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Motivational Interviewing as a Targeted Prevention Approach for Physically Aggressive  
Dating Couples

A Dissertation Presented

by

Erica Margaret Woodin

to

The Graduate School

in Partial fulfillment of the

Requirements

for the Degree of

Doctor of Philosophy

in

Clinical Psychology

Stony Brook University

August 2007

Stony Brook University

The Graduate School

Erica Margaret Woodin

We, the dissertation committee for the above candidate for the Doctor of Philosophy degree in Clinical Psychology, hereby recommend acceptance of this dissertation.

K. Daniel O’Leary, PhD – Dissertation Advisor  
Distinguished Professor  
Department of Psychology

Marvin Goldfried, PhD – Chairperson of Defense  
Distinguished Professor  
Department of Psychology

Arthur Aron, PhD  
Professor  
Department of Psychology

Shibani Ray-Mazumder, ScD, LMSW, MS  
Director  
Life and Mind Matters

This dissertation is accepted by the Graduate School

Lawrence Martin  
Dean of the Graduate School

Abstract of the Dissertation

Motivational Interviewing as a Targeted Prevention Approach for Physically Aggressive

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Erica Margaret Woodin

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Stony Brook University

2007

Motivational interviewing is a brief non-confrontational intervention designed to enhance motivation to reduce harmful behavior (Miller & Rollnick, 2002). The purpose of this study was to conduct the first trial of motivational interviewing as a targeted prevention for partner aggression. Participants were 50 college dating couples between 18 and 25 years-old who reported at least one act of male-to-female mild physical aggression in the preceding three months. All couples completed a two-hour assessment session. Half of all couples were then randomly assigned to receive a two-hour individualized motivational feedback session, and the remaining couples received brief, generalized, non-motivational feedback.

Results indicated that the motivational feedback intervention led to significant reductions in mild physical aggression, harmful alcohol use, and acceptance of female psychological aggression compared to the brief feedback condition. Reductions in physical aggression were predicted by reductions in psychological aggression as well as

by reduced acceptance of male and female psychological aggression. Reduction in physical aggression predicted improved investment in the relationship across treatment conditions, and was also related to less anxiety and greater optimism about the future of the relationship for couples in the motivational feedback condition only. Levels of physical aggression did not predict relationship dissolution, but lower commitment to the relationship by females and higher motivation to change by males did predict dissolution.

Across feedback conditions, reductions in psychological and physical aggression were predicted by reductions in beliefs about the normativeness of male psychological aggression and female physical aggression and decreased acceptance of female physical aggression. Further, reductions in psychological aggression were predicted by decreased beliefs in the normativeness of female psychological aggression, increased need and want to change aggressive behaviors, and decreased beliefs about the ability to change. There were no significant direct mediations between feedback condition and changes in aggression using these potential mechanisms of change, although reductions in the acceptability of psychological aggression by both males and females seemed to serve as a link between feedback condition and other mechanisms. Therapists higher in global empathy, reflection to question ratios, and lower in use of closed questions during the motivational feedback sessions led to greater reductions in physical aggression.

The current study was the first trial of motivational interviewing as a targeted prevention for dating aggression. The results of this study suggest that motivational interviewing is a promising approach to reducing dating aggression and improving relationship functioning and individual well-being.

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## Acknowledgments

This project is a testament to many individuals who have dedicated their lives to helping couples build strong relationships. I would first like to thank the participants in this study for their willingness to share their relationships with us and for their attempts to choose healthy paths for themselves and their partners.

I would also like to thank the amazing group of relationship researchers whose passion and encouragement have guided my own journey. As an undergraduate at the University of Washington, Sybil Carrère, Lynn Fainsilber Katz, and John Gottman imbued in me both a dedication for research excellence as well as a lifelong curiosity about close relationships.

As a graduate student at Stony Brook University, Dan O’Leary was the best mentor and collaborator I could have asked for. His warmth and humor, combined with a keen intellect and joy of learning, taught me to dream big, take risks, and fight for what I believe in.

I would also like to thank my parents, Paul and Katie, who have been a constant source of support and encouragement, and who taught me everything I ever needed to know about loving relationships.

And finally to my husband and the love of my life, Chuck, whose sacrifices and dedication to my academic pursuits go beyond words. This project would not have been possible without his hard work and steady presence. He is my rock and my inspiration.

## Introduction

The Centers for Disease Control and Prevention (CDC) estimate that approximately 1.3 million women are the victims of physical assault by an intimate partner in the United States each year, and that nearly half suffer physical injury as a direct result. Further, the direct and indirect costs of partner aggression, which include medical and mental health care and lost productivity, are nearly four million dollars per year (National Center for Injury Prevention and Control, 2003). The health consequences of partner aggression are well documented, with abused women often suffering physical injury, depression, anxiety, post-traumatic stress, and substance use (e.g., Cascardi, Langhinrichsen, & Vivian, 1992; Cascardi, O’Leary, Lawrence, and Schlee, 1995; Cascardi, O’Leary, & Schlee, 1999; Testa & Leonard, 2001, Vivian & Langhinrichsen-Rohling, 1994). In addition, married relationships characterized by physical aggression are more likely to end in divorce (e.g., Rogge & Bradbury, 1999), and to place children who witness this interparental aggression at increased risk for physically assaulting their own partners as adults (e.g., Stith et al., 2000).

### *The Role of “Resistance” in the Treatment of Partner Aggression*

The cost of partner aggression to individuals, families, and society underscores the need for effective interventions to combat this public health problem. Unfortunately, many individuals report being relatively unconcerned about the presence of aggression in their relationships, even when seeking treatment for relationship problems, and often believe the aggression will be transient or will have no significant impact on their partner or the relationship (Ehrensaft & Vivian, 1996). Thus, interventions are rarely initiated until aggression has reached severe levels and individuals are compelled to attend

treatment either by court order or by the demands of the assaulted partner (e.g., Saunders, 2000). Interventions with these individuals, who are typically male and often referred to as “batterers,” suffer from extremely high dropout rates and produce mixed results even for treatment completers (e.g., Gondolf, 2002), especially when the aggression is particularly chronic (e.g., Tolman & Bhosley, 1991) or severe (e.g., Woodin & O’Leary, 2006).

A commonly cited difficulty in engaging batterers in treatment is their unwillingness to accept personal responsibility for their aggression or to acknowledge the impact of aggression on their partner (e.g., Pence & Paymar, 1993). Commonly known as “resistance,” behaviors such as anger, irritability, opposition, and suspicion do indeed predict poor response to treatment across a wide range of disorders (e.g., Beutler, Moleiro, & Talebi, 2002). Traditional batterers’ interventions usually target this resistance directly using intensely confrontational interventions designed to break down resistance and eliminate minimization (e.g., Pence & Paymar, 1993; Saunders, 2000). However, there is extensive evidence that a positive therapeutic alliance, in which clients are trustful and willing to collaborate, is one of the most important elements of treatment success across a wide range of interventions (e.g., Lambert & Barley, 2001). Thus, coercive and hostile therapeutic tactics often diminish trust and willingness to collaborate on the part of the client (Ackerman & Hilsenroth, 2001), potentially limiting batterers’ treatment effectiveness and possibly even causing harm to vulnerable individuals (Murphy & Baxter, 1997). In fact, resistant individuals are least likely to benefit from directive forms of therapy, and instead generally profit most from client-focused, non-confrontational approaches (Beutler et al., 2002).

### *A Motivational Interviewing Approach to Resistance*

The alcohol treatment field has a similar history of confrontational interventions designed to break down denial and compel change (e.g., Polich, Armor, & Braiker, 1981). Responding in part to the ineffectiveness of these treatments, Prochaska and DiClemente (1984) proposed a *transtheoretical model of change*, in which change occurs not as a discrete event but rather as a series of stages: precontemplation, contemplation, preparation, action, and maintenance. From this perspective, reluctance to change is viewed not as a global personal deficit, but rather as an ambivalent state (e.g., contemplation). Individuals in the contemplation stage are seen as struggling with the costs and benefits of behavior change. Based on this model, the goal of intervention with “resistant” clients is to resolve ambivalence and support progression through the stages of change to healthier behavior patterns.

Influenced by the transtheoretical model, Miller (1983) proposed a method for promoting change in problem drinkers, termed *motivational interviewing*, which emphasizes an empathic, client-centered approach to reducing harmful drinking behavior. Motivational interviewing seeks to enhance individual responsibility and self-efficacy, avoid confrontation or labeling, create dissonance between current behavior and beliefs, and use this dissonance to promote behavior change. Brief interventions based on a motivational interviewing framework, termed *Drinker’s Check-Ups* (Miller, Sovereign, & Krege, 1988), typically entail the recruitment of individuals at high-risk for harmful drinking but not currently seeking treatment. Individuals undergo a two-hour assessment session to evaluate the magnitude and consequences of their drinking behavior and a one-hour feedback session in which they are provided with an individualized analysis of the

assessment results. The feedback session is designed to enhance awareness of negative consequences and to increase motivation for change in a non-confrontational manner.

As predicted by the transtheoretical model, motivational interviewing approaches are particularly effective for heavy drinkers low in readiness to change (Project MATCH Research Group, 1997). Further, an empathic, client-centered therapeutic style appears to be a crucial element. Similar brief interventions using a directive-confrontational style produce high levels of client resistance that then actually predict increased drinking rates following treatment (Miller, Benefield, & Tonigan, 1993). Finally, while originally conceptualized and validated as a method of priming individuals for more intensive treatment (e.g., Brown & Miller, 1993), brief interventions based solely on motivational interviewing methods also demonstrate considerable efficacy and often perform as well as more time-intensive alcohol treatments (e.g., Bien, Miller, & Tonigan, 1993; Miller, 2000b; Moyer, Finney, Swearington, & Vergun, 2002).

#### *Motivational Interviewing as a Treatment for Partner Aggression*

The similarities between the alcohol and batterers' treatment fields in terms of frequent treatment resistance and the limited efficacy of confrontational approaches has led to a call in recent years for the use of motivational methods to treat aggression in intimate relationships (e.g., Daniels & Murphy, 1997; Murphy & Baxter, 1997). Taft, Murphy, Elliot, and Morrel (2001), for instance, demonstrated that motivational techniques used by group leaders, such as personal handwritten notes, telephone calls, and expressions of concern and empathy, successfully improved treatment attendance for men undergoing batterers' treatment. Additionally, Kistenmacher (2001) applied a brief pre-treatment intervention with a motivational interviewing framework for men court-

mandated to batterers' treatment, producing improvement in aggression-related attitudes and self-reported readiness to change.

While no study has yet demonstrated the ability of motivational interviewing to actually reduce the incidence or severity of partner aggression when used as an adjunct to future treatment, these projects offer initial suggestions that such outcomes are possible. Further, to date there is no evidence of the effectiveness of brief stand-alone motivational interventions with severely aggressive populations. At this time, it may be unwise if not unethical to implement untested brief motivational interventions for severely aggressive populations. There is considerable reason to believe, however, that brief motivational interventions might prove to be a safe, effective, and cost-efficient method for promoting behavior change in young adults who are not severely aggressive, but are at risk for aggression escalation over time.

#### *Prevention of Partner Aggression in Young Adults*

Partner aggression is in fact most common in young populations (e.g., O'Leary, 1999a; O'Leary & Woodin, 2005). In a nationally representative sample, 37% of men aged 20 to 24 reported engaging in physical aggression against a partner in the last year (O'Leary, 1999a). The high risk for aggression in young adults, combined with the aforementioned limitations of existing batterers' treatments, has set the stage for efforts to prevent the onset or escalation of aggression in newly forming young adult relationships (e.g., O'Leary, Woodin, & Fritz, 2006).

Prevention approaches generally fall into two categories (Institute of Medicine, 1994). Universal prevention consists of proactive, broad-based, non-specific programs to prevent the onset of behavior problems for all individuals in a population regardless of

risk status, whereas targeted prevention utilizes some form of selection process (i.e. family history, behavior problems, co-occurring pathology) to identify individuals in need of more intensive intervention to reduce or eliminate destructive behavior. Further, targeted programs differ in their selection process. Selective targeted programs are intended for individuals who do not yet demonstrate problematic behavior, but are at risk for such behavior according to known risk-factors factors (i.e. abuse in the family of origin). Indicated targeted prevention programs, conversely, are used when sub-clinical levels of problem behavior are already occurring (i.e. mild and infrequent aggression) and the intent is to alter the developmental trajectory and to prevent an escalation of harmful behavior (Institute of Medicine, 1994). Although universal prevention programs avoid the risk of stigmatizing particular individuals, considerable resources must be expended to reach primarily well-functioning individuals. The provision of services to large, heterogeneous groups often limits the extensiveness and focus of universal programs, and may explain why they tend to demonstrate small effects across a range of problem behaviors (e.g., Wilson, Gottfredson, & Najaka, 2001).

Many of the current prevention programs for partner aggression in young adults are in fact universal, and typically consist of several sessions that supply information, challenge attitudes and stereotypes, provide resources, and at times provide training in communication and conflict management. Very few of these programs have undergone empirical evaluation and even fewer have documented actual change in aggression perpetration or victimization (e.g., Avery-Leaf & Cascardi, 2002; O'Leary et al., 2006). Systematic reviews and meta-analyses from prevention programs for other harmful behaviors (e.g., delinquency, substance use) have determined that, in general, the most

effective prevention programs are those that are targeted to individuals at high risk, use interactional techniques rather than didactic instruction, avoid confrontation or scare tactics, and employ cognitive-behavioral techniques or norms-based education (e.g., Lipsey, 1992; Walters & Bennett, 2000, Wilson et al., 2001).

*Motivational Interviewing as a Promising Targeted Prevention for Partner Aggression*

Motivational interviewing has only recently been employed as a targeted prevention strategy for heavy alcohol consumption. The design and theoretical foundations of motivational interviewing, however, map extremely well onto the characteristics of successful prevention models mentioned above. Namely, motivational interviewing targets at-risk individuals, employs an interactional and personalized format, uses a non-confrontational style, and promotes change through increased motivation and education about deviation from population norms.

In the alcohol treatment field, brief motivational interventions have demonstrated considerable success. A one-hour motivational interviewing session for high-risk college drinkers performed as well as a six-week self-management class in reducing rates of drinking over a two-year period (Baer et al., 1992). Further, a brief intervention with college freshman at high-risk for binge drinking significantly reduced drinking quantity and frequency over two years (Marlatt et al., 1998), and demonstrated continuous reductions in negative alcohol-related consequences over a four-year period (Baer, Kivlahan, Blume, McKnight, & Marlatt, 2001). Finally, Borsari and Carey (2000) demonstrated that changes in perceived drinking norms mediated reductions in drinking behavior after a brief motivational intervention, and Murphy and colleagues (2001) demonstrated that a brief motivational intervention was more effective in reducing



alcohol use among heavy drinkers compared to both a psychoeducational intervention and an assessment-only control group.

While motivational interviewing has not yet been used as a targeted prevention for partner aggression, young adults tend to report little concern about aggression in their own relationships (Arias & Johnson, 1989), suggesting that motivational interviewing may be well suited to promoting awareness and resolving ambivalence about ending aggression between young partners. Further, targeting newly forming relationships at risk for aggression escalation may be a useful alternative to treating aggression that is chronic and severe, given the limitations of existing batterers' treatments. Finally, because past aggression is the best predictor of future aggression even for young adults (e.g., O'Leary & Slep, 2003), targeting young adults who are already experiencing mild levels of aggression (an indicated targeted prevention approach) has the potential to best direct limited resources to maximum effect.

*Targeting Situational Risk-Factors for Aggression: The Riggs & O'Leary Causal Model of Courtship Aggression*

To most effectively prevent and reduce partner aggression, it may be important to focus not only on aggression, but also on its possible precipitants. Riggs and O'Leary's causal model of courtship aggression (1989) posits that there are contextual factors, such as societal and individual characteristics, that predict who will be aggressive, and situational factors, such as specific precipitating events, that predict when aggression is most likely. While contextual factors may serve as risk-markers for aggression, they are relatively unalterable (e.g., personality characteristics, aggression in the family of origin, socioeconomic status). Riggs and O'Leary posit a series of situational factors that may

increase the risk for aggression and that may also be amenable to change through intervention.

*Aggression by the Partner.* Aggression by the partner is one of the best longitudinal predictors of future aggression (e.g., O’Leary & Slep, 2003). In addition, although the physical and psychological impact of aggression is often greater for women than men (Cascardi et al., 1999; Magdol et al., 1997; Testa and Leonard, 2001), young women engage in physical aggression at equivalent or even slightly higher rates than young men (e.g., Capaldi & Owen, 2001; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). Further, conjoint approaches have been used successfully with treatment-seeking aggressive couples without causing increased fear or injury (O’Leary, Heyman, & Neidig, 1999). Although male aggression may have a greater impact on the well being of the partner, focusing exclusively on behavior change in young men may obscure the dyadic nature of many mildly aggressive episodes and thereby limit treatment effectiveness. Therefore, motivational interventions, which have been used successfully in a dyadic context to promote improved relationship satisfaction (Cordova, Warren, & Gee, 2001), may also be maximally effective at reducing dyadic aggression when behavior change by both members is encouraged.

*Psychological aggression.* Psychological aggression, which consists of behaviors such as insults, threats, and controlling behaviors, is another dyadic, changeable risk-factor for physical aggression (e.g., O’Leary & Slep, 2003). Psychological aggression often leads to harmful psychological impact over and above physical aggression, and is thus both a risk-factor and a harmful behavior in its own right (O’Leary, 1999b).

*Relationship conflict.* Physical aggression most often occurs during heated verbal disagreements (Cascardi & Vivian, 1995). Relationship conflict also predicts which couples will remain persistently aggressive over time (Aldarondo & Sugarman, 1996), even controlling for previous levels of aggression (Leonard & Senchak, 1996). Aggressive couples tend to display conflict behaviors that are extremely hostile and attacking, and also are more likely than non-aggressive couples to withdraw or stonewall during episodes of conflict (Berns, Jacobson, & Gottman, 1999).

*Alcohol use.* Heavy alcohol use is another potent predictor of physical aggression (e.g., Leonard & Senchak, 1996). Aggression is more likely on days of heavy drinking (Fals-Stewart, 2003) and heavy alcohol use interacts with relationship conflict to magnify the risk of physical aggression (Quigley & Leonard, 1999). Further, successful remission as a result of alcohol treatment reduces the risk of aggression (O'Farrell, Fals-Stewart, Murphy, & Murphy, 2003).

*Stress.* The experience of stressful life events also places individuals at increased risk for behaving aggressively in general (e.g., Felson, 1992), and for engaging in aggression against a partner (e.g., Cano & Vivian, 2001). Farrington (1986) theorizes that stress may be most likely to lead to partner aggression when couples experience many stressors but have limited resources to cope with the stressors and thus accept aggression as a means of coping.

*Acceptance of aggression.* Cognitive processes are also important when understanding which individuals are at greatest risk for aggression. Individuals justify the use of aggression in different ways. Beliefs about the acceptability of aggression for instrumental purposes, such as the need for control or the need to punish the partner, are

closely associated with physical aggression and injury. In contrast, expressive beliefs, which explain aggression as a loss of control, are relatively unrelated to either aggression or injury (Archer & Graham-Kevan, 2003; Archer & Haigh, 1997).

*Deciding to Leave an Aggressive Relationship: An Investment Perspective*

Relationship termination may not be the only option for individuals experiencing relatively mild levels of aggression (e.g., Peled, Eisikovits, Enosh, & Winstok, 2000). However, partner-aggressive couples are more likely to end their relationships than non-aggressive couples (Rogge & Bradbury, 1999). There is also some evidence to suggest that women who leave abusive relationships progress through the stages of change set forth by the transtheoretical model (Burke, Gielen, McDonnell, O'Campo, & Maman, 2001). Rusbult's (1983) investment model posits that commitment level, which is determined by relationship satisfaction, investment size, and perceived alternatives, should mediate relationship dissatisfaction and relationship termination. The investment model is a potent predictor of the decision to leave or stay in unsatisfying relationships, and predicts which victims of aggression will terminate their relationship (Choice & Lamke, 1999; Rusbult & Martz, 1995). Thus, an intervention that is designed to reduce ambivalence and foster action may actually facilitate the decision to leave an aggressive relationship, particularly if the costs of remaining in the relationship are substantial (e.g., high levels of aggression) and if commitment to the relationship is low.

*Mechanisms of Change: Understanding how Motivational Interviewing Reduces Aggression*

Although brief motivational interventions have long been known to reduce harmful behaviors with surprising success rates, there is less consensus at this time as to the mechanisms that lead to such change (e.g., Miller & Rollnick, 2002). Figure 1 presents a hypothesized model of the way in which motivational interviewing may lead to reductions in physical and psychological aggression.

*Improved motivation to change.* Based on the transtheoretical model, the primary goal of motivational interviewing is to increase awareness of the negative consequences of harmful behavior and to resolve ambivalence regarding behavior change (Miller & Rollnick, 2002). For individuals not currently seeking treatment (e.g., young adults in dating relationships), it is likely that many are currently in a precontemplative stage in which they are unaware of a problem or need for change, or are at most in a contemplative stage in which they are aware of a problem but ambivalent about change (Prochaska & DiClemente, 1984). Miller and Rollnick (2002) hypothesize that motivational interviewing facilitates progress from precontemplation to contemplation and from contemplation to action (e.g., behavior change). In support of this notion, Kistenmacher (2001) found that batterers undergoing a brief motivational intervention reported greater improvement in their stages of change profile compared to a no-treatment control group. Figure 1 demonstrates a hypothesized model in which participants will become more motivated to change their negative relationship behavior as a result of the motivational intervention, which will then translate to greater reductions in aggression over time.

*Improvement in perceived norms for relationship behavior.* One of the most important goals of motivational interviewing is to create cognitive dissonance between the current state and a desired state, and to then channel this dissonance into change behavior (Miller, 1983). The assessment and feedback format of many interventions based on motivational interviewing enhances this dissonance by demonstrating how an individual compares to the average of the reference group (e.g., other college students). Figure 1 also posits that as individuals come to realize that their behavior deviates from the population norm (i.e., higher conflict and aggression), they will be more likely to alter their behavior in line with the new information (e.g., Borsari & Carey, 2000).

*Decreased acceptance of aggression.* Motivational interviewing may act not just to change perceived norms for appropriate behavior, but also to change the perceived acceptability of that behavior. As motivational interviewing highlights the unintended consequences of aggression (e.g., impact to relationship and partner), the individual may actually come to view aggression as less useful or acceptable in resolving disagreements and maintaining control.

### *Summary*

Brief interventions based on motivational interviewing techniques demonstrate considerable efficacy in the alcohol treatment field, work particularly well with individuals who are ambivalent about change, and show utility as targeted preventive interventions. Although motivational interviewing demonstrates promise as an adjunct to treatment with severely aggressive individuals, there is as yet no evidence of the efficacy of this technique in preventing the occurrence and escalation of aggression in young adults. The first aim of this study was to evaluate the effectiveness of a brief intervention

based on motivational interviewing techniques as an indicated targeted prevention for non-married couples experiencing low levels of partner aggression in their current relationships. The second aim was to examine the predictors (i.e., reduction in risk-factors and motivation to change) and consequences (i.e., psychological and interpersonal) of reductions in physical and psychological aggression. The third aim was to evaluate a model of the mechanisms of change following the intervention. The hypothesis was that change in aggressive behavior would be mediated by improved motivation to change, improvement in perceived norms for relationship behavior, and decreased acceptance of aggression.

## Method

### *Participants*

Fifty college students and their partners were recruited from Stony Brook University, a mid-sized, ethnically diverse state university in Long Island, New York. Advertisements for participation included flyers posted around campus, announcements on student message boards, emails sent to undergraduates with campus email accounts, and postings in the Psychology subject pool. Advertisements announced a paid research program for college couples who wanted to “learn more about” their relationships.

*Eligibility screening.* Participants were recruited in a two-step process. First, students who expressed interest in the project were sent a website address and password in order to complete a series of online screening questionnaires. Second, those individuals

meeting criteria for the current study were contacted and asked to participate further with their dating partner. Participants received one experimental participation credit for completing the screening questionnaires, if applicable.

Eligibility was determined through demographic and relationship questionnaires completed during the screening process (see Table 1). To qualify for the current study, individuals had to report currently being in a non-married dating relationship of at least three months duration, no prior history of marriage or cohabitation, and at least one act of male-to-female mild physical aggression in their current relationship, reported by either the male or female. Mild physical aggression referred to at least one episode in which an individual threw something that could hurt, twisted an arm or hair, pushed or shoved, grabbed, or slapped (Straus et al., 1996). Both the individual and their partner also had to be interested in participating in two laboratory sessions and three online follow-ups, and be between 18 and 25 years-old. This age range was selected to represent “emerging adulthood,” or the period between adolescence and adulthood characterized by identity exploration and a high prevalence of risk-taking behaviors (Arnett, 2000).

*Exclusion criteria.* For safety reasons, participants reporting a history of serious injury as a result of physical aggression, as assessed by the Revised Conflict Tactics Scales (CTS2; Straus et al., 1996) or a significant fear of their partner, as assessed by the Fear of Partner Scale (FPS; Cohen & O’Leary, 2002), were given full payment but were withdrawn from further participation at the end of the first assessment session. Couples were debriefed individually and confidentiality regarding their immediate and long-term safety, and were given appropriate referral information to the undergraduate counseling center, as well as local emergency shelters and violence hotlines. One couple was



excluded from participation given these criteria due to significant injury inflicted by both partners.

*Participant demographics.* Of the 50 participating couples, the average length of relationship was 21.47 months ( $SD = 18.37$ ). The average age of females and males was 19.64 ( $SD = 1.26$ ) years and 20.28 ( $SD = 1.42$ ) years respectively. The median yearly family income was in the range of \$70,000 to \$79,999 for both females and males. The modal level of completed education for both females and males was two years of college. All females were enrolled in college full-time. 84% of males were enrolled full-time in college, 4% were part-time students, and 12% were not in college.

In terms of racial identification, 4% of females and 6% of males identified as African American, 38% of females and 42% of males identified as Asian American, 58% of females and 60% of males identified as Caucasian, 6% of males identified as American Indian, 6% of males identified as Native Hawaiian or Pacific Islander, and 4% of females and 8% of males identified as Other Race. Eight percent of females and 20% of males reported more than one racial identification. Measured separately from racial identification, 16% of females and 12% of males identified as of being of Hispanic ethnicity.

There were no significant treatment group differences for age, relationship duration, family income, education, college status, or racial and ethnic identification. There were, however, two significant gender differences. Females were significantly younger than males,  $t(98) = 2.39, p < .05$  and were also significantly more likely to be full-time college students than males,  $\chi^2 = 8.70, p < .05$ . Females and males did not differ on any other demographic factor.

### *Procedure*

All couples who qualified for the study and wished to participate were scheduled for a two-hour assessment session consisting of a battery of questionnaires and a conjoint interview. Couples then returned for a feedback session, at which point they were randomly assigned to receive either an extensive individualized feedback delivered in a motivational interviewing framework, or a brief non-motivational feedback. All couples also completed a brief questionnaire battery immediately following the feedback procedures. Finally, all couples were asked to complete online follow-up assessments three, six, and nine months after the feedback session.

*Assessment session.* At the beginning of the first visit, the purpose and procedures of the study were explained to the couples. The couples were also informed that they would have an equal chance of receiving either brief or extensive feedback about their relationships, to be determined randomly after the first session. Participants were then given written consent forms and any questions were clarified before participants signed the consent forms. Partners were next seated in non-adjointing rooms and asked to complete a series of questionnaires.

Both partners were then jointly administered the Oral History Interview (OHI; Buehlman, Gottman, & Katz, 1992), a brief semi-structured interview regarding the history and course of their relationship. They were asked to describe how they first met, what attracted them to each other, and how their relationship has progressed (i.e., time spent together, special moments, how they dealt with any hard times). To maintain confidential reporting, no questions specifically addressed physical aggression. The

interview was used to provide context for the feedback sessions and also served to acclimate participants to the study environment.

At the end of the assessment session, couples were scheduled for the feedback session and were given two \$5 gift certificates to a local fast food restaurant.

*Random assignment to feedback condition.* After the assessment session, a random numbers table was used to assign each couple to either the motivational or brief feedback conditions. Participants were informed of their randomization at the beginning of the feedback session.

*Feedback Session.* Couples were scheduled to attend the feedback session as soon as their schedules would allow, but usually within several weeks of participation in the assessment session ( $M = 2.10$  weeks,  $SD = 1.62$  weeks). The feedback session consisted of either the brief or motivational feedback conditions, followed by a short questionnaire battery of attitudinal measures. Each feedback session was videotaped with participants' consent. All couples were debriefed at the end of the feedback session and any final questions or concerns were addressed. Participants were also provided with a standardized summary of their assessment (see Appendices I and II for the extensive and brief summary reports respectively), along with an appropriate list of on- and off-campus referral options (see Appendix III) and a standard list of recommendations for building healthy relationships (see Appendix IV), all enclosed in a sealed envelope.

*Follow-up questionnaires.* All participants were asked to complete follow-up questionnaires three, six, and nine months after the feedback session. Individuals were sent an email containing a website address and password. The transfer of information between the website and the participant was encrypted, and the website was supported by

a security-enhanced server located within a locked room. Questionnaires were tailored for reporting on the last three months only, if applicable. The questionnaire administration was also dynamic, such that participants who were no longer in a dating relationship only completed questionnaires pertaining to their own attitudes and functioning. At each follow-up, each participant who completed the questionnaires was reimbursed \$15 cash and was also entered into two drawings for \$100 cash each.

If at least one partner of a couple completed a follow-up, data could be obtained regarding dating status (i.e., together versus terminated) and aggression estimates for both partners. In 88% of the couples at least one partner completed the 3-month follow-up (84% of females, 62% of males), 90% completed the six-month follow-up (78% females, 56% males), and 62% completed the 9-month follow-up (58% females, 40% males).

#### *Feedback Session Formats*

*Motivational feedback.* The motivational feedback sessions were designed following procedures developed for brief assessment and feedback of problems such as heavy alcohol use (e.g., Marlatt et al., 1998) and relationship distress (e.g., Cordova et al., 2001), and were based on the philosophy of motivational interviewing (e.g., Miller & Rollnick, 2002). During each interview, the therapist provided individualized feedback in an empathic and non-confrontational manner, discussed the current impact and possible future risks to the individual and to the relationship as a result of the aggression, and facilitated a discussion of possible means of behavior change. Common precipitating events for aggression were discussed as appropriate (i.e., heavy alcohol use, psychological aggression, relationship conflict). Further, the potential impact of the aggression on the well-being of the individual and the relationship were highlighted.

Participants were asked to respond to this feedback, and any statements indicating motivation to change these behaviors were attended to and reinforced.

Although couples were recruited based on reports of male-to-female physical aggression, female-to-male aggression was often equivalent or slightly greater in frequency, as anticipated based on previous research (e.g., Magdol et al., 1997). Thus these motivational feedback sessions addressed psychological and physical aggression perpetration by males and females. Care was taken, however, to emphasize personal responsibility for behavior while avoiding implications of blame for causing aggression in the partner.

Each individual motivational feedback session was 45 minutes in duration, and session order was randomly assigned by gender. It was anticipated that some individuals would report being the victims of aggression even though their partners did not report aggressing against them, as agreement between partners on reports of aggression perpetration and victimization is often in the low to moderate range (e.g., Jouriles & O'Leary, 1985; Moffitt et al., 1997). To ensure safety and confidentiality, individual interviews were conducted to give personalized feedback without any reference to the partner's report. For example, if partner A reported being the recipient of aggression by partner B, the therapist focused on the potential impact of that aggression to A and to the relationship between A and B, but did not discuss the reported aggression with B under any circumstances unless B independently reported aggression perpetration. If any participant reported no aggression perpetration, then the individual interview focused on whatever risk-factors for aggression the participant did acknowledge (e.g., psychological aggression, high stress levels) with the intent of motivating change of the possible

precipitants of physical aggression. At the end of each individual session, the therapist again emphasized that the information was confidential and would not be shared with the other partner.

The last interview of the motivational feedback session was 15 minutes in duration and included both partners, thus no specific mention of individual feedback was made. Instead, the therapist asked the couple to discuss their overall hopes and concerns for the future of their relationship. As in the individual interviews, the therapist attended to and reinforced statements indicating motivation to change any risk-factors for physical aggression (e.g., frequent conflict, alcohol use).

*Brief non-motivational feedback sessions.* Members of couples assigned to the control condition each received 10-minute individual, psychoeducational interventions in which they received individualized feedback about their overall relationship satisfaction only. Brief mention was made of factors affecting relationship satisfaction (i.e., stress, conflict, time spent together) and participants were allowed to ask questions. Therapists avoided use of motivational interviewing techniques (e.g., complex reflections, emphasis of individual control and responsibility), but did provide information and clarification to participants. Session order was randomly assigned by gender.

#### *Motivational Interviewing Training and Adherence*

*Therapists.* Assessment and feedback sessions were conducted by five advanced graduate students in clinical psychology. The same therapist conducted both sessions for each couple. Preparation consisted of 20 hours of training in motivational interviewing theory and techniques, followed by ongoing supervision and checks of treatment fidelity (Moyers, Martin, Manuel, & Miller, 2003; see Appendix V for an example of a treatment

fidelity form). A standardized treatment manual was also developed with specific protocols for the motivational feedback sessions.

*Treatment integrity rating.* Therapist behaviors during both the intervention and control conditions were coded using the Motivational Interviewing Treatment Integrity Scale (MITI; Moyers et al., 2003; Moyers, Martin, Catley, Harris, & Ahluwalia, 2003). The MITI is a two-pass coding system for motivational interviewing (MI) sessions that captures global therapist characteristics (*MI spirit* and *empathy*) as well as specific behavior frequencies (*giving information, close-ended questions, open-ended questions, simple reflections, complex reflections, MI adherent behaviors, and MI non-adherent behaviors*).

Five undergraduate research assistants were training in the MITI until they reached acceptable reliability levels, using example tapes provided by the creators of the MITI. Eighty-five percent of all feedback sessions were then independently coded by two coders, and Table 2 presents inter-rater reliability coefficients. For the most part, intra-class correlations (ICCs) were in the good to excellent range. An exception was the global code of MI spirit, which was in the fair range for both female and male sessions.

### *Measures*

*Partner aggression.* Aggression between partners was assessed using the Revised Conflict Tactics Scales (CTS2; Straus et al., 1996), a modification to the most widely used measure of partner aggression. The CTS2 has five scales (negotiation, psychological aggression, physical assault, sexual coercion, and injury) and assesses frequency of perpetration and victimization. Initially created with a college sample (Straus et al., 1996), the CTS2 has good internal consistency (alphas .79 to .95), and established

construct and factor validity (Newton, Connelly, & Landsverk, 2001). To minimize the problem of underreporting of aggression (e.g., Heyman & Schlee, 1997), the higher of the two partners' reports were used to calculate each individual's total aggression scores.

*Conflict patterns.* Patterns of verbal conflict were measured using the Conflict Patterns Questionnaire (CPQ; Christensen & Sullaway, 1984). The CPQ is an 11-item inventory measuring behaviors by both partners during the discussion of relationship problems. The three subscales (constructive communication, self demand / partner withdraw, and partner demand / self withdraw) have adequate internal consistency and high intraclass correlations between partners ( $r = .73$  to  $.80$ ; Christensen, 1987). The constructive communication subscale is closely associated with observations of conflict behaviors between partners ( $r = .62$  to  $.72$ ; Heavey, Larson, Zumtobel, & Christensen, 1996) and predicts long-term relationship satisfaction with as much accuracy as microanalytic observational measures (Rogge & Bradbury, 1999).

*Fear of partner.* The level of fear the partner was assessed using the Fear of Partner Scale (FPS; Cohen & O'Leary, 2002). The FPS is a 25-item Likert-scale inventory of the overall fear and hesitation regarding the partner and the prospect of engaging in conjoint treatment. The total and subscales scores of the FPS demonstrate high internal consistency (alphas  $.72$  to  $.92$ ) and correlate moderately with the psychological and physical aggression subscales of the CTS (Cohen & O'Leary, 2002).

*Acceptance of psychological aggression.* Beliefs about the acceptability of psychological aggression were assessed using the Justification of Verbal / Coercive Tactics Scale (JVCT; Slep, Cascardi, Avery-Leaf, & O'Leary, 2001). The JVCT elicits participants' beliefs about the acceptability of verbally aggressive, controlling, and



jealous tactics for both males and females in dating situations. The JVCT demonstrated good internal consistency (alphas .71 to .86) and adequate test-retest reliability in a high school sample (Slep et al., 2001).

*Acceptance of physical aggression.* Participants' beliefs about the acceptability of physical aggression were measured using the Attitudes about Aggression in Dating Situations scale (AADS; Slep et al., 2001). The AADS presents vignettes of males and females responding in a physically aggressive manner to interpersonally provocative situations and asks participants to rate the acceptability of each response. The AADS has good internal consistency (alphas .83 to .87) and test-retest reliability (Slep et al., 2001).

*Motivation to change.* Participants' motivation to change was assessed using the Relationship Self-Check Inventory (RSCI; Kistenmacher, 2001). The RSCI is a 30-item measure of motivation to change a range of physically aggressive and verbally conflictual behaviors. The items tap perceptions of need to change, desire to change, and self-efficacy for change, and are based on McClelland's (1987) theory of motivation as a combination of motives, intents, values, and probability of success. The scales of the RSCI have good internal consistency (alphas .83 to .88; Kistenmacher, 2001).

*Normativeness of partner aggression.* Participants' beliefs about the normativeness of partner aggression were assessed using the Perceptions of Conflict Scale (POC; Vega & O'Leary, 2007). Individuals were asked to estimate the percentage of males and females who engage in psychologically and physically aggressive acts against their partners, using examples of acts from the CTS2 (Straus et al., 1996). Total scores are obtained for separately for psychological and physical aggression and for male and female aggressors.

*Relationship satisfaction.* Relationship satisfaction was assessed using the Dyadic Adjustment Scale (DAS; Spanier, 1976). The DAS is a widely-used 32-item scale of adjustment with four subscales (dyadic satisfaction, dyadic cohesion, dyadic consensus, and affectional expression). The DAS has excellent internal consistency ( $\alpha = .95$ ) and two-week test-retest reliability ( $r = .87$ ; Carey, Spector, Lantinga, & Krauss, 1993), good convergent validity and discriminant validity with measures of relationship satisfaction and psychopathology respectively (Heyman, Sayers, & Bellack, 1994), and distinguishes distressed and non-distressed couples (Eddy, Heyman, & Weiss, 1991).

*Commitment and investment.* Commitment to the relationship, as well as factors that indicate investment and dependence, were measured using the Investment Model Scale (IMS; Rusbult, Martz, & Agnew, 1998). The IMS is a 37-item scale assessing commitment, satisfaction, quality of alternatives, and investment size. In a college sample, Rusbult and colleagues (1998) demonstrated the factorial structure of the IMS, good internal consistency of the factors (alphas .82 to .95), convergent and discriminant validity, and the ability to predict future relationship outcomes.

*Problematic alcohol use.* Alcohol use was measured using the Alcohol Use Disorders Identification Test (AUDIT; Saunders, Aasland, Babor, de la Puente, & Grant, 1993). The AUDIT is a 10-item scale measuring alcohol consumption, dependence, and related consequences. The AUDIT has good internal consistency (alphas above .80) and excellent sensitivity and specificity as a brief screen for risky alcohol use (Allen, Litten, Fertig, & Babor, 1997).

*Stressful life events.* Stress was measured using the Life Experiences Survey (LES; Sarason, Johnson, & Siegel, 1978). The LES is a 57-item measure of life events

(47 general and 10 academic items). Participants identify which events they have experienced and rate the positive or negative impact of these events on a 7-point scale. The LES was originally validated with an undergraduate population. The negative stress total score has adequate test-retest reliability over 5-6 weeks ( $r = .56$  to  $.88$ ) and correlates moderately with state and trait anxiety (Sarason et al., 1978).

*Depression.* Depression was assessed using the Beck Depression Inventory – Revised (BDI-II; Beck, Steer & Brown, 1996), a 21-item measure of current depressive symptoms. The BDI has high internal consistency (alphas above  $.90$ ; Beck et al., 1996) and a demonstrated record of convergent and factorial validity (Steer & Clark, 1997).

*Anxiety.* Anxiety was assessed using the Beck Anxiety Inventory (BAI; Beck, Epstein, Brown, & Steer, 1988), a 21-item self-report inventory of anxiety severity. The BAI has high internal consistency ( $\alpha = .92$ ), test-retest reliability ( $r = .75$ ; Beck et al., 1988), and convergent and discriminant validity (Fydrich, Dowdall, & Chambless, 1992).

## Results

Results from the current study begin with a preliminary discussion of the integrity of the motivational interviewing procedures and an overview of the data analytic procedures. Then, separate sets of analyses will be presented that correspond to the main hypotheses of the current study, including a presentation of the overall treatment outcomes, changes in risk-factors predicting reductions in partner aggression, changes in partner aggression predicting changes in individual and relationship functioning,

predictors of relationship dissolution, mechanisms of change in partner aggression reductions, and therapist behaviors predicting reductions in partner aggression.

### *Treatment Integrity*

To examine treatment integrity, therapist behaviors were first examined to ensure that motivational interviewing (MI) techniques were significantly more likely to be used during the motivational versus brief feedback sessions. Table 3 displays the percentage of therapist behaviors observed on average for the motivational versus brief feedback conditions. Percentages rather than raw scores were used to account for the difference in length (45 minutes versus 10 minutes) between treatment conditions. Results indicate that therapists were more likely to give information and ask closed-ended questions during the brief feedback condition compared to the motivational feedback condition, whereas therapists were more likely to ask open-ended questions and to make simple and complex reflections in the motivational feedback condition.

Therapist behaviors during the intervention conditions were also compared with existing guidelines put forth for ensuring that therapists have reached minimum competency levels for MI sessions (Moyers, Martin, Manuel et al., 2003). Table 4 demonstrates the minimum competency criteria threshold compared to actual therapist behaviors in this study. Therapists in the current study were able to meet or exceed all minimum thresholds, with the exception of the proportion of complex reflections to total reflections, which is considered the most difficult skill to master (Moyers, Martin, Manuel et al., 2003).

### *Data Analysis Procedures*

Data analyses began with an inspection of the integrity of the data, including screening for outliers. Several variables contained outliers that were greater than two standard deviations from the mean of the variable. In each case, the effect size was winsorized by recoding each outlier to be slightly larger than the next largest response. Next, the success of the randomization process was examined by comparing the intervention groups on all pre-treatment variables (i.e., demographics, partner aggression, relationship satisfaction, etc). No pre-treatment characteristics significantly distinguished the motivational and brief feedback conditions for either males or females.

The majority of study hypotheses were analyzed using longitudinal hierarchical linear modeling techniques (HLM; Raudenbush & Bryk, 2002; Singer & Willett, 2003) with the HLM6 computer program (Raudenbush, Bryk, & Congdon, 2006). HLM is a flexible data-analysis tool that is well-suited to the current study for several reasons (e.g., Raudenbush & Bryk, 2002; Singer & Willett, 2003). First, HLM maximizes power by including data with varying numbers and spacing of assessment, thereby enabling the inclusion of participants who do not complete all follow-up assessments or who complete assessments belatedly. Second, HLM is well suited to multi-level data structures, as in the current study in which time is nested within individuals and individuals are nested within couples. The ability of HLM to handle nested data designs is ideal for the analysis of aggressive behaviors, which are often highly correlated between partners.

For each outcome of interest, three-level HLM modeling was conducted following procedures developed by Atkins et al. (2005) for analysis of dyadic data. First, a trajectory was created for each participant's change over time for the outcome variable

of interest. Next, each participant's outcome data were fitted with an intercept and slope. Participants' slopes and intercepts were then modeled within each couple. Equation 1 demonstrates the general form of the three-level model:

$$\begin{aligned}
 \text{Level 1 (repeated measures): } & Y_{ij} = \pi_{0ij} + \pi_{1ij}(\text{Time}) + e_{ij} \\
 \text{Level 2 (individuals): } & \pi_{0ij} = \beta_{00j} + r_{0ij} \\
 & \pi_{1ij} = \beta_{10j} \\
 \text{Level 3 (couples): } & \beta_{00j} = \gamma_{000} + u_{00j} \\
 & \beta_{10j} = \gamma_{100} + u_{10j}
 \end{aligned} \tag{1}$$

where  $t$  is time within individuals,  $i$  is individuals within couples, and  $j$  is couples. A random intercept is included at the level of the individual ( $r_{0ij}$ ) to allow for differences between individuals before treatment. Random intercepts at the couple level allow for couples to vary in initial differences ( $u_{00j}$ ) and differences across time ( $u_{10j}$ ).

Time was centered so that the intercept corresponded to the participant's score on the outcome measure during the assessment session (i.e., before receiving the intervention). The slope corresponded to the amount of linear change from the assessment session to the last follow-up assessment. To minimize the number of parameters to be modeled, any non-significant Level 3 variance components were dropped from the final analysis for each model.

Data were scored such that analyses could be interpreted with the motivational feedback condition as the target group (scored as 1) versus the brief feedback condition (scored as 0) and males as the target group (scored as 1) versus females (scored as 0). The final estimation of fixed effects was examined using robust standard errors, which tend to be more stable when the highest level (i.e., couple) has a large number of groups

(Raudenbush & Bryk, 2002). Unadjusted effect sizes ( $r$ ) were also computed using the formula  $\sqrt{t^2/(t^2 + df)}$  to convert  $t$ -scores from the HLM analyses.

### *Effects of Motivational Feedback on Treatment Outcomes*

The first goal of the present study was to evaluate the overall utility of the motivational feedback intervention. The hypothesis was that couples who participated in the motivational feedback condition would report less physical aggression and less risk-factors for aggression (e.g., psychological aggression, alcohol use, stress, relationship conflict, and acceptance of aggression) following the intervention compared to the brief feedback condition. Each outcome (physical aggression, psychological aggression, alcohol use, stress, relationship conflict, and beliefs justifying aggression) was predicted using a separate three-level HLM analysis. Gender (male versus female) and treatment status (motivational versus brief feedback) were added as “time-invariant” predictors (i.e., not changing over time) at Levels 2 and 3 respectively to test the interactions between gender, treatment status, and change in outcome across time. The hypothesis was that the outcome variables would be significantly negatively sloped over time for the motivational feedback couples but unchanged for the brief feedback couples.

*Mild physical aggression.* Table 5 displays the means and standard deviations for the main outcome of interest, mild physical aggression, as measured by the CTS2 (Straus et al., 1996). Table 6 documents the results of the HLM analysis. First, there was no significant difference in intercepts across feedback conditions, meaning that there were no pre-treatment differences in mild physical aggression between participants in the motivational interviewing versus brief feedback conditions. There was, however, a significant difference in gender intercepts, with males being less physically aggressive

than females overall at pre-treatment ( $ES = .46$ ). There was no interaction between gender and feedback condition at pre-treatment.

Table 6 also indicates that, across gender and feedback conditions, there was a significant reduction in mild physical aggression from pre-assessment through the follow-up periods ( $ES = 0.28$ ). There was also a significant effect of feedback condition on the slope. Participants in the motivational feedback condition reduced their mild physical aggression at a significantly greater rate over time than participants in the brief feedback condition ( $ES = 0.27$ ).

There was no significant overall difference in slopes between genders, but there was a significant interaction between feedback condition and gender, with males in the motivational feedback condition demonstrating less reduction in mild physical aggression across time compared to females in the motivational feedback condition ( $ES = 0.12$ ).

Exploratory analyses also suggested that the age of participants significantly interacted with the treatment findings, such that younger participants in the brief feedback condition were least likely to reduce their use of mild physical aggression compared to other participants,  $B = 0.08$ ,  $SE = 0.04$ ,  $t(292) = 2.22$ ,  $p < .05$ ,  $ES = 0.13$ . Interestingly, relationship duration and years of education were not significantly associated with reductions in mild physical aggression, suggesting that age is not a proxy for other time-dependent factors that could influence treatment efficacy. Further, no particular racial identification impacted treatment efficacy, however Hispanic participants in the motivational feedback condition reduced their rates of mild physical aggression less following the intervention than non-Hispanic participants,  $B = 0.23$ ,  $SE = 0.10$ ,  $t(292) = 2.28$ ,  $p < .05$ ,  $ES = 0.13$ . Pre-treatment relationship satisfaction and physical



aggression levels were not significantly related to reductions in physical aggression over time.

*Severe physical aggression.* Although there was no specific hypothesis that the motivational feedback would reduce rates of severe physical aggression, due to the low base-rate of severe forms of aggression at all time points (see Table 5), an exploratory HLM analysis was conducted to determine if there were any changes in severe aggression as measured by the CTS2 (Straus et al., 1996). As demonstrated in Table 6, there were no pre-treatment differences in levels of severe physical aggression across gender or feedback conditions, and no overall change in severe aggression across time. There was a significant difference in the amount of change in severe aggression across genders, with males being less likely to reduce their rates of severe aggression across time (ES = 0.28). There was no interaction between gender and feedback condition on severe aggression reductions.

*Psychological aggression.* Tables 5 and 6 indicate that there were no significant pre-treatment differences in psychological aggression between genders or feedback conditions as measured by the CTS2 (Straus et al., 1996). There was a statistically significant reduction in psychological aggression over time across feedback conditions (ES = .47), but no difference in psychological aggression reductions across feedback conditions or genders.

*Alcohol use.* Means and standard deviations for alcohol use are displayed in Table 7 and HLM analyses are presented in Table 8. Harmful alcohol use, as measured by the AUDIT (Saunders et al., 1993), did not differ between feedback conditions at pre-treatment; however males reported significantly higher levels of pre-treatment harmful

drinking compared to females (ES = 0.20). Further, although there was no significant overall reduction in drinking across participants, couples in the motivational feedback condition were significantly more likely to reduce their harmful drinking following the intervention than couples in the brief feedback condition (ES = 0.33) with no significant differences in drinking reduction by gender and no interaction between gender and feedback condition on drinking reductions..

*Stress.* Stressful life events was assessed using the negative events subscale of the LES (Sarason et al., 1978), with means and standard deviations presented in Table 7 and HLM results presented in Table 8. At pre-treatment, males reported significantly less negative impact from life events than females (ES = 0.12), with no significant differences between feedback conditions. There was a significant reduction in the negative impact of life events across the follow-up period (ES = 0.29) but no significant differences in the amount of change across feedback conditions or genders and no interaction between gender and feedback condition.

*Conflict patterns.* Relationship conflict patterns were measured with three subscales of the CPQ (Christensen & Sullaway, 1984), as demonstrated in Table 9. Table 10 indicates that there were no significant differences at pre-treatment in levels of constructive communication, self demands-partner withdraws, or partner demands-self withdraws across feedback conditions, but there were significant differences between genders on levels of demand-withdraw behaviors at pre-treatment. Males were more likely to report that they demand while their partner withdraws (ES = .29), whereas females were more likely to report that their partner demands while they withdraw (ES = .20). This conflict pattern is unusual for non-aggressive couples, in which the female is

more likely to be demanding and the male withdrawing (Christensen, 1987), but is consistent with findings from studies of more severely aggressive couples in which the gender pattern is reversed (Berns et al., 1999). There were no significant changes over time in reported levels of conflict patterns, and no effect for gender, feedback condition, or the interaction between gender and feedback condition. Hence, couples did not report any changes in conflict patterns following the intervention.

*Acceptance of aggression.* Participants' belief that aggression is justified under certain circumstances was measured using the JVCT for psychological aggression and the AADS for physical aggression (Slep et al., 2001), and were assessed separately for male and female perpetrators.

As demonstrated in Tables 11 and 12, there were no significant differences between genders or feedback conditions at pre-treatment on acceptance of psychological aggression by female or male perpetrators. For male perpetration, there was no overall change across time and no effect of feedback condition. For female perpetration, in contrast, couples in the motivational feedback condition became significantly less accepting of female psychological aggression over time compared to couples in the brief feedback condition ( $ES = 0.10$ ). There were also significant interactions between gender and feedback condition such that males in the motivational feedback condition were less likely to reduce their acceptance of psychological aggression than females, both for male perpetration ( $ES = 0.12$ ) and female perpetration ( $ES = 0.11$ ).

In terms of the acceptance of physical aggression, Tables 13 and 14 demonstrate that there were no pre-treatment differences and no significant changes in acceptance

across the course of the follow-up period for genders, feedback conditions, or the interaction between gender and feedback condition.

### *Changes in Risk-Factors Predicting Reductions in Physical Aggression*

The second goal of the current study was to examine the predictors of reductions in physical aggression. The hypothesis was that reductions in situational risk-factors will predict eventual reductions in rates of physical aggression. Aggression risk-factors were recoded as “lagged time-varying” covariates (i.e., variables that precede the outcome by one time point and that change over time; Singer & Willett, 2003) and were included in the Level 1 model, with mild physical aggression as the outcome measure and treatment group as the Level 3 time invariant predictor. Gender was not included in the Level 2 model due to restrictions on the number of parameters available.

HLM analyses indicated that reductions in psychological aggression predicted reductions in physical aggression,  $B = 0.17$ ,  $SE = 0.07$ ,  $t(48) = 2.51$ ,  $p < 0.05$ ,  $ES = 0.33$ , with no differences between treatment groups on the link between psychological and physical aggression reductions. Similarly, reduction in the acceptance of male psychological aggression was related to reductions in physical aggression,  $B = 0.09$ ,  $SE = 0.04$ ,  $t(172) = 2.19$ ,  $p < 0.05$ ,  $ES = 0.15$ , as was the acceptability of female psychological aggression,  $B = 0.10$ ,  $SE = 0.04$ ,  $t(172) = 2.35$ ,  $p < 0.05$ ,  $ES = 0.16$ , with no differences across treatment groups in either case.

Reductions in harmful alcohol use, stressful life events, conflict behaviors, and acceptance of physical aggression were unrelated to reductions in physical aggression over time.

### *Reductions in Aggression Predicting Enhanced Individual and Relationship Functioning*

The third goal of this study was to examine the impact of reductions in physical aggression on relationship and individual functioning. The hypothesis was that reductions in physical aggression would predict enhanced relationship satisfaction and commitment, as well as reductions in depression and anxiety. To test this hypothesis, mild physical aggression was recoded as a lagged time-varying covariate and was included in a Level 1 model, with relationship and individual factors as the outcome measures and treatment group as the Level 3 time invariant predictor. Gender was not included as a predictor in this analysis.

Table 15 displays means and standard deviations for anxiety and depression. Lagged analyses indicate that reductions in physical aggression predicted reductions in anxiety for the treatment condition only,  $B = 0.19$ ,  $SE = 0.08$ ,  $t(95) = 2.57$ ,  $p < 0.05$ ,  $ES = 0.25$ . There was no significant association between reductions in physical aggression and depressive symptoms.

Means and standard deviations for relationship satisfaction and investment factors are presented in Tables 16 and 17. Relationship satisfaction and perceived relationship alternatives were unaffected by changes in physical aggression. Reductions in physical aggression did predict enhancement in perceived relationship investment, however,  $B = 0.10$ ,  $SE = 0.05$ ,  $t(185) = 2.05$ ,  $p < 0.05$ ,  $ES = 0.15$ , with no differences across treatment groups. Further, for couples in the treatment condition only, reductions in physical aggression predicted improved beliefs in the future of the relationship,  $B = -0.09$ ,  $SE = 0.04$ ,  $t(185) = 2.05$ ,  $p < 0.05$ ,  $ES = 0.15$ .

### *Relationship Dissolution*

The fourth goal of the current study was to determine if physical aggression, combined with low commitment to the relationship, would cause couples to terminate their relationships. The hypothesis was that couples in the motivational feedback condition who reported continued physical aggression and who were less committed to their relationships would be most likely to eventually dissolve their relationships.

In examining overall rates of relationship dissolution, six couples broke up within three months of the feedback session (three in the motivational feedback condition [12%], three in the brief feedback condition [12%]), one couple in the brief feedback condition broke up three months later (4%), and seven more couples broke up within nine months following the feedback session (four motivational [16%], three brief feedback [12%]). Thus by the end of the study, 28% of the couples in each feedback condition were no longer dating.

Survival analyses were then conducted using Cox regression, which is the most useful method of survival analysis when covariates are included in the model (Tabachnick & Fidell, 2001). First, a basic analysis was conducted in which time to breakup was predicted by feedback condition, and as expected there was no significant effect of condition on relationship dissolution,  $\chi^2(1) = 0.05, p > .05$ . Thus, feedback groups were combined for subsequent survival analyses.

Next, survival analyses were conducted in which levels of physical aggression, measured by the CTS2 (Straus et al., 1996), commitment to the relationship, measured by the IMS (Rusbult et al., 1998), and motivation to change aggressive and conflictual behaviors, measured by the RSCI (Kistenmacher, 2001) were used to predict relationship

dissolution. Commitment was computed from subscales of the IMS as the sum of satisfaction, investment, and beliefs about the future minus perceived alternatives to the relationship. Neither male nor female physical aggression predicted relationship dissolution,  $\chi^2(1) = 0.44, p > .05$ , and  $\chi^2(1) = 0.15, p > .05$ , respectively. Females with low commitment to the relationship were significantly more likely to breakup,  $\chi^2(1) = 8.82, p < .01$ , but commitment was unrelated to relationship dissolution for males,  $\chi^2(1) = 0.47, p > .05$ . In contrast, females' need and want to change their relationship were unrelated to relationship dissolution ( $\chi^2(1) = 2.72, p > .05$ , and  $\chi^2(1) = 3.26, p > .05$  respectively) whereas both males' perceptions of greater need  $\chi^2(1) = 4.17, p < .05$ , and want  $\chi^2(1) = 4.62, p < .05$ , to change the relationship were significantly related to a greater likelihood of relationship dissolution.

Finally, a last set of survival analyses were conducted examining the interaction between physical aggression by one partner and commitment to the relationship by the other partner, with the hypothesis that individuals might be more likely to dissolve their relationships if their partners are more physically aggressive and if the individuals are not as committed to the relationship. Analyses revealed that aggression by the partner did not interact with commitment to the relationship in predicting dissolution for either males,  $\chi^2(1) = 0.22, p > .05$ , or females,  $\chi^2(1) = 1.02, p > .05$ .

#### *Mechanisms of Change in Aggression Reductions*

The fifth goal of this study was to understand the mechanisms of change that lead to reductions in aggression following the motivational intervention. The hypothesis was that reductions in physical and psychological aggression following treatment would be mediated by greater motivation to change aggressive behavior, greater awareness of

normative relationship behavior, and decreased acceptance of aggression. A series of HLM analyses were run with the same three levels (time, individual, couple), using physical and psychological aggression separately as the outcome variables. Each proposed mediator was tested separately using Baron and Kenny's (1986) mediation criteria and analyses were conducted using procedures specific to multilevel data structures, as recommended by Krull and MacKinnon (2001). The hypothesis was that each proposed mechanism would fully or partially mediate the association between the feedback condition and aggression reduction.

*Mediators predicting change in aggression.* First, to test for possible mechanisms of change, each proposed mediator was included as a Level 1 predictor variable in a three-level model with gender as a Level 2 predictor and aggression (mild physical and psychological) as separate outcome variables.

Table 18 shows the significant mechanisms of change for psychological aggression. Reduction in psychological aggression was predicted by reductions in beliefs about the normativeness of male and female psychological aggression (ES = 0.18 and 0.14) and female physical aggression (ES = 0.13), as measured by the POC (Vega & O'Leary, 2007). Reductions were also predicted by decreased acceptance of female physical aggression (ES = 0.13), as measured by the AADS (Slep et al., 2001), and increased need and want to change their conflictual behaviors (ES = 0.31 and 0.21), as measured by the RSCI (Kistenmacher, 2001). Interestingly, couples also reduced their levels of psychological aggression to the degree that they felt less able to change their conflictual behaviors (ES = 0.13) as measured by the RSCI.



Several proposed mechanisms of change were also significantly related to changes in physical aggression (Table 19). Couples were more likely to reduce their rates of physical aggression if they came to believe that male psychological aggression and female physical aggression were less normative behaviors (ES = 0.13 for both), if they became less accepting of female physical aggression (ES = 0.13), and if they were less psychologically aggressive with each other (ES = 0.28).

*Treatment predicting mechanisms of change.* Second, feedback condition was examined as a predictor of change for each potential mediator. Means and standard deviations, as well as HLM analyses, are presented separately for motivation to change aggressive behavior (Tables 20 and 21), beliefs about normative relationship behavior (Tables 22 and 23), acceptance of psychological aggression (Tables 11 and 12), and acceptance of physical aggression (Tables 13 and 14).

Only one proposed mechanism of change was significantly related to feedback condition. Couples in the motivational feedback condition were more likely to reduce their acceptance of female psychological aggression (ES = 0.10) and there was a gender effect such that males were less likely to reduce their acceptance compared to females (ES = 0.11). As reported above, however, acceptance of female psychological aggression was unrelated to actual rates of either physical or psychological aggression, so there were no direct mediation models to be tested using Baron and Kenny's (1986) criteria.

Exploratory analyses suggested that decreased acceptance of female psychological aggression was related to several other mechanisms of change, including reductions in perceptions of the normativeness of psychological aggression in males,  $B = 0.60$ ,  $SE = 0.24$ ,  $t(371) = 2.50$ ,  $p < .05$ , ES = 0.12, and physical aggression in females,  $B =$

= 0.72,  $SE = 0.17$ ,  $t(371) = 4.27$ ,  $p < .001$ ,  $ES = 0.21$ , and the justifiability of physically aggressive acts for both males,  $B = 0.13$ ,  $SE = 0.04$ ,  $t(372) = 3.43$ ,  $p < .01$ ,  $ES = 0.17$ , and females,  $B = 0.17$ ,  $SE = 0.06$ ,  $t(372) = 2.78$ ,  $p < .01$ ,  $ES = 0.14$ . Hence, changes in the acceptance of psychological aggression may serve as a mediator of the link between feedback condition and other proposed mechanisms of change (see Figure 2).

### *Therapist Effects*

The sixth and final goal of the study was to examine how therapist behaviors affecting related to treatment outcomes. A final series of HLM analyses explored therapist behaviors as predictors of reductions in mild physical aggression. For these analyses, only couples in the motivational feedback condition were included in order to determine how therapist behaviors during the motivational intervention influenced change in physical aggression.

Couples were more likely to reduce their physical aggression following motivational feedback if the therapist was higher in global empathy,  $B = -0.12$ ,  $SE = 0.06$ ,  $t(148) = 1.95$ ,  $p = .05$ , and if the therapist demonstrated a higher reflection to question ratio,  $B = -0.14$ ,  $SE = 0.06$ ,  $t(148) = 2.45$ ,  $p < .05$ . In contrast, couples were less likely to reduce their rates of physical aggression following treatment if the therapist used more closed questions,  $B = 0.01$ ,  $SE = 0.00$ ,  $t(148) = 2.87$ ,  $p < .01$ . No other therapist behaviors significantly predicted treatment outcome.

### *Summary*

Overall, the motivational feedback intervention resulted in significant reductions in mild physical aggression, harmful alcohol use, and acceptance of female psychological aggression compared to the brief feedback condition. There was no significant effect for

severe physical aggression, psychological aggression, stress, conflict patterns, or acceptance of physical aggression or male psychological aggression. Reductions in physical aggression were predicted by reductions in psychological aggression as well as reduced acceptance of male and female psychological aggression.

Reduction in physical aggression predicted improved investment in the relationship across treatment conditions, and was also related to less anxiety and greater optimism about the future of the relationship for couples in the treatment condition only. Levels of physical aggression did not predict relationship dissolution, but lower commitment to the relationship by females and higher motivation to change by males did predict relationship dissolution. There was no significant interaction between commitment levels and physical aggression in predicting relationship dissolution.

Across feedback conditions, reductions in psychological and physical aggression were predicted by reductions in beliefs about the normativeness of male psychological aggression and female physical aggression, decreased acceptance of female physical aggression. Further, reductions in psychological aggression were predicted by decreased beliefs in the normativeness of female psychological aggression, increased need and want to change aggressive and conflictual behavior, and decreased beliefs about the ability to change. There were no significant direct mediations between feedback condition and changes in aggression using these potential mechanisms of change, although reductions in the acceptability of psychological aggression by both males and females seemed to serve as a link between feedback condition and other mechanisms.

Finally, motivational feedback sessions in which therapists were higher in global empathy, had a higher reflection to question ratio, and used less closed questions predicted greater reductions in physical aggression.

## Discussion

The primary hypothesis of the current study, which postulated that the motivational feedback intervention would lead to reductions in physical aggression, was supported. The motivational intervention did significantly reduce mild forms of physical aggression for both males and females, with an effect size nearing the medium range as specified by Cohen (1988). Many partner aggression prevention studies have failed to document actual changes in behavior following the interventions (O'Leary et al., 2006), and thus the current finding suggests that preventative interventions for partner aggression can influence behaviors rather than just attitudes towards partner aggression.

Wilson et al. (2001) reported that the average effect size across a range of targeted prevention programs for young adults in school settings was  $r = .10$ , a small effect by Cohen's (1988) standards. The effect size of  $r = .27$  for physical aggression reduction in the current study is quite substantial given the brief two-hour duration of the motivational intervention, and suggests that interventions providing individualized feedback combined with a motivational interviewing format might be an efficient and cost-effective alternative to the multi-session psychoeducational format currently favored for universal aggression prevention (O'Leary et al., 2006).

Notably, females reduced their physical aggression at a greater rate than males following the motivational feedback condition, although both genders reduced their aggressive behaviors significantly following the intervention. These gender differences can be explained at least in part by the fact that females were significantly more aggressive than males before treatment, as is typical for college dating couples (e.g., Straus et al., 1996), and hence had greater potentials for aggression reduction.

#### *Changing Situational Risk-Factors: Impact of the Motivational Intervention*

The hypothesis that situational risk-factors for partner aggression would also be affected by the motivational feedback intervention received partial support. The intervention was successful in reducing rates of harmful alcohol use and also reduced the perceived acceptance of female psychological aggression, particularly for the female participants in the study. The intervention did not, however, affect rates of psychological aggression, stress, conflict patterns, or perhaps most surprisingly the acceptance of physical aggression. There may be several factors that account for the failure of the motivational feedback intervention to change these risk factors, despite the fact that all risk factors were specifically targeted as part of the motivational intervention.

In terms of psychological aggression and overall stress levels, all couples reported significant reductions across time regardless of treatment condition. It may be that other factors, such as repeated questionnaire administrations, sensitized couples and caused them to naturally become less psychologically aggressive with each other over time. In the case of stress levels, many couples may have naturally experienced less stress after events such as final exams were completed.

The failure of the intervention to improve rates of constructive communication behaviors or to decrease rates of demand-withdraw behaviors, despite considerable focus on these behaviors during the motivational feedback session, was somewhat surprising. It could be that couples did not possess the skills necessary to be able to communicate differently with each other, and possibly the informational packet which was handed out after the feedback session was not detailed enough to assist them. Despite no significant changes in communication styles, the findings from this study indicate that couples were able to reduce their rates of physical aggression even in the face of demand-withdraw behaviors, which have been shown in previous studies to place couples at high-risk for physical aggression (Berns et al., 1999).

The lack of change in acceptance of physical aggression following the motivational feedback condition is also surprising, as is the fact that there was no change despite reductions in actual aggressive behaviors. The instrument used to assess acceptance of physical aggression, the AADS (Slep et al., 2001), was first created and normed on high school students, and thus may be developmentally inappropriate for this college cohort. Alternatively, it may be that physical aggression is becoming less socially acceptable in society as a whole, and thus there may have been a floor effect operating for acceptance of male physical aggression in particular.

#### *Changing Situational Risk-Factors: Implications for Aggression Prevention*

Although the motivational intervention successfully reduced rates of harmful alcohol use, this reduction was not significantly related to reductions in physical aggression. This is a surprising finding given the well-established link between alcohol use and physical aggression (e.g., Leonard & Senchak, 1996), but may be explained by

the relatively low-risk drinking behaviors of most couples in the current study. There is now mounting evidence that the link between alcohol use and physical aggression is far stronger in clinic samples with high rates of drinking compared to community samples (e.g., Foran & O'Leary, 2007). Hence, targeting harmful alcohol use might not be an essential component of partner aggression prevention programs, but may still be important in a more global effort to reduce high-risk behaviors in young adults. Further, the substantial treatment effect size for alcohol use reductions in the current study ( $r = .33$ ; medium effect) corresponds well with previous findings that motivational interviewing is quite effective in reducing risky drinking behaviors in young adults (e.g., Marlatt et al., 1998).

In contrast to alcohol reductions, reductions in psychological aggression were robustly related to reductions in physical aggression ( $r = .33$ ; medium effect). This finding is in line with the well-established link between psychological and physical aggression in couples (e.g., O'Leary & Slep, 2003) and reinforces the need to target psychologically aggressive behaviors as a way to prevent physical aggression (e.g., O'Leary, 1999b). Unfortunately, the current motivational intervention did not demonstrate a significant ability to reduce psychological aggression, but again that may be because all couples, regardless of treatment condition, reduced their rates of psychological aggression substantially over time ( $r = .47$ ; medium effect size).

Given the aforementioned link between psychological and physical aggression reductions, it was not surprising that reductions in the acceptability of male and female psychological aggression also predicted physical aggression reductions over time. Further, since the acceptability of female psychological aggression was significantly

reduced by the motivational intervention, particularly for female participants, this may be the way in which the motivational intervention most clearly had its effect on attitudinal factors related to psychological and physical aggression (see Figure 2).

### *Benefits of Reducing Physical Aggression in Dating Relationships*

One of the central goals of motivational interviewing is to help individuals identify their own reasons for behavior change based on their values and priorities, and in the case of partner aggression these goals often center on the effects of aggression to the individual and the relationship. Results of the current study suggest that individuals and couples do in fact benefit from reducing aggression in their relationships, as would be expected from cross-sectional and longitudinal work on the links between physical aggression and poor relationship and individual functioning (e.g., Rogge & Bradbury, 1999; Cascardi et al., 1999).

Relationship satisfaction per se was unaffected by changes in physical aggression, possibly because most couples in the current study were already quite satisfied with their relationships and were in fact over a full standard deviation on average above the general cutoff for relationship distress (Eddy et al., 1991). Reductions in physical aggression did however predict couples' report of greater investment in their relationships, regardless of treatment condition, hinting that couples may have been more likely to devote resources to their relationships as physical aggression became less frequent. Also, couples in the treatment condition who reduced their physical aggression over time became more hopeful about the future of their relationships and reported experiencing less anxiety in general, suggesting that the motivational feedback may have sensitized them to be particularly reassured by improvements in aggressive behaviors within their relationships.



### *Understanding Relationship Dissolution in Aggressive Dating Couples*

Over a quarter of all couples in the current study dissolved their relationships by the end of the nine month follow-up period, which is substantially less than the 50% dissolution rate reported by a previous longitudinal study on college dating couples in physically aggressive relationships (Avery-Leaf, 1997). The dissolution rate may be lower in the current study because both members of the couple were required to participate, possibly selecting for more committed couples, as opposed to the Avery-Leaf study in which only females were required to participate.

Low female commitment to the relationship predicted relationship dissolution, which is a finding similar to several previous studies using Rusbult's (1983) investment model to predict relationship dissolution in physically aggressive couples (Avery-Leaf, 1997; Choice & Lamke, 1999; Rusbult & Martz, 1995). In the current study, male commitment was not predictive, however male motivation to change conflictual and aggressive behavior was. This might suggest that males decide to terminate their relationships as a method of "action" once the motivation to make change has coalesced.

Levels of physical aggression did not predict relationship dissolution, in contrast to a longitudinal study on newlyweds conducted by Rogge and Bradbury (1999) in which physical aggression in the first years of marriage predicted early relationship dissolution. It may be that couples in the current study were not followed up for sufficiently long enough periods of time to capture the effects of ongoing aggression on relationship dissolution.

### *Understanding how Motivational Interviewing Works*

Despite the accumulating evidence regarding the effectiveness of prevention and treatment approaches based on motivational interviewing techniques (Miller, 2000b), little is known about the ways in which such interventions facilitate behavior change (Miller & Rollnick, 2002). The current study hypothesized that the motivational feedback condition would exert its effect through changes in attitudinal factors, including beliefs about the acceptability of aggression, normativeness of aggression, and motivation to change aggressive behavior. Little evidence was found for direct mediations based on these factors, as participation in the motivational feedback condition did not seem to directly affect most attitudinal factors. There was some evidence that the intervention might have exerted its effect through reductions in the acceptability of female psychological aggression, which was then related to reductions in beliefs about the normativeness and acceptability of physical aggression (see Figure 2).

Overall, however, evidence from the current study suggests that the most parsimonious mechanisms of change for motivational interviewing remain somewhat elusive. Miller (2000a) has suggested that motivational interviewing may operate through a process of "joining up" with an individual in a collaborative manner that is respectful of autonomy and individual choice. Consistent with this conceptualization, the current study demonstrated that therapist behaviors consistent with the philosophy of motivational interviewing were predictive of treatment outcome. Specifically, high global empathy and an emphasis on reflections instead of questions predicted significant reductions in physical aggression following the intervention. Further, higher levels of closed-ended questions actually predicted less reduction in physical aggression. Thus, these findings

are consistent with previous studies documenting the necessity of an empathic, non-confrontational therapeutic style in promoting behavior change during motivational interventions (Miller et al., 2001). More studies are required, however, to fully understand why these behaviors are so essential in the promotion of behavior change.

### *Strengths and Limitations*

A primary strength of this study is the combination of a dyadic and individualized nature in the motivational feedback interventions. No previous dating violence prevention study to date has attempted to intervene with both partners simultaneously to promote mutual aggression reductions, even though dating aggression is known to be highly correlated between partners (O'Leary & Slep, 2003). Further, including both partners in the study allowed for greater accuracy in reports of partner aggression, as individuals tend to underreport their own aggression more so than they do for their partners (Heyman & Schlee, 1997). The current study also allowed therapists to spend substantial time individually with each partner to ascertain and enhance each partner's own reasons for behavior change, a component that is considered essential to the core theoretical foundation of motivational interviewing (Miller & Rollnick, 2002).

As the current study was the first targeted prevention for partner aggression to utilize a motivational feedback format, the control condition selected was intentionally rather weak. The brief feedback condition was shorter in duration than the motivational feedback condition and did not control for exposure to written feedback about aggressive behaviors. Now that preliminary efficacy for motivational interviewing with aggressive dating couples has been established, future studies should employ control conditions of

greater equivalency, such as written feedback only or time-equivalent psychoeducational interventions targeting physical aggression and risk-factors for aggression.

Another limitation of the current study is the relatively homogenous sample. Although the participants in this study were markedly heterogeneous in terms of race and ethnicity, they were also mainly well-educated college students from middle-class backgrounds. Motivational interviewing is considered to be a useful technique when working with individuals from different backgrounds (Miller & Rollnick, 2002), however there was some evidence that Hispanic individuals in the current study benefited less from the motivational feedback procedures than non-Hispanic individuals. Future studies are needed to examine the generalizability of motivational interviewing in terms of issues such as age, socioeconomic status, educational level, degree of acculturation, and stage of relationship (e.g., dating, engaged, married, transition to parenthood).

#### *Future Research Directions*

The current study is preliminary in nature, and further investigation is required to more fully understand the ways in which motivational interviewing might be most successfully implemented as a targeted prevention approach for physically aggressive couples. Questions remain as to how motivational interviewing would fare against more established psychoeducational programs to prevent partner aggression, how motivational interviewing would operate with younger and older populations, and how these procedures might be successfully extended or incorporated into existing treatment services such as campus counseling centers and premarital education activities.

At a more theoretical level, findings from the current study present intriguing possibilities as to the active ingredients in motivational interviewing. There is still much

work to be done in understanding how and why such a relatively brief treatment program can exert such a substantial and long-lasting effect on behavior (Miller, 2000b). One potential avenue to explore is the influence of motivational statements made by the therapist during the motivational intervention in eliciting greater statements of motivation by the client, and then how these client self-motivational statements relate to treatment outcome.

### *Conclusions*

The current study provides encouraging evidence that individualized feedback delivered in a motivational interviewing framework is an effective and efficient targeted prevention tool for physically aggressive dating couples. Not only did the motivational intervention reduce rates of physical aggression and harmful alcohol use, but also improved indices of dyadic and individual well-being. Finally, an empathic and eliciting therapeutic style proved most effective in facilitating aggression reductions.

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Table 1

*Questionnaire Administration at Each Time Point*

Construct	Measure	Screen	Pre	Post	Follow-Ups
Demographics		X	X		
Dating Status					X
Partner Aggression	CTS2	X	X		X
Conflict Patterns	CPQ		X		X
Fear of Partner	FPS		X		
Acceptance of Psychological Aggression	JVCT		X	X	X
Acceptance of Physical Aggression	AADS		X	X	X
Norms for Relationship Behavior	POC		X	X	X
Motivation to Change	RSCI		X	X	X
Relationship Satisfaction	DAS	X	X	X	X
Relationship Investment	IMS		X	X	X
Alcohol Use	AUDIT		X		X
Stress	LES		X		X
Depression	BDI-II		X		X
Anxiety	BAI		X		X

Table 2

*Inter-rater Reliability for the MITI Coding System*

MITI Code	Interview	
	Female	Male
Empathy	0.74	0.69
MI Spirit	0.55	0.51
Giving Information	0.92	0.93
MI Adherent	0.92	0.93
MI Non-Adherent	0.86	0.90
Closed-Ended Questions	0.85	0.90
Open-Ended Questions	0.92	0.91
Simple Reflections	0.92	0.91
Complex Reflections	0.84	0.69

*Note.* Numbers represent intra-class correlation coefficients.

Table 3

*Percentage of Therapist Behaviors across Treatment Conditions*

MITI Code	Interview		
	Treatment	Control	<i>t</i>
Giving Information	17%	41%	16.10***
Closed-Ended Questions	11%	17%	3.71***
Open-Ended Questions	22%	18%	2.52*
Simple Reflections	31%	15%	10.63***
Complex Reflections	13%	3%	7.94***

*Note.* Therapist behaviors as a percentage of the total number of therapist behaviors observed.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 4

*Therapist Behaviors in the Current Study Compared to Pre-Established Thresholds for Minimum Competency*

Skill	Threshold	
	Recommended	Current Study
Reflections : Questions	1 : 1	1 : 1.59
% Open-Ended Questions	50%	66%
% Complex Reflections	40%	29%
% MI Adherent	90%	99%

Table 5

*Psychological and Physical Aggression over Time*

		Pre-Treatment		3-Months Post		6-Months Post		9-Months Post	
		<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>
Psychological Aggression (CTS2)									
MI	M	27.68	(22.17)	17.94	(16.28)	12.56	(12.90)	17.77	(17.54)
	F	39.08	(30.02)	23.56	(20.90)	19.95	(20.07)	24.71	(28.16)
CON	M	22.20	(18.07)	13.89	(15.55)	9.62	(9.47)	12.33	(13.22)
	F	25.84	(19.23)	14.95	(17.98)	12.00	(12.26)	13.91	(15.96)
Mild Physical Aggression (CTS2)									
MI	M	6.96	(8.73)	4.32	(6.99)	4.06	(6.73)	3.08	(5.22)
	F	11.40	(11.54)	6.68	(12.84)	5.26	(7.89)	3.14	(4.54)
CON	M	4.68	(7.53)	2.26	(5.81)	3.48	(7.97)	1.89	(4.94)
	F	5.88	(7.55)	4.25	(9.00)	3.32	(7.62)	2.82	(4.09)
Severe Physical Aggression (CTS2)									
MI	M	0.56	(1.08)	0.78	(1.56)	0.56	(1.29)	0.23	(0.44)
	F	1.88	(3.44)	1.83	(3.20)	1.32	(2.14)	1.86	(3.39)
CON	M	0.36	(0.76)	0.11	(0.46)	0.24	(0.89)	0.00	(0.00)
	F	1.12	(2.71)	0.50	(2.24)	0.27	(0.94)	0.09	(0.30)

*Note.* CTS2 = Conflict Tactics Scales, Revised; MI = Motivational interviewing; CON = Control; M = male; F = female.



Table 6

*Hierarchical Linear Modeling for Psychological and Physical Aggression as Outcomes*

Outcome	Intercept (Pre-Treatment)				Slope (Change over Time)			
	B	SE	<i>t</i>	ES	B	SE	<i>t</i>	ES
Psychological Aggression (CTS2)								
Time	24.56	3.43	7.16***	0.71	-0.42	0.11	3.72**	0.47
Gender (G)	-2.80	2.46	1.14	0.11	0.05	0.08	0.60	0.03
Treatment (T)	11.30	6.55	1.73	0.24	-0.09	0.21	0.44	0.06
G x T	-7.18	4.53	1.59	0.16	0.05	0.14	0.36	0.02
Mild Physical Aggression (CTS2)								
Time	5.75	1.65	3.49**	0.44	-0.09	0.04	2.06*	0.28
Gender (G)	-1.34	0.58	2.32*	0.46	0.02	0.02	0.64	0.07
Treatment (T)	5.07	2.91	1.74	0.24	-0.15	0.07	2.02*	0.27
G x T	-2.98	1.55	1.91	0.19	0.10	0.05	2.11*	0.12
Severe Physical Aggression (CTS2)								
Time	1.06	0.56	1.90	0.26	-0.03	0.02	1.96	0.26
Gender (G)	-0.75	0.45	1.66	0.23	0.03	0.01	2.04*	0.28
Treatment (T)	0.75	0.80	0.94	0.13	0.02	0.03	0.58	0.08
G x T	-0.37	0.62	0.60	0.08	-0.02	0.02	0.82	0.12

*Note.* B = fixed-effect regression coefficient; SE = standard error; ES = unadjusted effect

size  $r$ , calculated as  $\sqrt{t^2/(t^2 + df)}$ ; CTS2 = Conflict Tactics Scales, Revised.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 7

*Harmful Drinking and Negative Life Events over Time*

		Pre-Treatment		3-Months Post		6-Months Post		9-Months Post	
		<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>
Harmful Alcohol Consumption (AUDIT)									
MI	M	5.72	(3.88)	5.80	(3.30)	5.64	(4.20)	7.00	(4.32)
	F	5.36	(4.92)	4.90	(5.08)	3.50	(3.44)	4.50	(4.37)
CON	M	4.40	(3.33)	5.15	(4.83)	4.23	(4.46)	2.30	(3.13)
	F	3.56	(3.96)	3.05	(2.86)	3.94	(4.39)	3.64	(4.01)
Impact of Negative Life Events (LES)									
MI	M	7.20	(5.61)	6.06	(5.23)	7.21	(7.43)	8.50	(9.85)
	F	9.36	(7.11)	5.32	(4.74)	7.95	(7.11)	4.72	(5.63)
CON	M	6.56	(6.17)	3.57	(4.15)	4.46	(5.55)	4.20	(6.60)
	F	11.08	(7.04)	4.65	(4.40)	7.37	(4.87)	6.64	(6.67)

*Note.* AUDIT = Alcohol Use Disorders Identification Test; LES = Life Events Survey;

MI = Motivational interviewing; CON = Control; M = male; F = female.

Table 8

*Hierarchical Linear Modeling Results for Harmful Alcohol Consumption and Negative Life Events*

Outcome	Intercept (Pre-Treatment)				Slope (Change over Time)			
	B	SE	<i>t</i>	ES	B	SE	<i>t</i>	ES
<b>Harmful Alcohol Consumption (AUDIT)</b>								
Time	3.45	0.70	4.92***	0.57	0.02	0.02	1.40	0.19
Gender (G)	1.17	0.58	2.00*	0.20	-0.02	0.02	1.06	0.15
Treatment (T)	1.99	1.21	1.64	0.23	-0.06	0.02	2.48*	0.33
G x T	-0.90	1.15	0.78	0.08	0.05	0.04	1.31	0.18
<b>Impact of Negative Life Events (LES)</b>								
Time	9.86	1.36	7.23***	0.71	-0.13	0.06	2.17*	0.29
Gender (G)	-3.62	1.75	2.07*	0.12	0.07	0.06	1.21	0.17
Treatment (T)	-1.13	1.83	0.62	0.09	0.03	0.08	0.33	0.05
G x T	1.85	2.04	0.91	0.05	0.04	0.10	0.39	0.06

*Note.* B = fixed-effect regression coefficient; SE = standard error; ES = unadjusted effect size *r*, calculated as  $\sqrt{t^2/(t^2 + df)}$ ; AUDIT = Alcohol Use Disorders Identification Test; LES = Life Events Survey.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 9

*Conflict Behaviors over Time*

		Pre-Treatment		3-Months Post		6-Months Post		9-Months Post	
		<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>
Constructive Communication (CPQ)									
MI	M	21.92	(3.94)	22.20	(3.95)	20.15	(5.41)	17.22	(6.82)
	F	22.64	(3.59)	22.79	(3.82)	21.18	(5.02)	20.93	(5.61)
CON	M	22.24	(5.11)	21.64	(4.91)	18.55	(7.09)	21.63	(8.05)
	F	21.78	(3.28)	21.85	(3.94)	21.72	(4.90)	22.56	(4.56)
Self Demands, Partner Withdraws (CPQ)									
MI	M	15.48	(5.29)	14.40	(5.62)	16.31	(8.39)	13.78	(7.19)
	F	12.56	(3.69)	12.89	(5.00)	11.47	(4.08)	13.50	(6.48)
CON	M	14.88	(5.13)	14.82	(6.84)	11.27	(8.03)	11.25	(6.67)
	F	12.96	(4.88)	11.45	(5.30)	9.89	(4.71)	11.00	(4.90)
Partner Demands, Self Withdraws (CPQ)									
MI	M	13.60	(3.92)	15.07	(5.42)	13.85	(6.84)	12.11	(5.26)
	F	16.16	(4.63)	14.89	(4.70)	13.94	(5.96)	14.71	(4.45)
CON	M	11.56	(4.19)	12.55	(5.56)	10.91	(6.98)	9.38	(5.13)
	F	14.44	(4.95)	12.45	(5.00)	11.06	(6.41)	11.89	(4.91)

*Note.* CPQ = Conflict Patterns Questionnaire; MI = Motivational interviewing; CON = Control; M = male; F = female.

Table 10

*Hierarchical Linear Modeling for Conflict Behaviors as Outcomes*

Outcome	Intercept (Pre-Treatment)				Slope (Change over Time)			
	B	SE	<i>t</i>	ES	B	SE	<i>t</i>	ES
Constructive Communication (CPQ)								
Time	21.96	0.63	35.02***	0.98	-0.01	0.03	0.17	0.01
Gender (G)	0.34	0.81	0.42	0.04	-0.06	0.04	1.35	0.08
Treatment (T)	0.80	0.91	0.87	0.12	-0.04	0.04	1.04	0.06
G x T	-0.79	1.04	0.76	0.08	0.01	0.06	0.24	0.01
Self Demands, Partner Withdraws (CPQ)								
Time	12.67	1.00	12.72***	0.87	-0.06	0.04	1.70	0.10
Gender (G)	2.37	1.09	2.16*	0.29	0.01	0.07	0.21	0.01
Treatment (T)	-0.13	1.20	0.11	0.02	0.06	0.05	1.24	0.07
G x T	0.79	1.65	0.48	0.23	-0.02	0.09	0.23	0.01
Partner Demands, Self Withdraws (CPQ)								
Time	14.05	0.93	15.04***	0.91	-0.06	0.04	1.73	0.17
Gender (G)	-2.24	1.08	2.07*	0.20	0.05	0.05	1.06	0.11
Treatment (T)	1.87	1.27	1.47	0.20	0.03	0.05	0.65	0.06
G x T	0.63	1.48	0.43	0.04	-0.04	0.07	0.63	0.06

*Note.* B = fixed-effect regression coefficient; SE = standard error; ES = unadjusted effect size  $r$ , calculated as  $\sqrt{t^2/(t^2 + df)}$ ; CPQ = Conflict Patterns Questionnaire.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 11

*Acceptance of Psychological Aggression over Time*

		Pre-Treatment		Post-Treatment		3-Months Post		6-Months Post		9-Months Post	
		<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>
<b>Acceptance of Male Psychological Aggression (JVCT)</b>											
MI	M	21.52	(5.67)	20.80	(5.26)	22.38	(6.39)	22.36	(5.93)	23.30	(5.48)
	F	22.56	(4.95)	20.16	(4.67)	19.55	(4.55)	19.10	(5.47)	18.50	(6.70)
CON	M	21.88	(4.69)	20.60	(4.55)	23.07	(5.41)	19.77	(5.54)	20.20	(5.87)
	F	22.25	(4.87)	19.24	(4.14)	18.85	(4.34)	21.21	(5.39)	19.64	(7.31)
<b>Acceptance of Female Psychological Aggression (JVCT)</b>											
MI	M	22.40	(5.87)	22.20	(5.90)	24.25	(7.34)	24.14	(6.60)	28.90	(9.86)
	F	24.92	(6.50)	21.80	(4.45)	21.77	(4.46)	20.75	(6.02)	20.33	(5.62)
CON	M	23.03	(5.13)	20.96	(4.73)	23.71	(5.66)	20.23	(5.85)	24.50	(10.51)
	F	24.17	(5.89)	20.48	(4.25)	20.65	(4.32)	22.84	(5.85)	22.36	(6.96)

*Note.* JVCT = Justification of Verbal/Coercive Tactics Scale; MI = Motivational interviewing; CON = Control; M = male; F = female.

Table 12

*Hierarchical Linear Modeling for Acceptance of Male and Female Psychological**Aggression as Outcomes*

Outcome	Intercept (Pre-Treatment)				Slope (Change over Time)			
	B	SE	t	ES	B	SE	t	ES
Acceptance of Male Psychological Aggression (JVCT)								
Time	20.50	0.81	25.46***	0.96	-0.01	0.03	0.26	0.04
Gender (G)	0.99	1.17	0.85	0.12	-0.02	0.04	0.37	0.02
Treatment (T)	0.80	1.06	0.75	0.11	-0.07	0.05	1.45	0.20
G x T	-0.96	1.66	0.58	0.08	0.15	0.06	2.43*	0.12
Acceptance of Female Psychological Aggression (JVCT)								
Time	21.96	0.89	24.55***	0.96	0.01	0.04	0.15	0.02
Gender (G)	0.00	1.27	1.16	0.00	0.03	0.06	0.50	0.03
Treatment (T)	1.44	1.24	0.00	0.16	-0.09	0.05	1.98*	0.10
G x T	-1.17	1.85	0.63	0.09	0.18	0.08	2.23*	0.11

*Note.* B = fixed-effect regression coefficient; SE = standard error; ES = unadjusted effect size  $r$ , calculated as  $\sqrt{t^2/(t^2 + df)}$ ; JVCT = Justification of Verbal/Coercive Tactics Scale.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 13

*Acceptance of Physical Aggression over Time*

		Pre-Treatment		Post-Treatment		3-Months Post		6-Months Post		9-Months Post	
		<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>
Acceptance of Male Physical Aggression (AADS)											
MI	M	9.52	(3.75)	8.96	(3.49)	10.80	(5.06)	10.36	(6.21)	11.10	(5.97)
	F	10.12	(3.17)	9.64	(3.09)	8.80	(3.02)	9.30	(3.16)	8.83	(3.40)
CON	M	9.21	(3.39)	9.04	(3.10)	10.08	(3.75)	10.46	(4.45)	10.30	(5.44)
	F	9.13	(3.04)	8.96	(3.62)	8.74	(3.02)	8.83	(3.79)	8.55	(3.24)
Acceptance of Female Physical Aggression (AADS)											
MI	M	16.40	(4.21)	15.64	(5.02)	16.33	(3.52)	15.36	(4.89)	15.20	(6.22)
	F	18.28	(4.20)	16.56	(4.75)	15.00	(4.85)	13.70	(4.86)	14.50	(5.80)
CON	M	17.46	(5.84)	17.36	(5.31)	15.69	(6.30)	16.38	(4.84)	15.90	(5.51)
	F	16.50	(3.96)	16.16	(5.15)	15.32	(5.47)	15.50	(5.87)	14.82	(6.52)

*Note.* AADS = Attitudes about Aggression in Dating Relationships Scale; MI = Motivational interviewing; CON = Control; M = male;

F = female.



Table 14

*Hierarchical Linear Modeling for Acceptance of Male and Female Physical Aggression as Outcomes*

Outcome	Intercept (Pre-Treatment)				Slope (Change over Time)			
	B	SE	<i>t</i>	ES	B	SE	<i>t</i>	ES
Justification of Physical Aggression by Males (AADS)								
Time	8.91	0.60	14.81***	0.90	0.01	0.02	0.48	0.07
Gender (G)	0.17	0.78	0.22	0.02	0.04	0.03	1.30	0.18
Treatment (T)	0.89	0.81	1.10	0.15	-0.04	0.03	1.59	0.22
G x T	-0.67	1.10	0.61	0.06	0.05	0.05	0.93	0.13
Justification of Physical Aggression by Females (AADS)								
Time	16.23	0.88	18.49***	0.93	-0.03	0.03	0.81	0.11
Gender (G)	1.11	1.30	0.85	0.12	0.00	0.04	0.02	0.00
Treatment (T)	1.08	1.17	0.92	0.13	-0.06	0.04	1.45	0.20
G x T	-2.37	1.55	1.53	0.21	0.08	0.06	1.25	0.03

*Note.* B = fixed-effect regression coefficient; SE = standard error; ES = unadjusted effect size *r*, calculated as  $\sqrt{t^2/(t^2 + df)}$ ; AADS = Attitudes about Aggression in Dating Relationships Scale.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 15

*Anxiety and Depression over Time*

		Pre-Treatment		3-Months Post		6-Months Post		9-Months Post	
		<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>
Anxiety (BAI)									
MI	M	8.80	(6.37)	4.38	(3.91)	6.29	(7.82)	4.20	(5.88)
	F	13.56	(11.13)	7.81	(9.12)	7.65	(8.77)	8.50	(9.93)
CON	M	5.40	(3.55)	7.29	(7.44)	4.92	(4.39)	3.90	(4.65)
	F	13.16	(10.58)	8.70	(7.66)	8.00	(8.35)	9.18	(10.16)
Depression (BDI)									
MI	M	6.28	(4.52)	3.75	(4.11)	5.14	(7.25)	6.40	(8.75)
	F	8.64	(6.32)	7.38	(5.38)	8.35	(8.78)	8.72	(10.57)
CON	M	5.92	(3.99)	5.50	(4.29)	7.23	(6.00)	5.10	(6.10)
	F	12.04	(6.59)	7.32	(5.07)	10.32	(6.67)	11.27	(9.07)

*Note.* BAI = Beck Anxiety Inventory; BDI = Beck Depression Inventory; MI = Motivational interviewing; CON = Control; M = male; F = female.

Table 16

*Relationship Satisfaction over Time*

		Pre-Treatment		Post-Treatment		3-Months Post		6-Months Post		9-Months Post	
		<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>
Relationship Satisfaction (DAS)											
MI	M	115.68	(11.44)	119.58	(10.87)	117.60	(13.26)	112.85	(20.03)	109.89	(17.86)
	F	113.96	(9.78)	117.56	(10.00)	114.00	(16.18)	116.82	(12.67)	111.86	(17.32)
CON	M	117.16	(11.47)	121.48	(9.85)	118.17	(9.83)	119.64	(15.88)	120.38	(12.39)
	F	113.67	(11.79)	118.59	(11.73)	118.35	(14.95)	117.33	(19.55)	117.67	(18.92)
Relationship Satisfaction (IMS)											
MI	M	56.88	(7.65)	56.84	(7.31)	57.00	(8.50)	50.62	(14.49)	50.67	(16.22)
	F	55.72	(5.77)	56.24	(6.93)	54.47	(10.12)	54.53	(10.25)	52.29	(10.92)
CON	M	57.44	(6.43)	57.88	(8.54)	56.50	(8.65)	55.00	(11.61)	57.50	(8.07)
	F	56.64	(6.81)	57.44	(6.01)	58.90	(8.12)	54.22	(12.35)	55.44	(14.36)

*Note.* DAS = Dyadic Adjustment Scale; IMS = Investment Model Scale; MI = Motivational interviewing; CON = Control; M = male;

F = female.

Table 17

*Relationship Investment over Time*

		Pre-Treatment		Post-Treatment		3-Months Post		6-Months Post		9-Months Post	
		<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>
Relationship Investment (IMS)											
MI	M	51.44	(9.78)	54.12	(8.12)	56.00	(7.27)	56.00	(6.61)	55.67	(10.82)
	F	50.20	(8.07)	50.60	(8.31)	55.21	(7.86)	54.59	(11.29)	50.64	(14.68)
CON	M	54.16	(6.91)	56.24	(5.72)	55.55	(10.89)	53.64	(10.49)	59.38	(6.12)
	F	48.48	(7.53)	51.28	(7.20)	53.05	(8.94)	50.78	(10.65)	50.89	(11.08)
Relationship Alternatives (IMS)											
MI	M	23.68	(10.94)	22.40	(10.94)	24.07	(9.16)	34.92	(17.24)	31.67	(18.98)
	F	30.72	(10.15)	28.68	(10.82)	26.84	(12.58)	29.00	(13.80)	27.93	(14.35)
CON	M	24.52	(13.35)	23.52	(12.88)	26.27	(11.47)	25.36	(9.32)	24.63	(8.73)
	F	24.68	(9.28)	23.52	(9.26)	21.80	(9.79)	22.61	(9.83)	26.78	(14.09)

		Pre-Treatment		Post-Treatment		3-Months Post		6-Months Post		9-Months Post	
		<i>M</i>	( <i>SD</i> )	<i>M</i>	( <i>SD</i> )	<i>M</i>	<i>M</i>	( <i>SD</i> )	<i>M</i>	( <i>SD</i> )	<i>M</i>
Relationship Future (IMS)											
MI	M	45.20	(3.79)	45.40	(6.24)	45.47	(8.18)	43.08	(10.29)	45.56	(11.85)
	F	44.32	(7.54)	43.08	(5.97)	45.89	(8.80)	43.18	(9.94)	43.79	(11.20)
CON	M	44.84	(5.48)	46.20	(4.80)	46.45	(8.54)	46.09	(7.29)	47.00	(7.93)
	F	44.84	(7.33)	44.28	(5.18)	44.90	(5.26)	45.22	(8.68)	44.11	(5.90)

*Note.* IMS = Investment Model Scale; MI = Motivational interviewing; CON = Control; M = male; F = female.

Table 18

*Hierarchical Linear Modeling for Proposed Mediators Predicting Psychological**Aggression*

Predictor	Psychological Aggression			
	B	SE	t	ES
Acceptance of Male Psychological Aggression (JVCT)	0.08	0.08	0.98	0.06
Acceptance of Female Psychological Aggression (JVCT)	0.02	0.08	0.24	0.01
Justification of Physical Aggression by Males (AADS)	1.41	0.39	3.63**	0.22
Justification of Physical Aggression by Females (AADS)	0.81	0.34	2.36*	0.14
Norms for Male Psychological Aggression (POC)	0.24	0.08	2.95**	0.18
Norms for Female Psychological Aggression (POC)	0.20	0.09	2.21*	0.14
Norms for Male Physical Aggression (POC)	-0.04	0.04	0.81	0.05
Norms for Female Physical Aggression (POC)	0.19	0.09	2.07*	0.13
Need to Change (RSCI)	0.77	0.15	5.26***	0.31
Want to Change (RSCI)	0.55	0.16	3.46**	0.21
Able to Change (RSCI)	-0.31	0.15	2.09*	0.13

*Note.* B = fixed-effect regression coefficient; SE = standard error; ES = unadjusted effect

size  $r$ , calculated as  $\sqrt{t^2/(t^2 + df)}$ .

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 19

*Hierarchical Linear Modeling for Proposed Mediators Predicting Mild Physical**Aggression*

Predictor	Psychological Aggression			
	B	SE	t	ES
Psychological Aggression (CTS2)	0.16	0.03	5.03***	0.28
Acceptance of Male Psychological Aggression (JVCT)	0.04	0.08	0.48	0.03
Acceptance of Female Psychological Aggression (JVCT)	0.00	0.07	0.03	0.00
Justification of Physical Aggression by Males (AADS)	0.46	0.22	2.07*	0.13
Justification of Physical Aggression by Females (AADS)	0.21	0.12	1.78	0.11
Norms for Male Psychological Aggression (POC)	0.05	0.02	2.10*	0.13
Norms for Female Psychological Aggression (POC)	0.05	0.03	1.54	0.10
Norms for Male Physical Aggression (POC)	0.00	0.03	0.06	0.00
Norms for Female Physical Aggression (POC)	0.06	0.03	2.06*	0.13
Need to Change (RSCI)	0.10	0.07	1.45	0.09
Want to Change (RSCI)	0.06	0.07	0.91	0.06
Able to Change (RSCI)	0.06	0.06	0.48	0.03

*Note.* B = fixed-effect regression coefficient; SE = standard error; ES = unadjusted effect

size  $r$ , calculated as  $\sqrt{t^2/(t^2 + df)}$ .

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 20

*Motivation to Change Conflictual and Aggressive Behavior over Time*

		Pre-Treatment		Post-Treatment		3-Months Post		6-Months Post		9-Months Post	
		<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>
Change Needed (RSCI)											
MI	M	29.57	(12.52)	29.44	(12.48)	28.43	(10.80)	28.54	(11.94)	26.56	(8.89)
	F	30.12	(9.22)	33.00	(10.54)	32.53	(88.89)	33.50	(10.37)	29.43	(11.15)
CON	M	27.40	(10.46)	27.40	(10.94)	24.90	(9.66)	30.00	(6.71)	22.00	(9.56)
	F	31.24	(9.75)	29.52	(9.79)	27.17	(8.76)	31.41	(11.18)	29.78	(11.05)
Change Wanted (RSCI)											
MI	M	29.33	(12.05)	29.44	(12.80)	27.79	(9.36)	29.85	(10.92)	28.67	(10.08)
	F	30.68	(10.70)	34.12	(12.11)	32.76	(9.20)	34.22	(11.33)	31.71	(12.98)
CON	M	27.80	(9.58)	28.56	(11.43)	24.00	(8.34)	31.00	(6.45)	24.63	(10.97)
	F	31.48	(10.09)	29.88	(9.78)	26.94	(8.31)	31.12	(13.51)	29.00	(10.17)



		Pre-Treatment		Post-Treatment		3-Months Post		6-Months Post		9-Months Post	
		<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>
<hr/>											
Able to Change (RSCI)											
MI	M	38.83	(14.70)	40.52	(13.22)	28.21	(11.07)	30.62	(10.69)	31.00	(10.26)
	F	36.04	(11.29)	41.96	(13.87)	33.88	(8.70)	35.11	(9.25)	30.86	(12.22)
CON	M	36.52	(14.12)	35.20	(13.33)	25.90	(9.00)	33.18	(6.01)	25.50	(10.94)
	F	38.76	(11.35)	41.12	(16.01)	29.56	(9.98)	32.53	(11.19)	31.56	(12.20)

*Note.* RSCI = Relationship Self-Check Inventory; MI = Motivational interviewing; CON = Control; M = male; F = female.

Table 21

*Hierarchical Linear Modeling for Motivation to Change Conflictual and Aggressive**Behavior as Outcomes*

Outcome	Intercept (Pre-Treatment)				Slope (Change over Time)			
	B	SE	<i>t</i>	ES	B	SE	<i>t</i>	ES
Change Needed (RSCI)								
Time	29.94	1.67	17.95***	0.93	0.03	0.08	0.41	0.06
Gender (G)	-2.32	1.87	1.24	0.17	-0.04	0.10	0.41	0.06
Treatment (T)	1.84	2.45	0.75	0.11	-0.04	0.10	0.37	0.05
G x T	0.34	2.88	0.12	0.02	0.01	0.16	0.05	0.01
Change Wanted (RSCI)								
Time	30.23	1.77	17.07***	0.92	-0.01	0.08	0.07	0.01
Gender (G)	-2.08	1.79	1.17	.012	0.03	0.09	0.32	0.05
Treatment (T)	2.22	2.72	0.82	0.16	0.01	0.11	0.13	0.02
G x T	-0.77	2.99	0.26	0.04	-0.03	0.15	0.18	0.03
Able to Change (RSCI)								
Time	39.37	2.31	17.07***	0.92	-0.35	0.07	5.30***	0.26
Gender (G)	-3.62	3.47	1.05	0.15	0.13	0.12	1.08	0.15
Treatment (T)	-.60	3.24	0.19	0.03	0.17	0.10	1.66	0.08
G x T	3.95	4.93	0.80	0.11	-0.25	0.20	1.26	0.18

*Note.* B = fixed-effect regression coefficient; SE = standard error; ES = unadjusted effect size  $r$ , calculated as  $\sqrt{t^2/(t^2 + df)}$ ; RSCI = Relationship Self-Check Inventory.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 22

*Estimates of Psychological and Physical Aggression over Time*

		Pre-Treatment		Post-Treatment		3-Months Post		6-Months Post		9-Months Post	
		<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>
Estimate of Male Psychological Aggression (POC)											
MI	M	44.50	(14.27)	40.36	(17.56)	31.43	(12.55)	36.43	(20.32)	36.45	(20.34)
	F	54.16	(20.03)	42.92	(21.92)	44.28	(26.93)	41.38	(24.60)	42.25	(27.10)
CON	M	56.48	(15.36)	51.60	(15.99)	43.58	(13.31)	36.54	(19.65)	36.10	(20.03)
	F	54.16	(17.29)	53.70	(20.00)	48.33	(21.33)	46.00	(22.92)	38.32	(16.99)
Estimate of Female Psychological Aggression (POC)											
MI	M	42.24	(13.38)	38.56	(16.98)	34.00	(14.20)	35.89	(19.92)	37.35	(20.87)
	F	48.10	(19.02)	40.10	(20.86)	43.88	(25.73)	38.68	(23.54)	37.19	(21.05)
CON	M	48.60	(13.67)	45.70	(15.18)	42.58	(12.70)	35.96	(17.06)	35.25	(21.87)
	F	48.16	(19.25)	50.62	(17.49)	43.17	(20.73)	42.31	(21.40)	35.50	(16.68)

		Pre-Treatment		Post-Treatment		3-Months Post		6-Months Post		9-Months Post	
		<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>
Estimate of Male Physical Aggression (POC)											
MI	M	25.56	(9.20)	23.24	(12.55)	20.00	(13.52)	18.57	(12.01)	23.70	(14.80)
	F	29.08	(16.79)	29.12	(19.50)	23.00	(16.94)	23.00	(17.20)	27.72	(20.48)
CON	M	30.24	(12.66)	30.60	(13.18)	23.15	(12.10)	20.23	(10.77)	22.20	(12.16)
	F	32.92	(15.44)	34.16	(19.29)	32.72	(17.54)	32.44	(19.95)	26.91	(17.26)
Estimate of Female Physical Aggression (POC)											
MI	M	25.92	(10.51)	26.44	(15.82)	26.27	(16.66)	19.93	(14.09)	27.70	(14.89)
	F	33.28	(17.18)	26.00	(18.39)	23.30	(13.80)	23.20	(15.25)	25.28	(15.29)
CON	M	29.40	(12.37)	34.08	(14.49)	25.31	(12.35)	25.08	(11.54)	24.80	(12.37)
	F	34.88	(18.91)	35.96	(18.71)	28.78	(13.68)	33.72	(21.74)	25.27	(14.84)

*Note.* POC = Perceptions of Conflict Scale; MI = Motivational interviewing; CON = Control; M = male; F = female.

Table 23

*Hierarchical Linear Modeling for Estimates of Psychological and Physical Aggression as Outcomes*

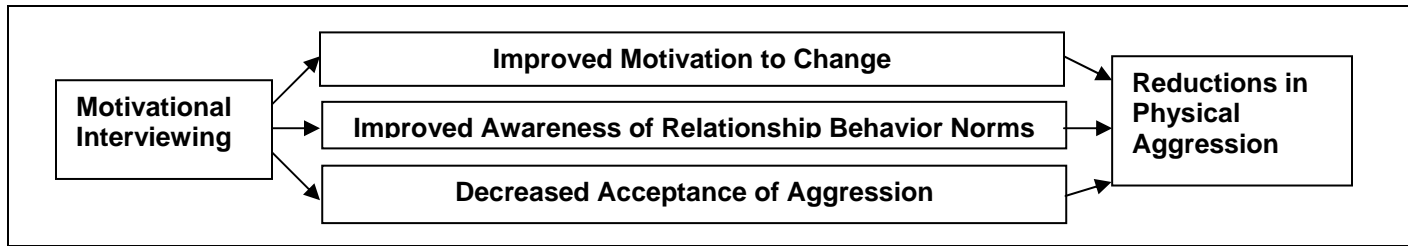
Outcome	Intercept (Pre-Treatment)				Slope (Change over Time)			
	B	SE	t	ES	B	SE	t	ES
Estimate of Male Psychological Aggression (POC)								
Time	53.64	3.34	16.05***	0.92	-0.21	0.11	1.93	0.26
Gender (G)	0.58	4.14	0.14	0.02	-0.21	0.15	1.37	0.19
Treatment (T)	-4.85	5.12	0.95	0.13	-0.02	0.15	0.13	0.02
G x T	-7.86	5.21	1.51	0.21	0.29	0.20	1.41	0.20
Estimate of Female Psychological Aggression (POC)								
Time	49.29	3.40	14.49***	0.90	-0.20	0.10	1.99*	0.10
Gender (G)	-1.80	4.20	0.43	0.06	-0.06	0.17	0.35	0.02
Treatment (T)	-4.33	4.96	0.87	0.12	-0.01	0.14	0.08	0.00
G x T	-3.32	5.41	0.61	0.09	0.16	0.22	0.76	0.04
Estimate of Male Physical Aggression (POC)								
Time	33.10	3.03	10.91***	0.84	-0.01	0.07	0.18	0.01
Gender (G)	-2.80	3.47	0.81	0.11	-0.24	0.10	2.43	0.12
Treatment (T)	-4.79	4.45	1.08	0.15	-0.05	0.11	0.42	0.02
G x T	-1.54	4.98	0.31	0.04	0.20	0.14	1.41	0.07

Outcome	Intercept (Pre-Treatment)				Slope (Change over Time)			
	B	SE	t	ES	B	SE	t	ES
Estimate of Female Physical Aggression (POC)								
Time	34.88	3.33	10.48***	0.83	-0.09	0.09	0.92	0.05
Gender (G)	-3.37	4.02	0.84	0.12	-0.06	0.12	0.52	0.03
Treatment (T)	-5.68	4.48	1.27	0.18	-0.06	0.11	0.52	0.03
G x T	0.44	5.50	0.08	0.01	0.15	0.14	1.08	0.05

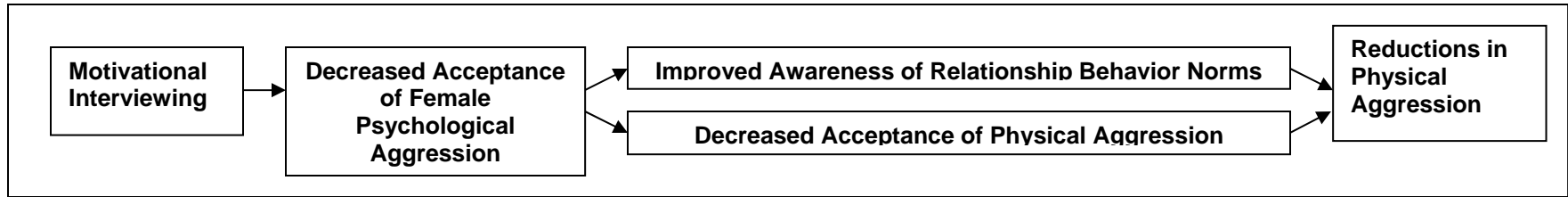
*Note.* B = fixed-effect regression coefficient; SE = standard error; ES = unadjusted effect

size  $r$ , calculated as  $\sqrt{t^2/(t^2 + df)}$ ; POC = Perceptions of Conflict Scale.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .



*Figure 1. Proposed model of the mechanisms of change in aggression resulting from motivational interviewing.*



*Figure 2. Final model of the mechanisms of change in aggression resulting from motivational interviewing.*



Appendix I: Extensive Feedback Sheet

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Dating Checkup Report

Name: \_\_\_\_\_

**1. Your Current Relationship Satisfaction:**

- Agreement, expression of affection, satisfaction, cohesion
- Less than 97 may indicate significant relationship problems

\_\_\_\_ Low (0-100)    \_\_\_\_ Medium (101-127)    \_\_\_\_ High (128+)

---

**2. Communication Patterns:**

Low                      Medium                      High

**a. Mutual Constructive Communication:** \_\_\_\_ (0-12)    \_\_\_\_ (13-23)    \_\_\_\_ (24+)

- Discuss issues calmly, express feelings, negotiate solutions

**b. Male Demands and Female Withdraws:** \_\_\_\_ (0-5)    \_\_\_\_ (6-15)    \_\_\_\_ (16+)

- Male: initiates discussions, demands change, criticizes
- Female: avoids discussions, withdraws from conflict, defends herself

**c. Female Demands and Male Withdraws:** \_\_\_\_ (0-6)    \_\_\_\_ (7-17)    \_\_\_\_ (18+)

- Female: initiates discussions, demands change, criticizes
  - Male: avoids discussions, withdraws from conflict, defends himself
- 

**3. Your Relationship Conflict and Aggression:**

Times in Last Year                      Percentile

**a. Constructive Negotiation:**                      \_\_\_\_                      \_\_\_\_

- Compromise, express caring, agree to partner's ideas, show respect for feelings

**b. Psychological Aggression:**                      \_\_\_\_                      \_\_\_\_

- Insult, shout, leave room, threaten to hit or throw something

**c. Physical Aggression:**                      \_\_\_\_                      \_\_\_\_

- Slap, grab, throw things, push, shove
-

**4. Your Report of Your Partner's Relationship Conflict and Aggression:**

	<u>Times in Last Year</u>	<u>Percentile</u>
<b>a. Constructive Negotiation:</b>	_____	_____
• Compromise, express caring, agree to partner's ideas, show respect for feelings		
<b>b. Psychological Aggression:</b>	_____	_____
• Insult, shout, leave room, threaten to hit or throw something		
<b>c. Physical Aggression:</b>	_____	_____
• Slap, grab, throw things, push, shove		

---

**5. Risk-Factors for Relationship Conflict and Aggression:**

**a. Your Alcohol Use**

- Overall level of alcohol use
- Greater than 7 may indicate risky levels of drinking

\_\_\_\_\_ Low (0-3)    \_\_\_\_\_ Medium (4-14)    \_\_\_\_\_ High (15-20)    \_\_\_\_\_ Very High (21-40)

**b. Your Stress Level**

- Impact of negative stressful events in last year

\_\_\_\_\_ Low (0)    \_\_\_\_\_ Medium (1-13)    \_\_\_\_\_ High (14-20)    \_\_\_\_\_ Very High (21+)

---

**6. Possible Consequences of Relationship Conflict and Aggression**

**a. Your Depression:** \_\_\_\_\_ Low (0-3)    \_\_\_\_\_ Medium (4-18)    \_\_\_\_\_ High (19+)

- Sadness, loss of pleasure, low energy, changes in sleep & eating, etc.
- Greater than 13 may indicate clinically significant levels of depression

**b. Your Anxiety:** \_\_\_\_\_ Low (0-4)    \_\_\_\_\_ Medium (5-21)    \_\_\_\_\_ High (22+)

- Unable to relax, fear of the worst, heart pounding or racing, nervous, shaky
- Greater than 22 may indicate clinically significant levels of anxiety

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## Dating Checkup Report

Name: \_\_\_\_\_

### Your Overall Relationship Satisfaction

0    20    40    60    80    100    105    110    115    120    125    130    135    140    145    150

LOW  
(0-100)

MEDIUM  
(101-127)

HIGH  
(128-151)

- This is how your overall relationship satisfaction compares to other college dating couples in the United States
- Your relationship satisfaction is made up of many factors:
  - How much you and your partner disagree on various topics
  - How much you consider you and your partner to be a team
  - How much affection and warmth is in your relationship
  - How happy you are overall with your relationship
- Your relationship satisfaction can be affected by many things:
  - How you and your partner resolve conflict
  - How much quality time (fun, affectionate, interesting time) you and your partner are able to spend together
  - You and your partner's stress levels

Appendix III: Referral Information

**CAMPUS RESOURCES**

**Emergency - University Police: 911 from campus or 632-3333 from non-campus phones**

Stony Brook University - Counseling Center, (631) 632-6720  
Free services for Stony Brook Students.

Stony Brook University - Wo/Men's Center, (631) 632-9666  
Free services for Stony Brook students.

**Eugene Weidman Wellness Center**, (631) 632-6817

Enlighten your mind, body, and spirit through seminars and hands-on workshops that address the intellectual, social, physical, environmental, cultural, occupational, and spiritual aspects of wellness. The Wellness Center also offers classes in Cardio Karate/Kick Boxing, Tai Chi Chuan, Yoga, Full Body Massage, Multi-Cultural Dance, Hawaiian Dance, Body Sculpting, and Step Aerobics. The Wellness Center is operated by the **Department of Campus Recreation** and is located in the lower level of the Student Activities Center.

*[<http://ws.cc.stonybrook.edu/sb/crg/wellnesscrg.shtml>]*

**Stony Brook Psychological Center**, (631) 632-7830.

The Center provides psychological services to adults, adolescents, children, couples, and families. Modalities include individual, marital, family, and group therapies. The Center also has an ongoing psychoeducational testing program for the assessment of mental retardation, learning disabilities, attention deficit disorder, and other forms of psychopathology. Individual intelligence and personality tests are administered on request. The Psychological Center gives Stony Brook graduate students in clinical psychology the opportunity to gain clinical experience under the close supervision of the University's clinical faculty. The Center is also a research facility where studies are conducted to identify causes and effective treatments for a variety of emotional and behavioral disorders. Based on a sliding-scale fee schedule.

*The Psychological Center does not have a 24-hour emergency service. In case of emergency, call the Comprehensive Psychiatric Emergency Program at Stony Brook University Hospital at (631) 444-6050.*

*[<http://ws.cc.stonybrook.edu/sb/crg/wellnesscrg.shtml>]*

## COMMUNITY RESOURCES

### **Emergency - Police: 911**

National Domestic Violence Hotline, (800) 799-SAFE

National Sexual Assault Hotline, (800) 656-HOPE

Victim's Information Bureau of Suffolk County (VIBS), (631) 360-3606

New York State Coalition against Domestic Violence, (800) 942-6906 (English)

New York State Coalition against Domestic Violence, (800) 942-6908 (Spanish)

Long Island Crisis Center, (516) 679-1111

Free and confidential 24 hour hotline; Also provides online services.

<http://www.longislandcrisiscenter.org/>

National Council on Alcoholism and Drug Dependency

Phone: (800) 622-2255 (24 hr. Hotline) or (212) 269-7797

*E-mail:* [\*\*national@ncadd.org\*\*](mailto:national@ncadd.org)

*Website:* [\*\*http://www.ncadd.org\*\*](http://www.ncadd.org)

National Council on Alcohol and Drugs, (800) 475-HOPE (24 hrs)

**MAKING YOUR RELATIONSHIP WORK**

The Dating Checkup Program

What makes relationships work?

Why do some relationships work and  
other couples have such difficulty?

What can you do to keep your love alive?

As a young couple starting out,  
what can you do to make  
and keep a strong relationship?

## **RESEARCH ON CLOSE RELATIONSHIPS SHOWS THREE FACTORS PREDICT SUCCESS**

- Communication skills
- Dealing with conflict
- Understanding expectations

### **BUILDING COMMUNICATION SKILLS**

What is good communication? Good communication means saying what needs to be said and listening with understanding.

Speaking directly takes practice and skill. Partners often assume their partners know what they think or feel. Love doesn't make you a mind reader.

Communication is a two-way street. Don't lecture or scold.

Many of us do not listen well when we hear another person speak. As the other talks, we are often judging what is said and thinking what to say next.

The most important thing to do when talking with your partner is to really try to understand what he or she is saying.

Agreement is less important than understanding. When you do understand, it is helpful to show your partner that you do.

A great way to show you understand is to put your partner's views into your own words. This does several things:

- It shows that you are really paying attention
- It allows you to check out possible misunderstandings
- For the speaker, it feels great to know that the listener is hearing what you have to say
- It helps keep conflict from getting out of hand – it's hard to stay angry with someone who is sincerely trying to understand what you are saying!

When your partner knows that you understand his or her point of view, it is much more likely that you will be able to deal with the situation in a way that is good for both of you.

### **DEALING CONSTRUCTIVELY WITH DISAGREEMENTS AND CONFLICT**

Every couple faces problems in their relationship that need to be resolved. Early in a relationship, many couples report problems with jealousy. Over time, communication and sex may become problem areas. Different values and perspectives can also produce conflict.

Problems themselves do not cause distress in a relationship—it is how couples handle problems that matters.

Early in a relationship, partners often avoid discussing "hot" issues because they do not want to upset their new relationship. Soon after getting together, many couples become busy with work, school, or other obligations. The demands of the moment may seem more important than issues in the relationship.

Yet, building a relationship requires making many decisions and planning for the future. Having good communication skills—being able to discuss and work out plans together—helps planning go smoothly.

Discussing, negotiating, and arriving at agreements that are satisfying to both partners are crucial to keeping your relationship on the right track.

No two relationships will be exactly alike,  
but many couples share similar hopes for their relationships.

Creating a strong relationship demands dedication, commitment, and learning how to handle conflict and disagreements effectively.

### **DANGER SIGNALS – SIGNS OF TROUBLE AHEAD**

Couples risk big future problems when:

- They are not able to handle conflicts constructively
- "Little" disagreements quickly become big "blow-ups"
- Arguments, once started, are hard to stop
- Partners often experience emotional conflicts
- Partners avoid dealing with significant issues over time
- Partners often put down or insult one another
- During conflicts, one partner withdraws or avoids dealing with the issue
- One or both partners use physical aggression (pushing, shoving) to deal with their conflicts.

When people withdraw or avoid dealing with disagreements, they usually are trying to avoid conflict, not their partners. Also, when people keep bringing up issues, they usually are not trying to nag or pick a fight—they are trying to find a way to connect with their partners.

If you notice some of these danger signs in your relationship, you should work on communication with your partner. Set up a weekly "couples meeting" and agree on one issue to discuss. To have good communication, both partners must feel emotionally safe – not vulnerable or on the defensive.

A first step is to listen to your partner. By listening carefully, you will go a long way toward improving your couple communication, even if your partner does nothing differently!

Be polite in talks with your partner. Treat your partner as you would a very valued friend. (Ironically, research shows that people are often more polite to a total stranger than to their partner!) When you have something negative or critical to say, find the most polite way to say it.

When you express your criticism politely, you increase the chances that your partner will actually hear what you say.



## **UNDERSTANDING EXPECTATIONS**

At the beginning of a relationship, it is important to recognize what really matters to you and your partner. Talking about your values, beliefs, and expectations builds your relationship.

Expectations play a big role in determining how satisfied we are in life and with our relationships. Expectations include feelings, desires, anticipations about life, relationships, "how the world works," and what is likely to happen in the future.

Our expectations shape the meaning we give our partner's words and actions, and how we react to our partner's behavior.

When we are happy in our relationship, we tend to see only the positive. When we are unhappy, we tend to see only the negative, and it is difficult to see our partner's good aspects.

It is important to understand and talk about expectations. Expectations include:

- How communication should take place in relationships
- How couples should handle conflicts and disagreements (such as "never raise voices")
- Who has more "say" or whether there should be "equal say" in the relationship
- Expectations about sex and affection

Many partners think their partners' expectations are similar to their own. Actually, it is more likely that you have different expectations. Remember, it's how you handle your differences that count.

For example, what are your ideas about how feelings should be expressed? Is it O.K. for partners to raise their voices when having a disagreement? How should you and your partner act when there is trouble, anger, or sadness? What are your expectations about your spiritual life?

Working through disagreements creates intimacy and trust in your relationship. Handling conflict lays the groundwork for satisfying and fulfilling relationships.

## **DEVELOPING TEAMWORK AND FRIENDSHIP IN CLOSE RELATIONSHIPS**

Partners often say they want their partner to be their best friend. Friendship is part of your relationship.

Friends listen to each other, show respect for each other's opinions, and are truly interested in each other's lives. Friends talk about their interests, dreams, and plans, and discuss what is important to them.

Life after relationships makes it harder to keep time for friendship. As life gets busier, and issues come up, friendship may suffer. However, keeping friendship alive is one of the best tools for a successful relationship. Friends work as a team – making life easier and more fun.

Make time for "friendship talk" with your partner, focusing on each other's work, dreams, and interests. Keep these friendship talks free from conflict – do not talk about relationship issues or try to solve problems during this time

## **RELATIONSHIPS AS BALANCING ACTS**

Individuals have many different roles in their dating lives. These roles include school and family and keeping a sense of self while also being part of a couple. It is important to keep a balance between these sometimes-competing roles. Doing too much of one often comes at the expense of another.

## **RECOGNIZING WHEN YOU NEED HELP**

What are signs of relationship distress? If you often have communication problems, if your arguments are more destructive than constructive, and especially if your disagreements lead to pushing or shoving or other kinds of "physical" behavior – it may be helpful to get assistance.

## **WHERE TO LOOK FOR HELP**

If you or your partner ever need help of any kind, knowing where to look is important. Family and friends can provide support. Expert help can also be useful. There are many highly qualified professionals to help you decide if you need assistance, and what kind of assistance might be best.

Fortunately, there are many resources in our community to help develop you skills and improve your relationship. Investigate programs and counseling offered by:

- Community mental health centers
- Religious organizations and spiritual leaders
- Relationship enhancement programs
- Marriage and family therapists

Many of these resources are available free of charge or on a sliding fee scale.

All couples have the potential to succeed in making a wonderful relationship. It does not happen naturally. It takes a lot of effort. The most successful relationships are ones that partners continually work to improve.

\*Brought to you by the Stony Brook University Marital Clinic

\*Adapted from a Colorado State handout on building better relationships

Appendix V: Motivational Interviewing Competency Sheet

**Motivational Interviewing Competency**

Dating Checkup Program

Therapist: \_\_\_\_\_ Couple ID: \_\_\_\_\_ Date of Session: \_\_\_\_\_

**Student**

Skill	Below Threshold	Beginner Proficiency	Advanced Proficiency
Global Therapist Ratings	<5	5	6 or 7
Reflection to Question Ratio	< 1	1	2
Percent Open Ended Questions	< 50%	50%	70%
Percent Complex Reflections	<40%	40%	50%
Percent MI-Adherent	<90%	90%	100%

Notes: \_\_\_\_\_

**Partner**

Skill	Below Threshold	Beginner Proficiency	Advanced Proficiency
Global Therapist Ratings	<5	5	6 or 7
Reflection to Question Ratio	< 1	1	2
Percent Open Ended Questions	< 50%	50%	70%
Percent Complex Reflections	<40%	40%	50%
Percent MI-Adherent	<90%	90%	100%

Notes: \_\_\_\_\_

**Joint**

Skill	Below Threshold	Beginner Proficiency	Advanced Proficiency
Global Therapist Ratings	<5	5	6 or 7
Reflection to Question Ratio	< 1	1	2
Percent Open Ended Questions	< 50%	50%	70%
Percent Complex Reflections	<40%	40%	50%
Percent MI-Adherent	<90%	90%	100%

Notes: \_\_\_\_\_