggression in batterers before/after the two intervention exercises were applied*

	Positivity After Intervention <i>F</i> (3, 31)	Negativity After Intervention <i>F</i> (3, 31)	Aggression After Intervention <i>F</i> (3,31)	Multivariate <i>F</i>
Positivity pre-intervention (covariate) <sup>a</sup>	1.05	.12	.04	.55
Negativity pre-intervention (covariate) <sup>b</sup>	1.17	1.12	.61	.59
Aggression pre-intervention (covariate) <sup>c</sup>	1.56	.83	1.29	3.34
BattererXCondition (Independent variable) <sup>d</sup>	.62	1.86	.71	1.29
Adjusted $\eta^2$	.02	.17	.19	.

<sup>a</sup>Pillai's trace,  $V = .05$ ,  $F(3, 29) = .55$ ,  $p = .65$  partial  $\eta^2 = .05$

<sup>b</sup>Pillai's trace,  $V = .06$ ,  $F(3,29) = .59$ ,  $p = .63$ , partial  $\eta^2 = .06$

<sup>c</sup>Pillai's trace,  $V = .26$ ,  $F(3,29) = 3.34$ ,  $p = .03$ , partial  $\eta^2 = .26$

<sup>d</sup>Pillai's trace,  $V = .334$ ,  $F(9,93) = 1.29$ ,  $p = .25$ , partial  $\eta^2 = .11$

Table 7. Contrast estimates and respective *p* values for pairwise comparison of batterers in the different conditions for their scores of exhibited positivity, negativity and aggression on the SPAFF during conflict#2

Variables	Level 1 vs. Level 4	Level 2 vs. Level 4	Level 3 vs. Level 4
	Contrast Estimates (p value)	Contrast Estimates (p value)	Contrast Estimates (p value)
Positivity	-.56 (.88)	-2.81 (.44)	4.09 (.41)
Negativity	4.11 (.53)	6.51 (.3)	19.10 (.027)*
Aggression	3.31 (.29)	-.662 (.88)	2.511(.53)

Level 1= Batterers who are Proactive and in the Accepting Influence condition

Level 2= Batterers who are Reactive and in the Accepting Influence condition

Level 3= Batterers who are Proactive and in the Editing out the Negative condition

Level 4= Batterers who are Reactive and in the Editing out the Negative condition

\*significant value at  $p < .05$

All values are adjusted for pre-intervention scores of reported positive and negative feelings during conflict #1

Table 8

*Results of the MANCOVA comparing changes in Observed Positivity, Negativity and Aggression in partners of batterers before/after the two intervention exercises were applied*

	Positivity After Intervention <i>F</i> (3, 49)	Negativity After Intervention <i>F</i> (3, 49)	Aggression After Intervention <i>F</i> (3,49)	Multivariate <i>F</i>
Positivity pre-intervention (covariate) <sup>a</sup>	77.27	.65	1.29	27.4
Negativity pre-intervention (covariate) <sup>b</sup>	3.9	4.68	2.28	12
Aggression pre-intervention (covariate) <sup>c</sup>	2.31	4.41	45.18	21.41
BattererXCondition (Independent variable) <sup>d</sup>	1.37	.64	1.71	1.35
Adjusted $\eta^2$	.68	.46	.62	.

<sup>a</sup>Pillai's trace,  $V = .64$ ,  $F(3, 47) = 27.4$ ,  $p < 0.001$  partial  $\eta^2 = .64$

<sup>b</sup>Pillai's trace,  $V = .43$ ,  $F(3,47) = 12$ ,  $p < 0.001$ , partial  $\eta^2 = .43$

<sup>c</sup>Pillai's trace,  $V = .58$ ,  $F(3,47) = 21.41$ ,  $p < 0.001$  partial  $\eta^2 = .58$

<sup>d</sup>Pillai's trace,  $V = .23$ ,  $F(9,147) = 1.35$ ,  $p = .22$ , partial  $\eta^2 = .08$

Table 9. *Contrast estimates and respective p values for pairwise comparison of scores of exhibited positivity, negativity and aggression on the SPAFF during conflict#2 as exhibited by partners of the batterers in the different conditions*

Variables	Level 1 vs. Level 4	Level 2 vs. Level 4	Level 3 vs. Level 4
	Contrast Estimates (p value)	Contrast Estimates (p value)	Contrast Estimates (p value)
Positivity	-1.99 (.35)	-.54 (.79)	3.58 (.16)
Negativity	-1 (.8)	4.2 (.27)	2.16 (.65)
Aggression	1.45 (.51)	4.67 (.03)*	2.77 (.3)

Level 1= Batterers who are Proactive and in the Accepting Influence condition

Level 2= Batterers who are Reactive and in the Accepting Influence condition

Level 3= Batterers who are Proactive and in the Editing out the Negative condition

Level 4= Batterers who are Reactive and in the Editing out the Negative condition

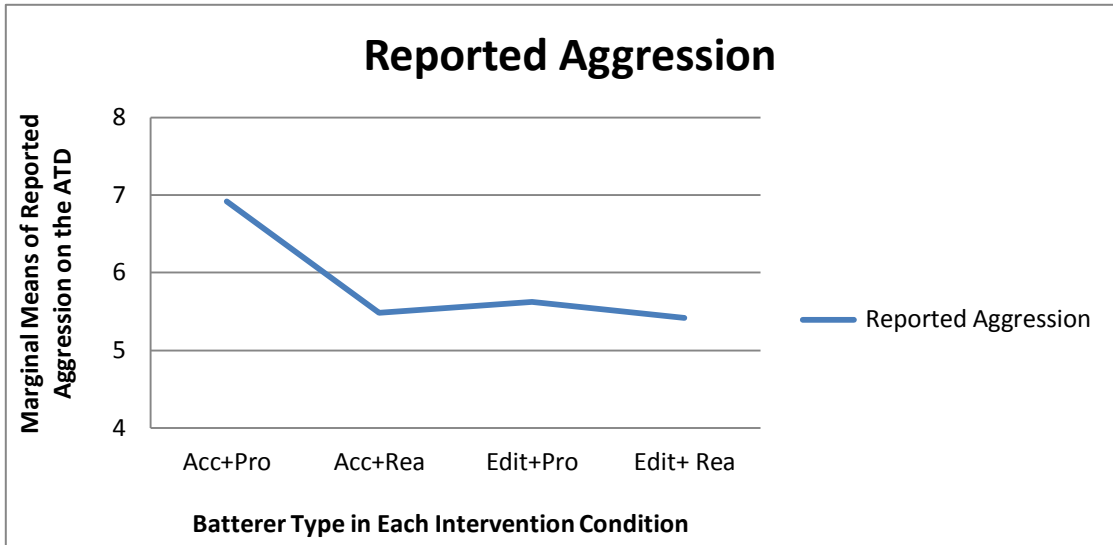
\*significant value at  $p < .05$

All values are adjusted for pre-intervention scores of reported positive and negative feelings during conflict #1



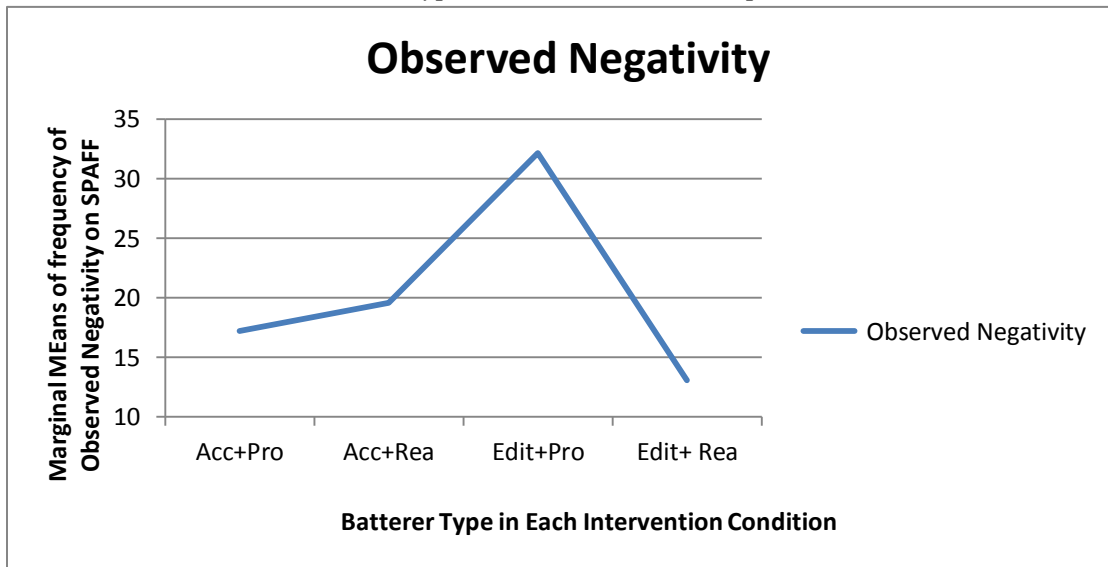
**Figures**

Graph 1. *Differences in reported aggression by batterers after their conflict discussion and intervention depending on their subtype and intervention completed.*



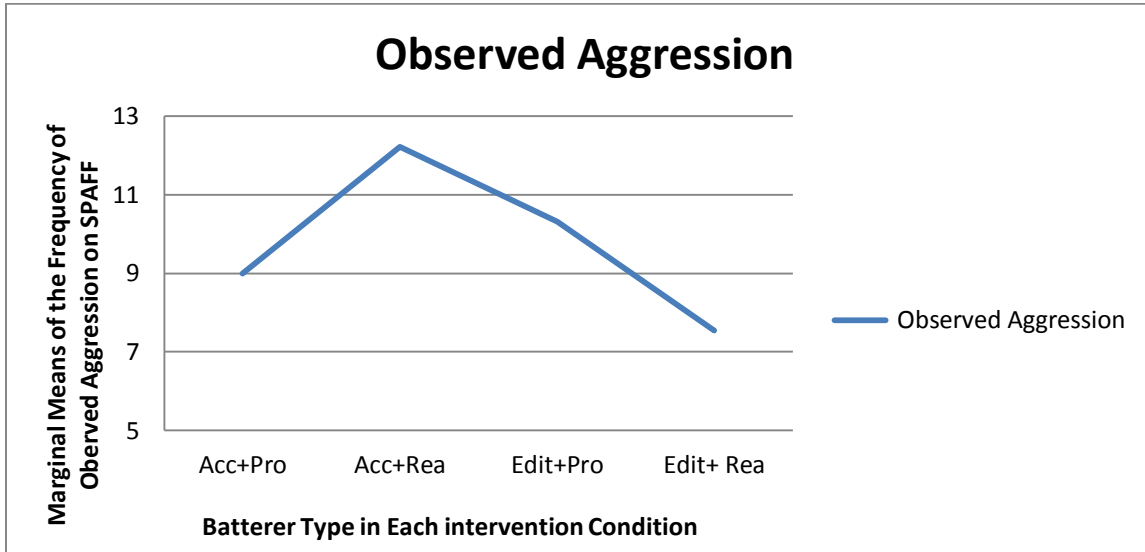
Note.  
All values are adjusted for pre-intervention scores of positivity, negativity and aggression of batterers during conflict #1

Graph 2. *Differences in Observed Negativity by batterers during second conflict depending on their subtype and intervention completed*



Note.  
All values are adjusted for pre-intervention scores of positivity, negativity and aggression of batterers during conflict #1

Graph 3. *Differences in Observed Aggression by partners of batterers during second conflict depending on their male partners' battering subtype and intervention completed.*



Note.

All values are adjusted for pre-intervention scores of positivity, negativity and aggression of batterers during conflict #1

## References

- Austin, J. B., & Dankwort, J. (1999). Standards for batterer programs: A review and analysis. *Journal of Interpersonal Violence, 14*, 152–168.
- Babcock, J. C., Tharp, A. L., Sharp, C., Heppner, W., & Stanford, M. S. (2014). Similarities and differences in impulsive/premeditated and reactive/proactive bimodal classifications of aggression. *Aggression and violent behavior, 19*(3), 251-262
- Babcock, J. C., Graham, K., Canady, B., & Ross, J. M. (2011). A proximal change experiment testing two communication exercises with intimate partner violent men. *Behavior therapy, 42*(2), 336-347.
- 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.
- Babcock, J. C., Jacobson, N. S., Gottman, J. M., & Yerington, T. P. (2000). Attachment, emotional regulation, and the function of marital violence: Differences between secure, preoccupied and dismissing violent and nonviolent husbands. *Journal of Family Violence, 15*, 391-409.
- Banks, I., Kini, S., & Babcock, I. (2013). Intimate Partner Violence. *What Works in Offender Rehabilitation: An Evidence-Based Approach to Assessment and Treatment*, 159.
- Bushman, B.J. & Anderson, C.A. (2001). Is it time to pull the plug on hostile versus instrumental aggression dichotomy?. *Psychological Review, 108* (1), 273-279.
- Chase, K. A., O'Leary, K., & Heyman, R. E. (2001). Categorizing partner-violent men within the Reactive–Proactive typology model. *Journal Of Consulting And Clinical Psychology, 69*(3), 567- 572. doi:10.1037/0022-006X.69.3.567.

- Coan, J., Gottman, J. M., Babcock, J. C., & Jacobson, N. S. (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*(4), 559.
- Cornell, D. G., Warren, J., Hawk, G., Stafford, E., Oram, G., & Pine, D. (1996). Psychopathy in instrumental and reactive violent offenders. *Journal of Consulting and Clinical Psychology, 64*, 783-790.
- Day, A., Chung, D., O'Leary, P., & Carson, E., (2009). Programs for men who perpetrate domestic violence: An examination of the issues underlying the effectiveness of intervention programs. *Journal of Family Violence, 24*, 203-201.
- Edleson, J.L., & Tolman, R.M. (1992). *Intervention for men who batter*. Thousand Oaks, CA: Sage.
- First, M. B., Spitzer, R. L., Gibbon M., and Williams, J. B.W. (1997). *Structured Clinical Interview for DSM-IV Personality Disorders, (SCID-II)*. Washington, D.C.: American Psychiatric Press, Inc.
- Ganley, A. (1981). *Court-mandated counseling for men who batter: A three-day workshop*. Washington, DC: Center for Women Policy Studies.
- Gondolf, E. W. (1997). Batterer programs: What we know and need to know. *Journal Of Interpersonal Violence, 12*(1), 83-98.
- 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.

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 et al, J. M., Jacobson, N. S., Rushe, R. H., & Shortt, J. (1995). The relationship

between heart rate reactivity, emotionally aggressive behavior, and general violence batterers. *Journal Of Family Psychology*, 9(3), 227-248.

Gottman, J. M. (1994). Why marriages succeed or fail. New York: Simon & Schuster.

Healey, K. (1999). *Batterer intervention: Program approaches and criminal justice strategies*.

DIANE Publishing.

Holtzworth-Munroe, A., & Stuart, G. L. (1994). Typologies of male batterers: Three

subtypes and the differences among them. *Psychological Bulletin*, 116(3), 478-497

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.

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.

Kini, S., Banks, J. & Babcock, J.C.(under review). The Proactive-Reactive Classification of

Intimate Partner Violence Offenders: A Multi-Method Approach to Classification of Batterers. *Submitted to Psychology of Violence*.

- Knox, D. (1971). *Marriage happiness: A behavioral approach to counseling*. Champaign, IL: Research Press.
- Kobak, R. R., and Hazan, C. (1991). *Parents and Spouses: Attachment Strategies and Marital Functioning*, University of Delaware, Newark
- Langhinrichsen-Rohling, J., McCullars, A., & Misra, T. A. (2012). Motivations for Men and Women's Intimate Partner Violence Perpetration: A Comprehensive Review. *Partner Abuse, 3*(4), 429-468.
- Lawson, D. M., Brossart, D. F., & Shefferman, L. W. (2010). Assessing gender role of partner violent men using the Minnesota Multiphasic Personality Inventory-2 (MMPI-2): Comparing Abuser Types. *Professional Psychology, 41*, 260-266
- Long, J. (1998). *The video coding station: Reference guide*. Caroga Lake, NY: Long.
- National Center for Injury Prevention and Control. Web-based injury statistics query and reporting system (WISQARS). Atlanta GA: Centers for Disease Control and Prevention. Available at: [www.cdc.gov/ncipc/wisqars](http://www.cdc.gov/ncipc/wisqars).
- Ross, J. M., & Babcock, J. C. (2009). Proactive and Reactive violence among intimate partner violent men diagnosed with antisocial and borderline personality disorder. *Journal Of Family Violence, 24*(8), 607-617.
- Ryan, K., & Gottman, J. M. (2004). Who improves and whodoes not in long-term follow up in psycho-educational and couples therapy. Unpublished manuscript.
- Saunders, D. G. (1984). Helping husbands who batter. *Social Casework, 65*, 347-356.
- Saunders, D. G. (1992). A typology of men who batter: Three types derived from cluster analysis. *American Journal Of Orthopsychiatry, 62*(2), 264-275.

- Stanford, M. S., Houston, R. J., & Baldrige, R. M. (2008). Comparison of impulsive and premeditated perpetrators of intimate partner violence. *Behavioral Sciences & The Law*, 26(6), 709-722.
- Stanford, M. S., Houston, R. J., Mathias, C. W., Villemarette-Pittman, N. R., Helfritz, L. E., & Conklin, S. M. (2003). Characterizing aggressive behavior. *Assessment*, 10(2), 183-190. doi:10.1177/1073191103010002009
- Straus, M.A. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics (CT) Scales. *Journal of marriage and the family*, 41, 75-88.
- The U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics (2012). <http://www.bjs.gov/>.
- Tweed, R. G., & Dutton, D. G. (1998). A comparison of impulsive and instrumental subgroups of batterers. *Violence And Victims*, 13(3), 217-230.
- Walker, L.E. (1984). *The Battered Woman Syndrome*. New York: Springer.
- 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, NY: W.W. Norton & Company, Inc.