

THE RELATIONSHIP BETWEEN ATTACHMENT AND EMOTIONAL EXPERIENCE
DURING SEMI-NATURAL AND THERAPY-LIKE COUPLE INTERACTIONS

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ABSTRACT

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Although a sizeable amount of research has investigated and demonstrated the effectiveness of couple therapy, a substantial number of couples still do not receive the optimal benefits of statistically and clinically significant change. This highlights the importance of moving from if to how couple therapy is effective. More specifically, it is important to understand client experience in therapy and those factors that influence both the course and outcome of therapy. This would facilitate the ability to more effectively adapt treatment to the needs of clients. Client-treatment matching research has attempted to accomplish this, but results have been disappointing as it has primarily focused on matching treatment models to specific diagnoses. A common factors perspective provides the insight that the core ingredients of change that exist across treatment models may be confounding results. If this is the case, it would be important to understand client-treatment matching from a more process-oriented approach that looks at how specific client and treatment characteristics interact to influence client experience and ultimately treatment outcome.

This study sought to begin looking at treatment process from a common factors perspective by looking at how attachment as a client characteristic interacted with a low (semi-natural) or high (therapy-like) structure interactional context to influence two indicators of emotional experience, physiological arousal and interpersonal distress. Emotional experience, as defined by emotional processing and regulation, ultimately influences emotional expression and has been shown to influence therapeutic outcomes. Findings appear to indicate that attachment

influences emotional experience and provides preliminary evidence that taking into account attachment may be useful in improving outcomes. Specific relationship process, clinical, and research implications are discussed. Overall, it is hoped that this study will provide the impetus for additional work that will continue to investigate how attachment and other client characteristics interact with elements of therapy process to positively influence client experience and outcomes. This will then facilitate the more effective adaptation of treatment to the specific needs of clients.

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CHAPTER I

INTRODUCTION

Although numerous studies and meta-analyses agree that psychotherapy and couple therapy are effective (Lambert & Ogles, 2003; Shadish, Ragsdale, Glaser, & Montgomery, 1995), a substantial number of clients do not receive the full benefits of treatment (Clarkin & Levy, 2003; Lambert & Ogles, 2003; Sexton, Alexander, & Mease, 2003). As a result, empirical research and scholarly work in psychotherapy have sought to identify and define those therapist and client variables associated with engagement in therapy as well as overall outcome (Beutler et al., 2003; Clarkin & Levy, 2003). Although more research is needed to identify variables that contribute to client dropout and poorer outcomes in psychotherapy, the need is much greater in couple therapy, where only a handful of studies have sought to move beyond *if* couple therapy is effective to *how*.

Existing client-treatment matching research clearly illustrates this issue. Client-treatment matching offers potential for being able to enhance the effectiveness of therapy by identifying not only *what* works but for *whom* it works (Paul, 1967). However, the primary focus of client-treatment matching research has been on identifying which theoretical approach (e.g. behavioral versus cognitive therapy) works best with individuals placed in specific diagnostic categories. This oversimplifies the issue and loses sight of the numerous other client characteristics that may be interacting with treatment to influence outcome. Of even greater concern is that these studies have consistently lacked statistically significant results, even when great time, resources, and methodological rigor have been employed to improve study outcome.

A common factors perspective has the potential to shed significant light on this issue. Comparing the effectiveness of therapy models does not acknowledge those core ingredients of

change shared across models that are likely confounding results. As such, client-treatment matching research needs to focus more on how to adapt those core ingredients to specific client characteristics in order to improve effectiveness. In terms of what happens in therapy, many of these core ingredients of change refer to treatment processes that influence the therapist-client interaction (Greenberg & Pinsof, 1986) or common mechanisms that facilitate in-session change events (Sprenkle & Blow, 2004).

Although a substantial body of treatment process research exists in psychotherapy, much less research has addressed treatment process in couple therapy. However, one body of theoretical and empirical work has identified enactments as a potential common change mechanism for improving treatment process (Butler, Davis, & Seedall, 2008; Butler & Gardner, 2003; Butler & Wampler, 1999; Davis & Butler, 2004; Seedall & Butler, 2006). Enactments are therapist-coached couple interaction with the primary goals of facilitating more productive interaction patterns and overall couple self-reliance (Butler & Gardner, 2003; Butler & Wampler, 1999). Butler and Gardner (2003) developed a conceptual model that also demonstrates how to adapt treatment process involving enactments to varying levels of couple emotionality, reactivity, and overall readiness. This idea introduces an important issue of interactional structuring that has rarely been discussed in couple therapy research or scholarly work but is important to understanding and improving treatment process in the context of therapy with multiple clients (Seedall & Butler, 2006).

In addition to helping structure couple interaction, enactments also offer the potential for providing a different experience for couples. For example, emotionally focused therapy utilizes enactments to deepen emotional experience and heighten a newly emergent way of emotional relating for the couple (Johnson, 2004). Emotional experience has shown strong potential in

both psychotherapy and couple therapy as a treatment process that positively influences outcomes. Emotions have been identified as a central organizing feature of individual (Frijda, 1986; Izard, 1991) and couple (Johnson & Greenberg, 1994) experience. Overall, emotions inform meaning, motivation, and adaptation (Frijda, 1986; Izard, 1991).

Two essential aspects of emotion are processing and regulation. Processing refers to the depth at which an individual can explore, cope with, and transform emotions (Klein, Mathieu-Coughlan, & Kiesler, 1986). Similarly, regulation refers to “attempts individuals make to influence which emotions they have, when they have them, and how these emotions are experienced and expressed” (Rottenberg & Gross, 2007, p. 325). Individuals who struggle with emotional *processing* typically cannot adequately regulate their emotional *experience*, thereby over- or under-regulating their emotions and leading to disruptive emotional *expression*. As a result, facilitating deeper emotional processing within psychotherapy offers great potential in yielding more positive outcomes (Beutler et al., 2003; Bridges, 2006; Greenberg & Pascual-Leone, 2006; Wiser & Arnow, 2001). Within couple therapy, emotional processing and regulation in some form has also been identified as an important change factor in several empirically supported couple therapies, including emotionally focused therapy (Johnson, 2004), enhanced cognitive behavioral therapy (Epstein & Baucom, 2002), behavioral marital therapy (Jacobson & Margolin, 1979), and insight-oriented marital therapy (Snyder, 1999, 2002).

Interestingly, although clinical research has acknowledged the importance of understanding treatment process as well as client-treatment matching, no research in either psychotherapy or couple therapy has analyzed the interaction between treatment process and client characteristics. Attachment theory represents one potential avenue for understanding how to adapt treatment process to specific client characteristics and thereby enhance client experience

and improve outcomes. Attachment theory is a theory of close relationships, most often focusing on early, formative relationships and the adaptive strategies infants learn regarding how to respond when they are separated, threatened, or distressed (Bowlby, 1982). Findings have emphasized the importance of the attachment figure's sensitivity and attunement in consistently meeting the infant's needs (Ainsworth, Blehar, Waters, & Wall, 1978), thereby helping them to develop a secure internal working model of self and others (Bowlby, 1973; Haft & Slade, 1989). However, when their needs are not met on a regular basis, they develop coping strategies that lead them to either shut down emotionally (deactivating) or demand that their needs be met in an exaggerated and ultimately rejecting way (hyperactivating; Kobak, Cole, Ferenz-Gillies, Fleming, & Gamble, 1993). These concepts closely parallel the ideas of under- and over-regulation of emotion, but with an additional component explaining the reciprocal influence between intrapersonal attachment strategies and close relationships.

More recently, attachment theory has been utilized to understand how relationship models formed in infancy may be generalized to adulthood (Grossmann, Grossmann, & Waters, 2006; Mikulincer & Shaver, 2007; Sroufe, Egeland, Carlson, & Collins, 2005), with a variety of informative findings complicated somewhat by the existence of two measurement techniques with very little empirical overlap (Fortuna & Roisman, 2008). One approach, anchored in developmental psychology, measures attachment according to a person's discourse or narrative about childhood attachment experiences, while the other approach utilizes a self-report measurement strategy typical of social and personality psychology.

Nonetheless, findings from a number of psychotherapy studies have shown important associations between a person's general approach to attachment relationships (secure versus insecure; hyperactivation versus deactivation) and two viable indicators of emotional experience:

physiological arousal and interpersonal distress. Physiological arousal refers to the unconscious physical processes that accompany emotion and interpersonal distress refers to the influence that emotions have on the conscious processes involved in relationships, including couples in a committed romantic relationship, which are the focus of this study.

In terms of clinical work, psychotherapy research has found little evidence to support the claim that therapy may be expected to consistently *change* attachment in terms of an individual's global attachment category (Dozier, Manni, & Lindhiem, 2005). More evidence exists of the potential for therapy to *shift* an individual's behavior towards increasing security during couple interactions (Steele & Steele, 2008). Although this is an important area for research, of potentially even greater importance is the question of how attachment influences a person's experience in therapy and its overall outcome. A few articles have begun to address how self-reported attachment may moderate treatment outcome (McBride, Atkinson, Quilty, & Bagby, 2006; Meyer, Pilkonis, Proietti, Heape, & Egan, 2001) or how certain narrative/discourse attachment characteristics may provide unique treatment challenges (Dozier, Lomax, Tyrrell, & Lee, 2001; Korfmacher, Adam, Ogawa, & Egeland, 1997).

Although a relatively small but growing body of psychotherapy research has addressed the role of attachment in adult couple relationships, no empirical work has been done in terms of attachment and couple therapy, including how attachment models and strategies (secure versus insecure; hyperactivating versus deactivating) influence core therapy processes such as emotional experience. Emotionally focused therapy (EFT), an empirically-supported couple therapy (Sexton et al., 2003), has effectively demonstrated how distressed relationships may be conceptualized within an attachment framework. However, even though EFT has been shown to be effective, results have not been able to demonstrate an empirical connection between its

underlying assumptions regarding attachment and couple therapy process and outcome.

Research is needed to draw more definitive conclusions about the role of attachment in couple therapy and to begin identifying implications that therapists can use to adapt and improve treatment process. For example, how might attachment influence an individual's experience in couple therapy? Those clients who have consistently had their attachment needs met in relationships (characteristic of secure attachment) may be more able to express themselves, ask for their needs to be met, and then to reach out to their partner in therapy.

Conversely, individuals who have not experienced consistent responses in the past when they were distressed may have greater difficulty in therapy. When attachment needs or threats have been inconsistently met by attachment figures (characteristic of preoccupied/anxious attachment), it may be difficult for individuals to appropriately request that their needs be met. They may also struggle to regulate their attempts to meet their partners' needs. Those who have been regularly rejected (characteristic of dismissing/avoidant attachment) may struggle to open up emotionally, thereby making it difficult for them to request that their needs be met or to reach out to their partner. These issues are made more complex by the varying attachment strategies and expectations that partners may have for their close relationships.

As a result, if couple therapy is generally tailored toward distressed clients with secure attachment strategies, then those clients with less secure strategies may not be receiving optimal benefits from treatment. Research is needed to understand the attachment-related experiences of clients in a therapeutic context so that treatment process may then be adapted to their needs and experiences. The attachment strategies of clients potentially interact with specific elements of treatment process to influence the emotional experience of clients. This study adapted interpersonal process recall (Elliott, 1986; Kagan & Kagan, 1990; Kagan, Krathwohl, & Miller,

1963) to analyze how attachment within two contrasting interactional conditions (low structure, semi-natural and high-structure, therapy-like) influences the emotional experience of couples in terms of their physiological arousal and interpersonal distress.

CHAPTER II

LITERATURE REVIEW

Effectiveness Research in Couple Therapy

In addition to examining the effectiveness of individual psychotherapy (see Lambert & Ogles, 2003), meta-analyses have studied the effectiveness of couple treatment.

Overwhelmingly, both behavioral and nonbehavioral couple approaches have been found more effective than no-treatment control groups (Alexander, Holtzworth-Munroe, & Jameson, 1994; Christensen & Heavey, 1999; Sexton et al., 2003). In fact, the most recent meta-analysis found that, on average, 80% of distressed couples receiving treatment showed more improvement than distressed couples in no-treatment control groups (overall mean effect size = .84; Shadish & Baldwin, 2003).

However, Sexton et al. (2003) caution, “Despite what look to be large effect size differences, the clinical significance of couple therapy remains in question Even among the most efficacious treatments, fewer than half of couples treated have clinically significant positive outcomes” (p. 598; see also Christensen & Heavey, 1999, and Jacobson & Addis, 1993, for similar conclusions). Even as effectiveness and efficacy research has continued and therapeutic approaches such as emotionally focused therapy (EFT) have become evidence-based, the overall level of clinical effectiveness has not improved since Jacobson and Addis (1993) first addressed the issue by challenging couple researchers to address the following questions: “Who benefits from couple therapy? What are the active ingredients of successful couple therapy? What are the pertinent change processes?” (pp. 86-87).

Couples who do not achieve clinically significant outcomes can be classified five ways: (a) those whose condition worsens as a result of therapy; (b) those who remain unchanged; (c)

those who demonstrate improvement but do not move into the non-distressed range; (d) those who do not maintain their gains at follow-up (i.e., relapse); or (e) those who drop out before change can be measured or achieved. Thus, efforts are needed not only to improve the effectiveness of therapy, but also the engagement of clients so that they remain in therapy to receive the full potential benefits.

Dropping out of treatment, also known as attrition, premature termination, or unilateral termination, is an area of great concern for psychotherapists. Most often, researchers have defined dropout using one or a combination of the following methods: (a) failure to complete a specified number of treatment sessions; (b) therapist rating the level of treatment completion; and (c) discontinuation of therapy after the intake session (Masi, Miller, & Olson, 2003; Wierzbicki & Pekarik, 1993). One meta-analysis of 125 psychotherapy studies using varying definitions of dropout found an average dropout rate of 46.9% (Wierzbicki & Pekarik, 1993). The mean dropout rate for individual therapy (47.5%) was comparable to the rates found for studies of group, family, and/or couple therapy (45.7%).

Similarly, a study of 463 individuals in a university-based marriage and family therapy (MFT) clinic found no significant differences in dropout rates between individual, couple, or family therapy across any of the aforementioned dropout conditions (Masi et al., 2003). However, a more recent study with 434,317 patients in an administrative health care system (CIGNA) found that, although dropout, defined as discontinuing treatment after one session, was less likely when the provider was an MFT as compared to other mental health professions, patients were 33.2% more likely to dropout when participating in relational therapy than when attending individual therapy (Hamilton, Moore, Crane, & Payne, 2010). Regardless, beyond an initial understanding of dropout rates in couple or family therapy and how they compare to

individual therapy, relatively little is known theoretically or empirically, especially when considering the much larger number of studies in general psychotherapy that have addressed the topic of dropout (Bartle-Haring, Glebova, & Meyer, 2007; Bischoff & Sprenkle, 1993). For example, it is not known how much of couple therapy dropout can be attributed to factors such as initial client or couple distress, less effective treatment, or the lack of fit regarding the therapist's approach to client characteristics (e.g., attachment) that might lead to difficulties such as disagreement regarding the depth and breadth of change needed (Bischoff & Sprenkle, 1993; Helmeke, Bischof, & Sori, 2002).

One review of couple research identified the dimensions involved in predicting therapy dropout as client- and therapist-related characteristics and contextual factors, elements of therapeutic process, and the techniques or interventions used in treatment (Bischoff & Sprenkle, 1993). Client-related factors associated with higher rates of dropout in couple therapy were lower socio-economic status (Williams, Ketrings, & Salts, 2005); therapist-client ethnic mismatch (Williams et al., 2005); a larger number of children in the family (Allgood & Crane, 1991); lower husband life happiness (Anderson, Atilano, Bergen, Russell, & Jurich, 1985); higher husband anxiety (Allgood & Crane, 1991); and the attribution of blame on one individual for relational problems (Allgood & Crane, 1991). These couple therapy findings mirror results from psychotherapy in general that have found associations between outcome and a client's interpersonal relatedness, psychological resources, and level of psychopathology (Clarkin & Levy, 2003).

Therapist-related factors associated with higher dropout rates were being a man (Allgood & Crane, 1991); lower levels of therapeutic rapport (Tryon & Kane, 1993); low therapist activity (Anderson et al., 1985); high levels of therapist interpretation and talking (Hollis, 1968); less

treatment follow-up (Hollis, 1968); and therapist predictions of client discontinuation (Allgood & Crane, 1991). Therapy process and intervention variables are much rarer in the research literature, but there have been indications from both individual and couple therapy research that the risk of dropout originates primarily during the first two sessions (Hollis, 1968; Phillips, 1985), and might decrease by focusing on understanding and meeting client expectations early. Nonetheless, additional research needs to expand upon and replicate these preliminary findings regarding dropout predictors.

In addition to the relatively small literature addressing dropout, no empirical research has analyzed the potential for deterioration in couple therapy. Nonetheless, with approximately 20% of participants in couple therapy meta-analyses no better off than no-treatment controls, client decline is a very salient risk. If results parallel psychotherapy research reviews, approximately 5-10% of couples will actually get worse while in treatment (Lambert & Ogles, 2003). This is a sobering statistic, especially considering that outcomes from routine clinical practice may be less effective than those conducted in highly-controlled clinical trials due to the additional time, energy, and resources often expended in empirical studies (Lambert & Ogles, 2003).

Increasing the Effectiveness of Couple Therapy through Client-Treatment Matching

Over 40 years ago, Paul (1967) encouraged researchers to focus beyond treatment effectiveness to discover “what treatment, by whom, is most effective for this individual with that specific problem under which set of circumstances” (p. 111). For this to happen, increased attention must be given to research that provides an in-depth look at the experiences of those at risk for sub-optimal results from couple therapy. This includes understanding how their experiences differ across client, therapist, intervention, and therapy-process factors from those who demonstrate clinically significant outcomes. With respect to the importance of client

factors, Lambert and Ogles (2003) explained that “carefully matching techniques to client dispositions, personality traits, and other diagnostic differences” (p. 180) may ultimately be vital to enhancing retention and expanding clinically significant outcomes. This section will summarize the work that has been done on matching treatment to client characteristics.

Matching Type of Treatment to Client Characteristics

Client-treatment matching, also known as aptitude by treatment interaction (ATI) and systematic treatment selection (STS) has been researched most commonly in the fields of psychotherapy in general and substance abuse treatment. The breadth of attention in this area has been substantial, with entire books (Nathan & Gorman, 2002; Roth & Fonagy, 2005) and research projects (Elkin et al., 1989; Project MATCH Research Group, 1997a, 1997b, 1998) dedicated to this subject. The most prevalent research approach to client-treatment matching has focused on identifying the most effective treatment model in treating a specific diagnosis, with some studies also looking at how additional intrapersonal characteristics mediate this relationship. For example, one study within the Treatment for Depression Collaborative Research Program (TDCRP) compared interpersonal therapy (IPT) and cognitive therapy (CT), finding that IPT reduced depression more effectively for individuals who exhibited higher levels of obsessiveness, while CT was more effective in treating depression for those higher in avoidance (Barber & Muenz, 1996).

Perhaps the most expansive, methodologically sophisticated, and well-known study that analyzed client-treatment interaction is Project MATCH, conducted at multiple sites by the National Institute on Alcohol Abuse and Alcoholism (NIAAA; Project MATCH Research Group, 1997a, 1997b, 1998). Project MATCH analyzed data from 952 alcohol-dependent individuals in outpatient therapy and 774 participants in aftercare therapy who were randomly

assigned to one of three treatment conditions: cognitive behavioral coping skills therapy (12 sessions), motivational enhancement therapy (4 sessions), or 12-step facilitation therapy (12 sessions). Participants in all three modalities demonstrated statistically significant improvement on a variety of drinking and general outcome measures. Client characteristics compared across treatments were severity of alcohol use, cognitive impairment, client conceptual level, gender, meaning seeking, motivational readiness to change, psychiatric severity, social support for drinking versus abstinence, sociopathy, and typology (Project MATCH Research Group, 1997a).

Of those three modalities, only psychiatric severity was found to interact significantly with treatment type during the full year following treatment (Project MATCH Research Group, 1997b). These disappointing results led to speculation that either client-treatment matching is not a salient aspect of therapy or it is a much more complex and dynamic issue (Project MATCH Research Group, 1998). Since then, research and scholarly work have sought to identify potential methodological issues that limited the Project MATCH results (Buhringer, 2005; Lakey & Ondersma, 2008; Project MATCH Research Group, 1998) and have continued testing client-treatment interaction effects (Rychtarik et al., 2000; UKATT research team, 2008). Regardless, recent results have done little to empirically substantiate the significance of client-treatment matching, in spite of the overwhelming theoretical expectation of its importance.

Couple therapy adds additional complexities to understanding how to effectively match treatment process to client characteristics. Not only are there two client-treatment interactions in couple therapy, but there is also the relationship between both clients that interacts with treatment. Unfortunately, couple therapy research has employed virtually the same method as psychotherapy and substance abuse treatment research in attempting to demonstrate the effectiveness of one approach over another in treating a specific diagnosis (see Snyder &

Whisman, 2003, and Sprenkle, 2002, for in-depth examples). In fact, no empirical examples exist in couple therapy of matching treatment to client characteristics other than client diagnosis. Although not an explicit example of client-treatment matching, Jacobson and Christensen (1996) did find that incorporating an acceptance component into an integrative behavioral treatment protocol for at-risk couples enhanced therapy effectiveness by adapting treatment to client needs. Nonetheless, more work is needed to understand how the role of client-treatment matching in couple therapy may improve therapy outcome.

A Common Factors Approach to Client-Treatment Matching

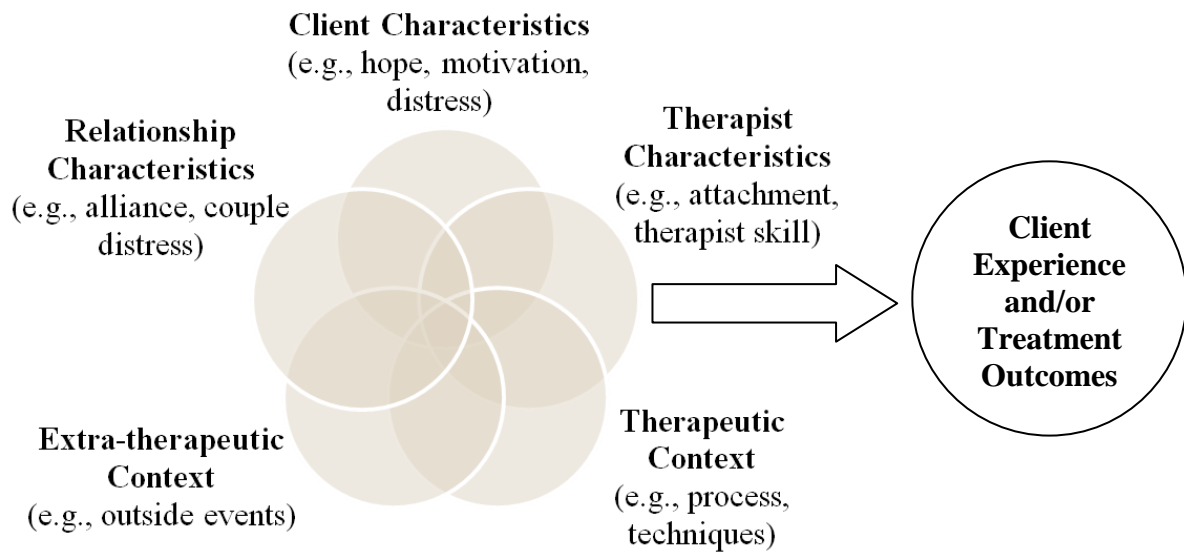
Although a number of justifications for the relatively small effects of client-treatment matching have been given, another potentially viable explanation for the consistent lack of significant findings may be derived from a common factors perspective. A common factors approach to therapy was developed in partial response to meta-analytic findings that very few substantive differences exist between treatment models in terms of achieved outcome when controlling for confounding variables (Hubble, Duncan, & Miller, 1999; Smith, Glass, & Miller, 1980; Wampold, 2001). In fact, one meta-analysis suggested that techniques associated with specific models accounted for only 8% of therapeutic outcome variance (Wampold, 2001). Thus, a common factors framework has sought to shift the focus from differentiating between models by focusing on identifying active ingredients, mechanisms, and processes of change that are shared by effective therapeutic approaches as well as those intrapersonal and interpersonal characteristics shared by effective therapists (Blow, Sprenkle, & Davis, 2007; Frank & Frank, 1991; Lambert, 1992).

As a result, a common factors perspective may yield crucial understanding as to why existing client-treatment matching research has yielded few statistically significant results.

Interestingly, current client-treatment matching research may be considered an outgrowth of efficacy/effectiveness research. The methodology employed by existing client-treatment matching research focuses primarily on identifying which model most effectively treats a specific diagnosis, but with the added dimension of looking at how additional client characteristics influence the model-diagnosis interaction. Although this component does provide further information about how treatment in general might be matched to client characteristics, it oversimplifies the issue by assuming that models differ solely according to the types of clients for whom they are effective. The lack of significant differences in outcome between models then is attributed to unmeasured client characteristics that are confounding the results.

However, the consistent non-significant findings in client-treatment matching research indicates that this may not be the case. Instead, the very models being tested actually may be confounding results. From a common factors standpoint, these non-significant results point to the fact that the tested models—despite being operationally distinct—share similar change ingredients, mechanisms, and/or processes that lead to positive outcomes. The disappointing findings regarding the interaction between treatment type and client characteristics led the Project MATCH Research Group to a similar conclusion that future research needed to “identify the common and unique active ingredients of treatments, as well as provide a better understanding of how these treatment variables lead to differential client outcomes” (Project MATCH Research Group, 1997b, p. 1695). Thus, client-treatment matching research is needed that goes beyond *what* models are effective to discovering *how* and *for whom* they are most effective by investigating the interaction between treatment process and client characteristics (see Figure 1).

Figure 1. Process Research from a Common Factor Perspective



Matching Treatment Process to Client Characteristics

The concept of *process* has been defined in a variety of ways, but generally refers to how change occurs. That being said, one potentially valuable distinction that needs to be made is the difference between change process and treatment/therapy process (Orlinsky, Ronnestad, & Willutzki, 2003). For purposes of simplicity, this study defines change process as those intrapersonal and interpersonal factors that contribute to change in a person's life both inside and outside of therapy. One important element of change process—especially in terms of therapy and its effectiveness—is treatment process, which is defined here as those technical or interpersonal conditions occurring in the context of therapy that lead to positive outcomes and overall change. In this manner, treatment process is conceptualized here as consisting of (a) the nature of the interaction between the therapist and client systems (Greenberg & Pinsof, 1986), and (b) those core mechanisms that facilitate change events within the framework of therapy (Sprenkle & Blow, 2004).

The relationship between therapy process and outcome has been a much-studied topic in

psychotherapy research. In a comprehensive review of hundreds of articles, Orlinsky et al. (2003) found that some of the most robust research findings included a positive therapist-client relationship, characterized by collaboration, communicative rapport, empathy, and mutual affirmation. Therapist skillfulness in facilitating positive affect, expressiveness, emotional processing, cooperation, and openness in clients, as opposed to increasing resistance and defensiveness, were also associated with more positive outcomes (Orlinsky et al., 2003; see also Beutler et al., 2003). In terms of specific techniques, a number of studies consistently found that the “timely and skillful application of potent interventions such as experiential confrontation, interpretation, and paradoxical intention” (Orlinsky et al., 2003, p. 324) were also found to be consistently effective.

In terms of couple therapy, much less treatment process research has been conducted. Many of those studies that do exist involve couple change process (i.e., dynamics between the couple that influence outcome) rather than treatment process, as defined above. Those that do address treatment process independent of theoretical orientation have yielded results similar to those from psychotherapy research in general. Couple therapy studies found that a strong therapeutic alliance was associated with higher rates of retention (Raytek, McCrady, Epstein, & Hirsch, 1999) and outcome (Quinn, Dotson, & Jordan, 1997). In addition, therapists were expected to be active and directive (Estrada & Holmes, 1999) while demonstrating competence (Raytek et al., 1999) and empathy (Bischoff & McBride, 1996) during the therapy process.

In terms of general couple interventions, one study found that clients perceived change according to affective, cognitive, and communicative dimensions (Christensen, Russell, Miller, & Peterson, 1998). Butler and Wampler (1999) also found that therapist behaviors that facilitated couple-responsible process such as enactments, accommodation, and inductive

process were associated with higher levels of cooperation and lower levels of therapist-client struggle, two conditions associated with positive outcomes. Enactments have been defined as “therapist-facilitated, couple-focused interaction” (Butler & Wampler, 1999, p. 30) that adapts therapist role, involvement, and interactional structure to varying levels of couple reactivity and volatility (Butler & Gardner, 2003; Seedall & Butler, 2006). Enactments have been suggested as a potential core change mechanism by virtue of their utility across theoretical orientations and applicability for a variety of couple issues (Butler et al., 2008).

A number of studies specific to EFT have also sought to identify treatment processes that influence outcome. These studies have found that a strong therapeutic bond (Johnson & Talitman, 1997), emotional experiencing (Bradley & Furrow, 2004; Johnson & Greenberg, 1988), and positive emotional responses (Bradley & Furrow, 2004; Greenberg, James, & Conry, 1988; Johnson & Greenberg, 1988) are related strongly to perceived change in EFT and overall success in achieving positive outcomes. In this manner, the process of EFT intends to allow couples to process their emotions, express their vulnerable feelings and needs, and gain mutual understanding while receiving support and validation from one another and the therapist. These processes are intended to help partners soften towards one another and thereby restore trust and repair past relationship traumas.

Despite yielding some important information about therapeutic change, none of these studies investigated how treatment process might be adapted to varying client characteristics to maximize outcome. Yet client-treatment matching from this perspective may be vital to improving therapy outcomes. One qualitative study of three couples over 23 sessions noted that, “Pivotal moments tended to be highly individualized accounts, with little overlap between spouses and little overlap between therapist and client” (Helmeke & Sprenkle, 2000, p. 469).

Thus, because intrapersonal characteristics often vary between partners within the couple relationship, it is even more imperative for empirical work in couple therapy to examine how to systematically adapt therapy to specific intrapersonal *and* interpersonal client characteristics in order to maximize positive therapeutic outcomes.

In their evaluation of current process research in couple therapy, Heatherington, Friedlander, and Greenberg (2005) comment that much of research has focused on what clients *do* in therapy through the use of observational coding. This understanding of interpersonal behavior is an important component of understanding effective treatment. However, Heatherington et al. (2005) also emphasize the need to pay attention to clients' *intrapersonal experiences* in therapy. In other words, what is therapy really like for clients? This study represents a preliminary effort to understand this by integrating client-treatment matching concepts with process-outcome research. Specifically, it investigated how attachment as a potential match variable influenced a person's emotional experience during low structure, semi-naturalistic and high structure, therapy-like couple interactions.

Emotions in Couple Relationships and Therapy

The previous section addressed the importance of treatment process research in identifying those factors that contribute to therapeutic change. This section discusses the role of emotion in couple relationships and therapy. Emotional experience in some form (e.g., empathy, positive emotions, emotional processing) has been identified consistently as a core therapeutic process variable. More generally, emotion has been described as having semantic, motivational, and adaptive functions (Frijda, 1986; Izard, 1991) in being "involved with organizing, guiding, and driving perception, thought, and action" (Izard, 1991, p. 51). In this manner, emotion may be considered a driving force for many intrapersonal and interpersonal processes. These ideas

have led Johnson and Greenberg (1994) to the conclusion that emotion is the “primary building block of adult intimate relationships” (p. 10).

Because emotion is so instrumental in providing intra- and interpersonal meaning and organizing how an individual responds to a situation, the processing of felt emotion becomes a vital adaptive skill that allows for the appropriate regulation of emotion. During periods of arousal, emotional processing allows individuals to focus on, cope with, and potentially expand and/or transform emotional experience and expression (Klein et al., 1986). However, when individuals cannot adequately cope with their emotions or the arousal that they might produce, they often attempt to over- or under-regulate them, leading them towards more negative, relationship-disrupting expressions of affect.

In terms of couple relationships, Gottman (1999) identified several of these negative emotional responses that appear related to later relationship dissolution: criticism, contempt, defensiveness, and stonewalling. More generally, Gottman and Levenson (2002) found that, over a 14-year period, couples who divorced early demonstrated high expressivity, anger, and wife negativity (i.e., under-regulation). Those who divorced later during the longitudinal study were more likely to demonstrate prolonged periods of neutral affect during conflict characterized by physiological evidence of emotional suppression (i.e., over-regulation). Regardless, it appears that a person’s emotional experience and expressions, measured by physiological means and observed couple interaction, have strong implications for understanding couple relationships. In addition to the relationship consequences, emotional suppression has been linked to greater cardiovascular health risks, especially if it is part of a consistent relationship pattern (Mauss & Gross, 2004).

In terms of psychotherapy, emotional processing and regulation have been described as

key factors that influence the facilitation of therapeutic change across models (Bridges, 2006; Greenberg & Pascual-Leone, 2006). A deeper awareness and processing of emotions allows for personal meaning to be explored (see also Wiser & Arnow, 2001) and impels clients to work for change (see also Linehan, 1993). Beutler et al. (2003) cite several major reviews and conclude that “emotional arousal will increase positive outcomes, especially if applied early in the treatment” (p. 263). However, Greenberg and Pascual-Leone (2006) point out that some incorrectly equate emotional arousal with felt intensity instead of representing emotional experience or the depth of emotional processing. This level of processing is achieved when, in the context of an empathic and validating therapeutic relationship, the therapist helps clients to create new meaning by experiencing, exploring, and restructuring their emotions (Greenberg & Paivio, 2003).

Although the focus on emotions in couple therapy has steadily increased in recent years across therapeutic approaches, the most salient example of utilizing emotions to facilitate change in couple therapy is emotionally focused therapy (EFT), a systemic and experiential approach that helps clients “reprocess and reformulate their emotional responses” in the context of their couple relationship and ultimately establish more secure emotional bonds (Johnson, 2003b, p. 16). This process centers on healing from an attachment trauma, where one partner reached out to the other during a time of distress and did not have his/her needs met. This often leads to a pattern similar to pursue-withdraw, where one partner demonstrates high levels of emotionality and negativity and the other partner consistently delays and separates from the partner during couple interaction. In this manner, part of treatment in EFT involves engaging the withdrawing partner while also softening the pursuing/blaming partner (Bradley & Furrow, 2004).

One of the unique contributions of EFT is that it emphasizes the idea that emotional

processes within couple relationships are related to attachment and that understanding couple relationships from an attachment perspective can inform clinical practice. However, EFT stops short of conceptualizing the reciprocal relationship between emotional experience inside and outside of therapy and a person's attachment *model* of self and other. The following sections will provide an overview of attachment theory and its potential as an important client characteristic in client-treatment matching in couple therapy. This will include how relationships with caregivers as early as infancy contribute to how individuals view their adult close relationships as well as how emotions are processed, regulated, and ultimately expressed within those relationships.

An Overview of Attachment Theory and Close Relationships

The previous section explained how empirical research has shown that emotional experience is an important aspect of treatment process and contributes to outcome. However, little research has looked at how client characteristics (e.g., attachment) might influence emotional experience. This section will provide an overview of attachment theory, its relationship with emotional experience, and existing research that points towards attachment being a potentially important match variable. Originating in the 1940's, attachment theory emphasizes the innate human need to establish non-interchangeable, long-term relationships with a few individuals, beginning during the first months of life (Ainsworth et al., 1978; Bowlby, 1982). Bowlby utilized an integrative, multi-disciplinary approach to conceptually validate the idea that even infants' earliest experiences with primary caregivers instruct them about whom "attachment figures are, where they may be found, and how they may be expected to respond" (Bowlby, 1973, p. 208).

Attachment figures serve as potential secure bases from which individuals explore the

environment and safe havens from which they seek comfort when feeling threatened or distressed (Bowlby, 1973; Haft & Slade, 1989). Unexplained separation from these attachment figures yields distress, while reunion brings relief. These interactions with attachment figures contribute to an internal working model (IWM; Bowlby, 1973) of self and other that regulates a person's emotional response by indicating (a) the level of safety and comfort found in close relationships when confronted with separation, threat, or distress, (b) the probable availability and responsiveness of attachment figures in attending to the person's distress, and (c) the individual's own worthiness to receive sensitive, loving care from attachment figures.

Ainsworth, after working with Bowlby early in her career, developed a strong empirical base for Bowlby's theory based upon meticulous observation of naturalistic caregiver-child interaction. Because of Ainsworth's methodological rigor, she and her colleagues (Ainsworth et al., 1978) developed a laboratory procedure, the Strange Situation (SS), during which they identified distinct infant behavior patterns that occurred at various points of separation and reunion. The SS is a 20 minute, eight-episode experiential paradigm designed to promote attachment-seeking behaviors in the infant (Ainsworth & Bell, 1970). Infants who expressed their needs for closeness and connection directly and were calmed easily (*secure*) were more likely to have attuned, responsive mothers. Those who actively tried to ignore the caregiver (*avoidant*) were more likely to have had their expression of needs responded to with rejection, and those who expressed a form of direct anger while simultaneously seeking closeness (*ambivalent*) were more likely to receive inconsistent responses to their expressions of need. Later, another classification (*disorganized*) was added to describe those infants who demonstrated odd or disorganized behaviors in the SS (Main & Hesse, 1990).

Dozier et al. (2001) offer a useful conceptualization of these varying attachment states of mind: “When secure or autonomous strategies fail to produce desired outcomes, alternative secondary strategies are adopted” (p. 63). These secondary strategies exist on a continuum of deactivation-hyperactivation of the attachment behavioral system (Kobak et al., 1993). When infants’ signals for closeness and safety from a caregiver during moments of distress have been met consistently with rejection, they respond by shutting down or deactivating emotionally when distressed or threatened. Others whose caregivers provided inconsistent responses during distressing moments—consisting of a mix of loving, rejecting, and enmeshed caregiver reactions—become hyper-aroused when distressed in an effort to maximize the chance for a loving response. This hyperarousal is often an exaggerated solicitation of love and comfort that often pushes away and rejects the attachment figure. Disorganized attachment, typically manifested by anomalous oscillations between hyperactivating and deactivating infant behavior, has been linked to frightened, threatening, or dissociative actions by the attachment figure (Hesse & Main, 2006). In this manner, the attachment figure is the primary source of the infant’s distress rather than a secure base and safe haven from which to explore or seek comfort.

Attachment in Adulthood

Having briefly explained how a person’s attachment model forms in infancy, this section summarizes how attachment has been utilized to understand attachment relationships in adulthood. The original focus on the formation of infant attachment in the early years of life and its relationship to caregiver behavior generated a great deal of interest in attachment at other developmental periods across the lifespan, including childhood and adolescence (Parkes, Stevenson-Hinde, & Marris, 1991). The focus on the influence of attachment shifted onto adulthood as researchers began to study parents’ attachment experiences in addition to those of

their children. This began with conceptualizing adult bereavement (Bowlby & Parkes, 1970; Parkes, 1972) and marital separation (Weiss, 1975) from an attachment perspective. Later, the focus shifted to the functioning of marital/sexual relationships (Ainsworth, 1991; Weiss, 1991), including how adult attachment patterns and representations (George, Kaplan, & Main, 2002) influence their romantic relationships (Hazan & Shaver, 1987).

Adult Attachment: Two Alternative Measurement Approaches

Two distinct empirical traditions of studying attachment in adulthood have developed with divergent strategies in conceptualizing and measuring attachment that yield substantially different results (Crowell, Treboux, & Waters, 1999; Fortuna & Roisman, 2008; Roisman et al., 2007). One approach is rooted in social and personality psychology and based primarily on self-report; the other utilizes narrative/discourse measurement based on the Adult Attachment Interview (George et al., 2002) which is more typical of developmental psychology. A social or personality psychology approach operates from the belief that attachment can be measured from individuals' conscious appraisals and attributions about themselves and their relationships (Crowell, Fraley, & Shaver, 1999). In contrast, a developmental perspective presumes that the expression of attachment is an unconscious process approximated through specific representations occurring during the process of an interview or interpersonal interaction (Roisman et al., 2007).

There are also conceptual differences between these two approaches to measuring adult attachment (Crowell, Treboux, & Waters, 1999), with each emphasizing somewhat different elements of both Bowlby's and Ainsworth's work. In addition, empirical studies have found, at best, modest to moderate statistical associations (Bartholomew & Shaver, 1998; Shaver, Belsky, & Brennan, 2000). In perhaps the most comprehensive analysis of the relationship between self-

report and narrative/discourse categorical dimensions of attachment to date, Roisman et al. (2007) conducted a meta-analysis that found only trivial to small associations (mean $r = .09$, meta-analytic $N = 961$). They also assessed for similarities between the two approaches across personality traits and adult relationship functioning, again yielding few commonalities. Fortuna and Roisman (2008) analyzed the relationship between the two adult attachment measurement traditions across reports of psychiatric symptomatology and life stress. Results again showed little overlap between the two approaches, providing additional evidence that these attachment measures “seem to tap different aspects of ‘security’” (Fortuna & Roisman, 2008, p. 12).

A variety of potential explanations exist for these dissimilarities, many of which target data that support the efficacy of the author’s preferred approach (Fraley, 2002). Beyond the debate over validity, there appear to be some legitimate differences between approaches in terms of the type of relationship between attachment insecurity and variations in an individual’s psychopathology or close relationships. Recent research has found divergent implications of attachment insecurity as measured by the two approaches in terms of psychopathology and interactional quality. The primary difference rests in whether attachment insecurity represents a general risk for problems in these areas (risk model) or if problems arise only under conditions of high stress (diathesis-stress model; Fortuna & Roisman, 2008; Roisman et al., 2007). In other words, the issue is not whether a link exists but how stress may moderate these relationships differently for each measurement approach.

Thus far, no consistent pattern of results and implications for couple relationships has emerged for either approach. Although self-report attachment security was related to relationship quality when couple interactions were perceived as stressful (diathesis-stress model; Roisman et al., 2007), self-report attachment insecurity was associated with psychopathology

under both high and low life stress (risk model; Fortuna & Roisman, 2008). Conversely, security as measured by the Adult Attachment Interview (AAI) was associated with higher levels of relationship quality under conditions of high and low life stress (risk model; Roisman et al., 2007), while AAI insecurity was associated with psychopathology only under conditions of high life stress (diathesis-stress model; Fortuna & Roisman, 2008).

Regardless of the reasons behind the differences between approaches, the trivial to small overlap between them necessitates that clear distinctions be made when discussing the literature and implications of research using each measurement approach. Too often generalizations are incorrectly made across both approaches, as if the measurement approaches were equivalent (see Johnson, 2003a, for an example). Because literature from each is relevant to the current research, attachment will be discussed using both self-report and narrative/discourse measures. The sections that follow summarize attachment-related measurement issues, relevant intrapersonal and interpersonal findings, and clinical implications separately for each approach.

Narrative/Discourse Attachment Measurement

The Adult Attachment Interview (AAI; George et al., 2002) has become the primary narrative/discourse method for measuring adult attachment. Developed by Mary Main, a student of Ainsworth, the AAI is a semi-structured interview that assesses a person's current "state of mind with respect to attachment" (Hesse, 2008, p. 554). Consisting of 20 open-ended questions with a variety of probes, the AAI asks respondents about their early childhood relationships with their parents, including any issues of rejection, abuse, loss, and trauma. Coding the interview is based upon the concept of "narrative coherence" regarding childhood experiences that has been linked to a secure state of mind related to attachment and is based upon criteria Grice (1975) established for collaborative discourse: *quality* (consistent information and proper evidence);

quantity (appropriate length of talk-turns); *relation* (relevant speech); and *manner* (clear and orderly speech).

Classification labels for the AAI (secure-F, dismissing-Ds, preoccupied-E, and unresolved-U) are different from those assigned in the Strange Situation (secure-B, avoidant-A, resistant/ambivalent-C, and disorganized-Ds), but they are conceptually parallel to one another in terms of how individuals view attachment relationships and respond to distress. Secure individuals—as measured by the AAI—present a coherent and balanced narrative of their experiences characterized by an autonomous and collaborative way of relating (Hesse, 2008). Dismissing individuals typically present an incomplete or inconsistent picture of their early childhood characterized by extreme idealization or derogation of attachment figures and experiences. They may also appear to block discourse by insisting on a lack of memory. Individuals assigned the preoccupied classification on the AAI demonstrate involving anger towards the attachment figure or passivity/vagueness of discourse. Both forms of preoccupation are characterized by a sense of incoherence, irrelevance, and overall confusion. Unresolved attachment is assigned when a person’s monitoring of discourse or reasoning abruptly changes during discussions of loss or abuse (Hesse & Main, 2006).

The Adult Attachment Interview (AAI) and the Strange Situation (SS). One of the most important elements of the AAI is its link with SS findings. For example, an infant’s avoidant classification upon reunion in the SS is strongly related to his/her caregiver’s dismissing state of mind as measured in the AAI. A meta-analysis of 14 studies found a 75% correspondence between two category (secure/insecure) parent-infant attachment and a 70% three category match (ambivalent/preoccupied, avoidant/dismissing; secure/secure; van IJzendoorn, 1995). Establishing an association between the AAI and the SS was important for questions of validity,

since SS findings were based upon naturalistic observations of the actual infant-caregiver relationship. In this manner, the AAI has been able to predict differences in how parents behave towards their offspring and how their infants respond.

To control for potential confounds, including infant characteristics that might influence parenting behavior (e.g. temperament), several studies administered the AAI to mothers prior to birth and compared those results to infant SS classifications at one year (Benoit & Parker, 1994; Fonagy, Steele, & Steele, 1991; Ward & Carlson, 1995). Each of these studies yielded similar results to those of the meta-analysis, finding at least a 75% two-group (secure/insecure) match. Two of the studies (Benoit & Parker, 1994; Ward & Carlson, 1995) actually showed a 4-group match between SS and AAI classifications of 68% (secure/secure, avoidant/dismissing, ambivalent/preoccupied, and disorganized/unresolved). Interestingly, Benoit and Parker (1994) also gathered information across three generations, with a grandmother-infant match of 75% across three categories and 49% across four. Thus, there is a much stronger than chance association between mother-infant attachment classifications.

Self-Report Attachment Measurement

Self-report attachment is an outgrowth of the effort to understand and effectively measure adult romantic attachment from a social and personality psychology perspective. In particular, the self-report tradition sought to explore “the possibility that romantic love is an attachment process” (Hazan & Shaver, 1987, p. 511). There are a variety of categorical or continuous self-report measures from which to choose which represent the progression of attachment measurement in the field of social and personality psychology. However, developing a reliable and valid self-report measure of attachment has proven to be somewhat of a challenge. Whereas substantial attention and effort have been given to anchor attachment as measured by the AAI

with Strange Situation results, no research as yet has sought to demonstrate a relationship between self-report attachment and the Strange Situation. This fact, coupled with the evidence of very little empirical overlap between AAI and self-report attachment results, has made it difficult to definitively measure attachment via self-report methods, even though those methods appear to conceptually parallel to Ainsworth et al.'s (1978) coding and subscales. The remainder of this section outlines the historical progression of self-report attachment instruments while also summarizing the progress that has been made in this area.

In order to begin understanding the potential role of self-report attachment in adulthood, Hazan and Shaver (1987) established a categorical, forced-choice measure with three paragraphs based upon Strange Situation attachment categories. Responses ranged from relative ease in forming and comfort with relationships (secure), to discomfort with closeness and difficulty trusting others (avoidant), to fears that others would not get as emotionally close as desired and fears of abandonment (anxious/ambivalent). Hazan and Shaver's (1987) initial study found associations between attachment-style categories and love experiences, working models of self and relationships, reports about childhood experiences with parents, and a measure of trait loneliness.

Hazan and Shaver's (1987) measure was utilized in a number of additional studies before continuous self-report measures were developed to enable measurement of the variation within attachment categories, increase reliability, and decrease measurement error (Mikulincer & Shaver, 2007). Two continuous measures were independently developed in the early 1990's to address some of these issues by deconstructing Hazan and Shaver's measure into separate items. The Adult Attachment Questionnaire (AAQ; Simpson, 1990) consists of 13 items and two factors, attachment anxiety and avoidance, while the Adult Attachment Scale (AAS; Collins &

Read, 1990) is an 18-item scale that assesses respondent beliefs on three factors relating to beliefs about closeness, depending on others, and potential abandonment.

A few years later, the Attachment Style Questionnaire (ASQ; Feeney, Noller, & Hanrahan, 1994) was developed. Instead of its items being adapted from Hazan and Shaver's measure, Feeney et al. (1994) constructed the ASQ directly from attachment theory principles. The ASQ consists of 40 items with five factors relating to attachment anxiety or avoidance: self- and other-confidence, relationship anxiety, feelings about closeness, level of approval-seeking, and priority given to relationships. These continuous measures of attachment, each primarily addressing attachment anxiety and avoidance, had the desired effect by improving internal consistency and test-retest reliability to moderate levels.

Bartholomew (1990) constructed a measure from an integration of attachment principles relevant to both the AAI and Hazan and Shaver's (1987) self-report measure. In this manner, a dimensional model was created that consisted of four quadrants representing the potential for positive or negative models of self and other. This self-report measure is unique in that it used the adapted AAI labels. Bartholomew conceptualized *secure* attachment as having a positive model of self and other. Those with a positive model of self but a negative model of other were classified as *dismissing*, while individuals with a positive model of other and a negative model of self were classified as *preoccupied*. The final group represents Bartholomew's unique contribution to the attachment categories. Individuals with both a negative model of both self and other were considered *fearful*.

From these concepts, two attachment measures were developed: the Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991), and the Relationship Scales Questionnaire (RSQ; Griffin & Bartholomew, 1994). Adapted from Hazan and Shaver's (1987) measure, the

RQ is composed of four short paragraph prototypes of the attachment styles, with the additional paragraph representing fearful attachment. An additional item allows respondents to rate each paragraph on how much it is like them by using a 7-point Likert scale, thus making continuous measurement possible. The RSQ was developed by deconstructing the RQ content into a 30-item questionnaire intended to yield only a continuous measure of attachment.

Although Bartholomew's (1990) dimensional concept of attachment is valuable from a conceptual standpoint, internal consistency has been rather low, bringing into question its general utility. As a result, Brennan, Clark, and Shaver (1998) constructed a questionnaire incorporating all the items from the existing continuous scales and administered the entire set to a large undergraduate sample. A factor analysis led to the development of the Experiences in Close Relationships scale (ECR; Brennan et al., 1998). The ECR consists of two, 18-item scales with high reliability that are based on the two dimensions identified in the factor analysis (avoidance and anxiety). As a result, Brennan et al. argue that the ECR scales more accurately parallel Ainsworth et al.'s (1978) attachment constructs and coding scales originally utilized for mother-infant interactions.

Attachment and Emotional Experience in Couple Relationships

Earlier sections emphasized the importance of effectiveness research in couple therapy, including the need to understand how to decrease the number of clients who do not receive optimal results from therapy. Matching treatment to client characteristics represents one potentially useful way to enhance treatment effectiveness. However, the client-treatment matching research has been limited in focus and scope, thereby limiting the ability to accurately assess the possible impact of client characteristics. A common factors approach that focuses on matching and adapting core elements of treatment process to client characteristics such as

attachment seemingly holds a great deal of promise. In addition, attachment has been suggested as a more relevant client characteristic than the usual choice of diagnostic category. Aspects of emotional experience (e.g., depth of emotional processing) have regularly been found to be examples of such process mechanisms that have been linked to positive outcomes. How individuals process emotion has a direct effect on how they attempt to regulate it. When individuals have difficulty processing emotion, they often respond by over- or under-regulation.

Attachment theory sets forth parallel ideas within a relational framework. From a very early age, people develop relationship models that inform them how caregivers will respond when they are confronted with separation, threat, or distress (Bowlby, 1973, 1982). If their needs are not consistently met with comfort, sensitivity, and closeness, they develop hyperactivating or deactivating coping strategies that continue to be relevant throughout the lifespan and influence their close adult relationships (Kobak et al., 1993). These attachment ideas closely mirror the concepts of emotion processing and regulation (including emotional over- and under-regulation), but add the relationship component that illustrates how individuals develop an internal working model of self and other (Bowlby, 1973).

Distress (often evidenced through the emotions of fear, anger, or sadness) activates the attachment behavioral system (Kobak & Madsen, 2008), which results from the internal model of relationships with respect to the instrumentality and function of attachment figures in helping regulate distress when separated or threatened. This model then organizes the cognitive, behavioral, and emotional response (i.e., the depth of emotional processing and emotion regulation). As such, attachment is an intrapersonal construct with intrapersonal and interpersonal consequences and shows great potential for being a client characteristic with an important theoretical connection to a core variable associated with positive treatment outcomes:

emotional experience. The following sections focus on empirical research that has begun to investigate the relationship between attachment and two indicators of emotional experience: physiological arousal and interpersonal distress.

Adult Attachment and Physiological Arousal

Signs of high levels of emotional intensity and the adverse emotional coping they promote are subtle and may not be immediately demonstrated. However, physiological measures have proven to be valuable indicators of emotional experience that only later manifest itself in outward behavior. In research with couples, physiological measures (e.g., skin conductance and cardiovascular) have been labeled as indicators of *diffuse physiological arousal* (DPA; Levenson & Gottman, 1985), conceptualized as a general alarm mechanism found to be predictive of couple dissatisfaction. DPA results from an inability to self-soothe in a stressful interpersonal situation such as a recorded discussion of a current couple problem or concern. This *emotional flooding* contributes to higher levels of interpersonal distress and dysfunctional interaction, including a propensity towards demand-withdraw patterns (Gottman, 1998).

Gottman (1990) also found that DPA was associated with a person's decreased ability to process information and a regression to more automatic patterns of behavior and cognition, thus providing further evidence that lower levels of emotional processing lead to heightened emotional intensity and lower regulation. In terms of attachment, physiological indicators represent an important way to understand the potentially subtle ways that attachment relates to a person's experience when distressed, one goal of this study. Sroufe and Waters (1977) first used physiological data this way, finding that in several of their case studies, avoidant infants demonstrated accelerated heart rate upon reunion in the Strange Situation, even though they appeared unexpressive and unresponsive to their caregiver's presence and did not signal that they

were distressed and in need of comfort. The following sections summarize how researchers have used physiological measures since that time to understand attachment in adulthood.

Narrative/discourse attachment. Relatively few studies have looked at the link between AAI security versus insecurity and a person's physiological response to distress. Two of these (Dozier & Kobak, 1992; Roisman, Tsai, & Chiang, 2004) utilized the Kobak (1989) q-set method of coding the AAI to differentiate between attachment strategies and physiological responses during the AAI. Dozier and Kobak (1992) found that individuals higher in deactivating strategies showed greater changes from baseline (signs of emotional suppression) on AAI questions about separation, rejection, threat, and relationship evaluation. However, changes in skin conductance were not related to other patterns of insecurity. Roisman et al. (2004) later replicated these findings and provided additional evidence that deactivation was "uniquely correlated with electrodermal activity" (p. 777) by showing that deactivation was not correlated with cardiovascular activation.

One other study analyzed how attachment strategies were related to physiological responses during couple conflict (Roisman, 2007). In seeking to minimize potential limitations of other studies that focused primarily on dating couples, participants in this study were 40 engaged couples and 40 couples who had been married at least 15 years. Findings revealed that during couple interaction about conflict, deactivating adults demonstrated higher deviations in skin conductance from baseline levels, while hyperactivation was associated with increases in heart rate. Interestingly, skin conductance levels for secure individuals remained near baseline throughout the couple interaction.

Self-report attachment. The link between physiology and self-report attachment has been analyzed by several different methods, with varying results. One study of dating couples found

an inverse relationship between anxious and avoidant attachment in terms of diastolic blood pressure as well as the interaction between pulse rate and systolic blood pressure (Kim, 2006). Although each of these indicators increased as perceived stress increased for those who reported anxious attachment, they actually decreased for those who endorsed avoidant attachment. Another study of women in a dating relationship confronted participants with a potentially stressful situation on two different occasions, varying her partner's presence (Carpenter & Kirkpatrick, 1996). Interestingly, anxious and avoidant individuals exhibited elevated heart rate and blood pressure responses to the potential stressor only when the partner was present. These divergent findings make it difficult to understand whether attachment insecurity yields an increase or decrease in physiological indicators of stress as measured by heart rate and blood pressure. An important question is whether those two indicators discriminate between attachment styles in ways that are consistent with attachment theory.

Another study measured the skin conductance of 74 non-distressed, cohabiting couples during an attachment-related discussion (Diamond, Hicks, & Otter-Henderson, 2006). Findings for those who reported avoidant attachment were similar to those for individuals classified as dismissing on the AAI. The elevated skin conductance for those reporting an avoidant attachment style were typical of repressive coping, "in which tasks that elicit negative thoughts and feelings are accompanied by *heightened* and *escalating* sympathetic nervous system reactivity in the absence of corresponding self-reported distress" (p. 221). Also similar were the findings that attachment anxiety was not associated with skin conductance level or change.

Two other methods for measuring the relationship between attachment styles and physiological reactivity have been vagal tone and cortisol levels. Vagal tone, which has been identified as an indicator of emotion regulation, was found in one study to be negatively

associated with attachment anxiety and positively associated with perceptions of emotional security (Diamond & Hicks, 2005). Interestingly, fluctuations in vagal tone were not related with the presence of an individual's partner. In another study (Powers, Pietromonaco, Gunlicks, & Sayer, 2006), cortisol levels were measured at seven points before and after 124 adolescent couples engaged in a problem resolution task and varied according to gender. Although attachment avoidance predicted cortisol levels in women, attachment anxiety was most predictive for men.

In sum, it appears that skin conductance, at least in terms of deviation from baseline, has been a reliable and valid indicator of emotional suppression that often accompanies attachment deactivation as measured by both self-report and narrative/discourse traditions. However, findings regarding potential indicators of attachment hyperactivation have been less conclusive, with heart rate and vagal tone showing the most promise. However, heart rate is influenced by both sympathetic and parasympathetic activity (Bradley & Lang, 2007). This can be problematic because these systems at times operate in opposition to one another, with the sympathetic nervous system varying with emotional intensity and the parasympathetic nervous system activating during times of rest versus stimulation (Bradley & Lang, 2007). This makes it difficult to reach definitive conclusions from heart rate results alone. As an indicator of emotion regulation, vagal tone (Porges, Doussard-Roosevelt, & Maiti, 1994) may effectively measure attachment hyperactivation, but more research is needed to demonstrate its reliability and validity in both attachment measurement traditions.

Adult Attachment and Interpersonal Distress

The foregoing summarized research focused on the relationship between attachment and an unconscious, intrapersonal indicator of emotional experience, physiological arousal. Another

area that is strongly influenced by emotional processing and regulation and that serves as an important indicator of a person's experience is the interpersonal distress within a relationship. Interpersonal distress has been conceptualized as a conscious, interpersonal construct that reflects how emotions are both experienced and expressed within a relationship along a continuum of softening, hostility, and withdrawal according to the following five dimensions (adapted from Seedall and Butler, 2006): (a) level of emotional evenness and stability (calming); (b) amount of clarity in understanding self, partner, and the problem (understanding); (c) self and partner accessibility, receptivity, and responsiveness (closeness); (d) the ability to express one's thoughts, feelings, and concerns (safety); and (e) the optimism for relationship improvement and change (hope).

Interpersonal distress parallels how emotional intensity is manifested during couple interaction. Emotion under-regulation (i.e., attachment hyperactivation) is likely to lead to hostility, while over-regulation (i.e., attachment deactivation) is more predictive of withdrawal. Both disrupt relationships and lead to relationship distress, dissatisfaction, and ultimately dissolution (Gottman, 1993; Gottman & Levenson, 1992; Heavey, Christensen, & Malamuth, 1995; Weiss & Heyman, 1997). The alternative to withdrawal and hostility is softening. In emotionally focused therapy (EFT) literature, softening is a bonding process contributing to positive outcomes (Bradley & Furrow, 2004; Johnson & Greenberg, 1988), whereby "a newly vulnerable spouse reaches out to a now accessible and engaged partner and asks for his or her attachment needs to be met" (Johnson, 2003a, p. 108).

Interestingly, attachment research has looked at interpersonal distress exclusively in terms of how couple interaction is perceived by an outside observational coder rather than how it is continuously experienced (as reported by each partner) during the couple interaction.

Nonetheless, much can be learned from assessing interpersonal distress from a variety of methods, including alternative perspectives (global and continuous self-report as well as the observational reports of couple behaviors or interaction quality by trained coders) and times (immediate as well as long-term feedback). The following section will summarize the literature on the relationship between attachment and interpersonal distress coded observationally.

Narrative/discourse attachment. Research on how attachment is associated with couple interaction has generally found associations between AAI security and lower levels of interpersonal distress. AAI security has been associated with higher observed marital quality (Roisman, Collins, Sroufe, & Egeland, 2005), as well as greater couple synchrony and lower dominance (Bouthillier, Julien, Dube, Belanger, & Hamelin, 2002). In terms of individual functioning in the context of couple interaction, Bouthillier et al. (2002) found that security in men was associated with statistically significant differences in terms of support, self-disclosure, and engagement. Security in women was also associated with higher levels of support offered to their partner. Another study specifically coded caregiving behaviors during a conflict resolution task (Simpson, Winterheld, Rholes, & Orina, 2007). Secure individuals on the AAI were more accepting of and calmed by their partners' emotional caregiving efforts, while dismissing individuals were calmed by more instrumental caregiving.

Similarly, security in both spouses was associated with less conflict and better overall functioning than married couples where at least one member was insecure on the AAI (Cohn, Silver, Cowan, Cowan, & Pearson, 1992). The lone exception was when a secure man was paired with an insecure woman, in which case their interaction did not qualitatively differ from couples where both spouses were secure. Another study of 145 couples also found some variation in results based on gender and whether security was associated with more positive or

simply fewer negative behaviors (Creasey, 2002). Specifically, there were no differences in positive behaviors expressed by men when controlling for attachment. Rather, the only significant difference was that couples with a man categorized as insecure were coded as more negative than those couples with a secure man. Couples with a woman coded secure, however, displayed significantly more positive *and* less negative behaviors than those couples with a woman coded insecure. Thus, men and women may differ in the effects that their attachment strategies have on their couple interactions as well as the partner in general.

Although most studies of attachment and couple interaction typically consist of relationship-relevant partner distress stemming from discussing an area of disagreement, one study looked at the potential role of attachment on relationship-irrelevant partner distress (Simpson, Rholes, Orina, & Grich, 2002). Heterosexual couples who had been dating for at least three months were observed while the man waited to perform a stressful task. Women classified as secure appeared to be more attuned to their partners' needs, providing more support when it was sought and less when it was not. Interestingly, attachment was not significantly associated with the amount of support-seeking in men.

Most research analyzing the links between attachment and relationship-relevant distress have had non-clinical couple samples. However, one study of distressed clinical couples found an association between lower security on the AAI and difficulty in problem-solving (Wampler, Shi, Nelson, & Kimball, 2003). This included "more negative affect, less respect, less openness, more avoidance, and less willingness to negotiate when interacting with their partner" (p. 497). Wampler et al. (2003) also found that only negative affect was associated with less AAI security, while the only predictor of positive affect was positive affect from the partner, indicating that positive affect may be a reciprocal process while negative affect may be related to greater AAI

attachment insecurity. One other study of clinical couples indicated that insecurity is more common among violent than maritally distressed men (Babcock, Jacobson, Gottman, & Yerington, 2000). Dismissing, violent husbands were the most controlling and distancing, while preoccupied, violent husbands were more provocatively confrontational.

Self-report attachment. A social and personality psychology perspective on attachment has looked not only at the differential effects of attachment on observed behaviors that contribute to interpersonal distress but also on the self-reported perceptions and attributions that may influence those behaviors. For example, more secure individuals reported feeling less threatened during conflict, thereby leading to less fighting and more effective problem resolution (Pistole & Arricale, 2003). Those who reported greater attachment insecurity also reported lower levels of validation, higher escalation, and more problematic conflict management strategies (Creasey & Hesson-McInnis, 2001; Creasey, Kershaw, & Boston, 1999). Both avoidant and anxious individuals reported fewer adaptive responses to positive and negative events (Campbell, Simpson, Boldry, & Kashy, 2005; Collins, Ford, Guichard, & Allard, 2006). Specifically, Campbell et al. (2005) found that attachment anxiety was associated with perceptions of conflict as more severe, hurtful, and far-reaching, while attachment avoidance was related to viewing supportive events as less positive.

Similar to AAI results, self-reported security appeared to be an asset during observed couple conflict (Guerrero & Jones, 2005). Individuals who reported high levels of attachment anxiety were viewed as less composed (Guerrero & Jones, 2005), more negative (Simpson, Rholes, & Phillips, 1996) and more distressed following the couple interaction, regardless of their partners' behaviors (Campbell et al., 2005). They were also more likely to overreact and escalate conflict (Campbell et al., 2005). Attachment avoidance was associated with lower levels

of observed expressiveness and other-orientation (Guerrero & Jones, 2005) as well as fewer pro-relationship behaviors (Collins, Cooper, Albino, & Allard, 2002).

Two other observational studies looked at how self-reported attachment differentiated between behaviors when one partner experienced relationship-irrelevant distress. In each study, couple behaviors were coded while they waited for the man (Simpson et al., 2002) or the woman (Rholes, Simpson, & Orina, 1999) to engage in a stressful task. Significant results were primarily related to attachment avoidance. When women scored as avoidant were faced with a potentially stressful situation, they displayed greater anger in the context of their own distress or when they perceived little partner support (Rholes et al., 1999). They also provided less support when their partners were the ones faced with a potentially stressful situation, regardless of the amount of support their partners sought (Simpson et al., 2002). When their partners were experiencing distress, men scored as avoidant were more likely to display high levels of anger. The only significant result for anxious (ambivalent) attachment was that women scored as anxious behaved more negatively toward their partners in a five-minute period after they were informed that they would not have to do the stressful task, especially if they had been distressed and sought support (Rholes et al., 1999)

In sum, just as analyzing mother-infant interaction was critical to understanding infant behavior in the SS and linking it to attachment, couple interaction research involving either relationship-relevant or irrelevant distress has the potential to yield valuable insights into ways that attachment behaviors are manifested in adult romantic relationships. In terms of observed couple interaction, it appears that attachment security as measured by both traditions is an overall asset, while insecurity is associated with higher levels of interpersonal distress and more negative interaction patterns. However, one study using the AAI found that security was not associated

with more positive feelings about the relationship when assessed five years after the initial assessment. In that study, all partner attachment pairings (secure-secure, insecure-secure, insecure-insecure) were equally likely (20%) to have ended their relationship (Crowell & Treboux, 2001), indicating that attachment may not predict later relationship dissolution. Regardless, more research is needed to understand how attachment influences relationship and therapy process and how it may differentiate between partner experiences in each.

Attachment in Psychotherapy

As mentioned previously, although research has begun to establish a link between attachment and indicators of emotional experience in relationships (e.g., physiological arousal and interpersonal distress), more research is needed to fully understand the differentiating effects of attachment in couple relationships. Of perhaps even greater importance is the need for analyzing how attachment relates to individuals' experiences in psychotherapy. Twenty years ago, Bowlby (1988) expressed disappointment at the apparent disconnect between attachment theory and clinical practice, even though he believed that both were inherently compatible. At that time, he outlined five therapeutic tasks anchored in attachment theory: (a) create a secure therapeutic environment, (b) assist clients to understand and evaluate how s/he engages current relationships, (c) explore ways in which current behaviors are linked to past childhood experiences with attachment figures, (d) use the therapeutic relationship as a model for exploration, and (e) help clients evaluate current relationship images, develop alternatives, and work towards restructuring them. Unfortunately, relatively little empirical work has been done in any of these areas. This section summarizes existing literature that has addressed the relationship between attachment and clinical work.

Narrative/discourse attachment. Although valuable work has begun to look at the

relevance of attachment-informed assessment and intervention and their influence on outcome (see Steele & Steele, 2008), only a small number using narrative/discourse measures of attachment have treated attachment as a client characteristic that influences therapeutic process. Clients classified secure on the AAI were more compliant during treatment (Dozier, 1990) and more committed to learning and putting what they learned into practice (Korfmacher et al., 1997) than those with other attachment strategies. Clients with dismissing states of mind were judged to be less invested in treatment (Dozier, 1990; Korfmacher et al., 1997) and less likely to self-disclose (Dozier, 1990). However, a study of that analyzed the attachment state of mind of 54 clients with serious psychiatric disorders and their case managers found a complementary case manager-client effect of deactivation (Tyrrell, Dozier, Teague, & Fallot, 1999). Highly deactivating clients reported a higher working alliance with case managers who were lower in deactivation, while clients low in deactivating tendencies reported a higher working alliance with case managers who were higher in deactivation.

Also of note are the findings of an outcome study of 85 nonpsychotic inpatients that those classified as dismissing on the AAI were most likely to demonstrate clinical improvement (Fonagy et al., 1996). This led Meyer and Pilkonis (2001) to conclude,

Securely attached patients might engage productively in most therapy settings, whereas those with dismissing attachment may require concentrated or targeted interventions, helping them overcome their characteristic detachment. Once they do connect emotionally with a therapist, however, improvement might be all the more dramatic. (p. 467).

Although these findings support the idea that attachment does indeed influence therapeutic process and outcome, more work is needed to understand how attachment relates to client

experiences, which in turn influence process and outcome. In other words, beyond knowing that certain individuals may be easier or more difficult to treat, it is important to know what they may be experiencing in therapy and how that may be facilitating or impeding positive therapy process and how treatment could thereby be adapted to improve outcomes.

Self-report attachment. With respect to self-report attachment, much of the clinical research has focused on the effects of attachment on the therapist-client working alliance. However, results have varied. In one study using the RQ, security was significantly related to a positive working alliance (Satterfield & Lyddon, 1998). Other studies have found a relationship between a weaker working alliance and higher levels of avoidance (using the RQ; Parish & Eagle, 2003) and anxiety (using the AAS; Mallinckrodt, Coble, et al., 1995). As one exception to these findings, Reis and Grenyer (2004) found no significant relationship on the RQ between attachment and working alliance. One other study measured the working alliance during the beginning, middle, and end stages of therapy and found evidence of unique treatment trajectories (Kanninen, Salo, & Punamaki, 2000). Although the working alliance remained relatively stable at all three points for secure clients, it was more likely to be poor at the middle stage for anxiously attached individuals before becoming much stronger at the end. This differed from avoidant clients, who reported that the alliance was deteriorating at the end stage.

In addition to being associated with the working alliance, attachment has also been found to relate to therapy process. Although not all studies found that attachment differentiated between those clients who progressed and those that did not (Cyranski et al., 2002), security has been linked to higher levels of client-therapist agreement perceived by the therapist regarding the tasks and goals of therapy (Dolan, Arnkoff, & Glass, 1993). Attachment avoidance in one study was associated with more negative views about engaging in therapy (Lopez,

Melendez, Sauer, Berger, & Wyssmann, 1998), and higher concurrent levels of anxiety and avoidance (conceptualized as fearful attachment) were inversely related to viewing the first therapy session as smooth and valuable (Mohr, Gelso, & Hill, 2005).

Although findings indicate that attachment as measured by self-report is associated with therapy process and outcome, more research is needed to ensure that these significant results are not a product of method variance that may accompany using self-report attachment and outcome measures. Regardless, additional research will enhance understanding of the process by which attachment influences therapy. There is also some evidence that treatment approach can be effectively matched to client attachment. One study found that cognitive behavioral therapy (CBT) was more effective in treating major depression for individuals scored as avoidant than interpersonal psychotherapy (IPT; McBride et al., 2006). However, beyond simply knowing that one approach is better than the other in terms of attachment, it is important to discover what elements and processes are making the difference in clients' experiences.

Attachment in Clinical Work with Couples

Unfortunately, only one research article has analyzed the relationship between attachment and clinical work. Makinen and Johnson (2006) utilized the Experiences in Close Relationships scale (ECR) to assess whether EFT led to categorical attachment change after 12 therapy sessions. However, their study found no differences between attachment dimensions in terms of therapeutic outcome, leading to hypotheses that they “may be more enduring characteristics that are not easily modified” (p. 1062), that attachment change may “require a number of positive experiences even after an optimal 'corrective' experience of new and reparative interactions in therapy” (p. 1062), or that the ECR was “not sensitive enough to detect changes in attachment” (p. 1063) over the 12-session timeframe.

Regardless of the reason, these non-significant outcomes bring up the need to further investigate how couple therapy might influence attachment *continuously*, along a continuous spectrum of security, rather than categorically (Dozier et al., 2005). In other words, rather than focusing on helping individuals completely change longstanding attachment models, therapists work to help clients to enhance the security of their *interactions* by (a) becoming more aware of their propensities and automatic responses; (b) more consciously responding to their partner's distress; and (c) learning to signal and express their needs more appropriately during times of distress. In this manner, therapy focuses on setting the stage for clients to progress towards more secure behavior (Bick & Dozier, 2008). To do this, couple therapists and researchers need to understand what factors may contribute to positive attachment change and whether therapy helps change attachment classification, mobilizes clients for future change, or primarily lessens individual and couple distress.

However, not only can couple therapy potentially influence client attachment, an understanding of attachment may also help therapists effectively adapt their clinical interventions to their clients' attachment characteristics. Eagle (2006) points out, "The challenge to attachment theorists and researchers is to spell out as precisely as possible the ways in which attachment theory contributes to the way one does psychotherapy and the specific interventions one uses" (p. 1087). This may produce farther-reaching effects for therapists than demonstrating that therapy changes or influences attachment.

Unfortunately, couple therapy has seldom attempted to address attachment and therapy process beyond the attachment-based EFT model. EFT explains how attachment informs its approach conceptually but is less clear about how treatment process may be adapted to fit specific client characteristics. Adapting the timing and delivery of specific interventions to client

characteristics such as internal working model of attachment may enhance engagement in the therapeutic process and thereby more effectively facilitate change. If couple therapy is to be effectively adapted to client attachment, more research is needed that analyzes how varying attachment strategies may influence (a) the treatment experiences of clients, (b) how clients approach therapy and (c) how and what interventions may be effectively matched to clients.

The Purpose of This Study

This literature review summarizes how to enhance treatment effectiveness in couple therapy by adapting treatment process to varying client characteristics. Attachment is an intrapersonal characteristic that organizes how individuals approach close relationships in general and the degree to which they seek support when they feel distressed or threatened. When individuals do not trust that their needs will be met, they adopt hyperactivating or deactivating strategies as a way of coping. In this manner, attachment represents a potentially important client characteristic that could influence the clinical experiences of couples as well as the ultimate outcome of therapy.

One of the primary objectives of couple therapy is to improve the process by which partners interact with one another. Emotions and how they are experienced (processed and regulated) have been identified as an integral part of couple interaction that influences process and outcome. An attachment perspective adds a relational component to this process by emphasizing the importance of partners becoming a secure base and safe haven for each other. Yet expressing more vulnerable, primary emotions can be potentially threatening and impede therapeutic change. For example, an individual who has consistently experienced rejection from attachment figures and has developed a deactivating coping strategy may find it difficult to open up emotionally. Others whose attachment figures inconsistently responded to their needs have

adopted hyperactivating strategies that include expressing more volatile, secondary emotions. Thus, attachment patterns as well as the couple's history of interactions will likely influence how well partners signal their own distress as well their responsiveness to each other's distress.

A core issue in couple therapy is how to appropriately handle emotional intensity that often accompanies distress. Therapist-coached, direct couple interaction through enactments holds great promise as a common change mechanism for altering interaction patterns, improving treatment process, and ultimately facilitating long-term couple self-reliance. Yet enactments need to be adapted throughout therapy to partners' willingness and readiness to discuss emotionally-laden content with one another. Although low structured, semi-natural couple interaction may be utilized initially to assess couple functioning, very often the couple's high volatility needs to be buffered by filtering much of the interaction through the therapist, who models healthy interaction. As the emotional experience of the couple begins to change and healthier patterns emerge, the interactional structure shifts again from the standard therapy-like interaction to more freeform direct interaction where the therapist is less active and functions primarily as a process coach.

As a result, only limited conceptual work has addressed how the interactional structure during therapy sessions may be adapted according to couple emotional reactivity. This represents a small step in couple therapy toward understanding how to adapt treatment process to varying client characteristics in order to improve outcome. In order to accomplish this objective more fully, empirical research is needed to understand what influences emotional experience in therapy. Because couple therapy often explores the more difficult aspects of a couple's relationship, an understanding of attachment and how individuals and couples cope with distress in a relationship context is also needed. Although some valuable psychotherapy research exists

that explains how attachment influences relationships, no research has addressed the role of attachment in the context of couple therapy.

This study represents a first step in making some of these connections by studying how the client characteristic of attachment interacts with two general interactional conditions (low structure, semi-natural versus high structure, therapy-like) to influence an individual's emotional experience (physiological arousal and self-reported interpersonal distress). Although both narrative/discourse and self-report attachment were measured during data collection, results from only the attachment self-report measurement tradition are reported as part of this dissertation. In this manner, this study addressed the following research questions:

Research Question 1: Are higher levels of self-reported attachment avoidance and/or anxiety associated with a more negative emotional experience for partners in each of the interactional conditions?

Research Question 2: How do the effects of self-reported attachment account for the differences in emotional experience between the semi-natural and therapy-like conditions?

Research Question 3: How will self-reported attachment influence the congruence between the observed physiological arousal of participants and their moment-to-moment feelings towards their partner?

Chapter III

METHODS

Design

This study investigated the relationship between attachment and emotional experience (i.e., physiological arousal and interpersonal distress) in the context of moderately distressing low structure, semi-natural, and high structure, therapy-like couple interactions. Data were gathered during one 3 ½ -4 ½ hour experimental session consisting of four phases combining self-report, continuous physiological measurement, and interpersonal process recall (Elliott, 1986; Kagan & Kagan, 1990; Kagan et al., 1963) designed to increase experimental validity by measuring variables using a variety of methods (i.e., physiological data, observational coding, interpersonal process recall, and self-report).

The original plan was to counterbalance the semi-natural and therapy-like conditions. However, the option of establishing a fixed order of semi-natural interaction and then therapy-like was chosen for two primary reasons. The potential limitations arising from confounds associated with not counterbalancing the interactions (i.e., not being able to directly compare the effectiveness of the semi-natural versus therapy-like interactions) were deemed less than those that would likely result from couples processing their issues first with the therapist/coach before then being able to discuss the issue directly between spouses. In other words, gaining therapeutic resources before the semi-natural interaction would greatly reduce the likelihood of it representing how participants interact at home. In addition, it made conceptual sense that couples most often talk first about their issues alone before a therapist might intervene. In this manner, this study contrasted the semi-natural condition with a therapy-like condition that was preceded by a semi-natural interaction.

Predictor Variables

Because narrative/discourse attachment data were obtained using the Adult Attachment Interview (AAI) but not analyzed during the dissertation portion of this study, two predictor variables were used in this study relating to attachment: self-reported avoidance and anxiety as measured by the Experiences in Close Relationships scale (ECR). Anxiety and avoidance conceptually parallel the concepts of attachment hyperactivation and deactivation (Kobak et al., 1993). As stated previously, client-treatment matching from a common factors perspective provides a great deal of promise for understanding how to adapt treatment to specific client characteristics. Yet nearly all of the studies have sought to differentiate which therapeutic modalities can be matched to client characteristics, disregarding the ingredients of change shared by treatments. A common factors approach allowed a conceptual shift from focusing on modalities to those processes or interventions that might be can be adapted to client characteristics, including attachment.

Attachment refers to a model of self and other that helps to organize exploratory behaviors as well as the regulation of emotions when confronted with separation, threat, or distress (Bowlby, 1973). When needs are not consistently met, individuals develop one of two forms of emotional coping: hyperactivation or deactivation (Dozier et al., 2001). Although perhaps adaptive in helping the infant's world be more predictable and avoid the pain of rejection, these insecure strategies have been consistently found across two measurement traditions to have negative intrapersonal and interpersonal consequences throughout the lifespan. Yet very little research has been done to understand the relationship between attachment and therapy. Much more is needed to understand how attachment relates to client experiences in therapy in a way that informs how therapists adapt their approaches to specific clients.

One other predictor variable looked at in this study was the condition within which the couple interaction occurred. Whereas individual psychotherapy focuses on therapist interaction with the client, couple therapy provides an additional therapist-client interaction as well as client-client interaction. With this added complexity, organizing and structuring the interactions is paramount for positive outcomes to occur. Yet few empirical or theoretical articles have addressed these issues in couple therapy. Recent work studying enactments has provided the most impetus in this area. During an enactment, the therapist focuses on facilitating direct couple interaction (Butler & Wampler, 1999). However, an enactment consists of more than simply telling partners to talk to one another, something which many beginning therapists errantly believe (Nichols & Fellenberg, 2000). This misconception leads to permissive, inadequately-structured enactments where emotionality and volatility are not appropriately buffered by the therapists, who are then more likely to abandon enactments entirely.

On the other extreme, some therapists tend to exert unnecessary control over sessions by filtering all the interaction through themselves. The centrality of enactments in couple therapy (i.e., facilitating direct couple interaction) has led to a developmental model (Butler & Gardner, 2003) that provides guidelines on how to adapt enactments to varying levels of emotionality and volatility by adjusting the therapist role and overall structure of the interaction (see also Seedall & Butler, 2006). During earlier stages of therapy, the interaction is much more structured and filtered almost exclusively through the therapist. Later stages are more free-form, with the couple interacting directly more often while the therapist coaches from the periphery. The overall goal of the developmental enactment model is couple interactional self-reliance (Butler & Gardner, 2003).

In addition to the structuring problems that may arise when facilitating an enactment,

therapists may also permit couples to interact solely on the surface by talking about superficial issues. This may serve as a buffer and maintain couple reactivity and volatility at manageable levels, but it does not facilitate a deeper emotional experience or move the couple to new relationship patterns, something that models such as EFT emphasize (Johnson, 2004). Although not explicitly tied to Butler and Gardner's (2003) stages of enactments or to any one therapy model, the conditions used in this study (semi-natural and therapy-like) provided varying levels of structuring (low versus high) in the form of the therapist/coach role and activity while also encouraging partners to focus on their emotional experience and expression as they discussed a recent time when they felt hurt, angry, or offended in the relationship.

In the low structure, semi-natural condition, the therapist was present but inactive as both partners interacted directly. During the high structure, therapy-like condition, the therapist/coach was much more active, with the majority of the dialogue filtered through him/her. Although a number of studies have analyzed the relationship between attachment and emotional experience during couple interaction, none has analyzed how that experience changes in the context of a therapy-like interaction. In addition, conceptual and empirical work has discussed how the interactional structure of therapy sessions (therapist role and type of involvement: therapist-client or client-client interaction coached by the therapist) may be adapted according to couple distress, reactivity, and volatility (Butler & Gardner, 2003; Seedall & Butler, 2006). However, no work has compared how attachment strategies might influence therapist or client behaviors within varying interactional contexts. This study facilitated a comparison of how attachment strategies influence variations in partner experiences during both semi-natural and therapy-like interaction.

Outcome Variables

The purpose of this study was to begin to understand the relationship between attachment

and the emotional experiences of individuals during two types of couple interactions commonly experienced in couple therapy. As a result, two outcome variables were measured, consisting of two indicators of emotional experience (physiological arousal and interpersonal distress).

Accessing emotions and using them to create a positive emotional experience and a sense of emotional support is an important vehicle for facilitating positive outcomes in EFT (Makinen & Johnson, 2006). However, even outside of EFT, other evidence-based couple therapy approaches that focus primarily on behaviors and cognitions have identified emotional experience and expression as important pathways for intervention and indicators of outcome (Epstein & Baucom, 2002; Jacobson & Margolin, 1979; Snyder, 2002).

Because emotions are often so complex and learned coping strategies can mask emotional arousal, a physiological indicator, electrodermal activity (EDA) as measured by skin conductance, was chosen as an indicator of emotional experience. EDA has been found used to identify emotional arousal and its subsequent suppression (Dawson, Schell, & Fillion, 2007). A variety of strategies exist for measuring skin conductance (Andreassi, 2007; Dawson et al., 2007), including skin conductance level (SCL) and response (SCR). SCL refers to the average level of skin conductance over a period of time. SCR refers to the number, magnitude, and/or length of changes in skin conductance. The primary methods of skin conductance measurement employed in past attachment literature has been related to SCL as well as the difference between SCL and a pre-established baseline. Measured in this manner, skin conductance appears to be a strong indicator of attachment deactivation (Diamond et al., 2006; Dozier & Kobak, 1992; Roisman et al., 2004). However, SCR indicators and their potential relationship to attachment have not been previously analyzed in the literature.

Whereas physiological arousal as measured by skin conductance is an intrapersonal

indicator, interpersonal distress relates more to emotion expressed in a relational context. This study focused on participant perceptions of their experience reported continuously while observing video of their own couple interaction, in contrast to the usual approach of an outside observer coding the interaction and the participants providing a global, self-report appraisal after the interaction is complete. Global and self-report measures were also used according to principles of interpersonal process recall (Elliott, 1986; Kagan & Kagan, 1990; Kagan et al., 1963). Participants watched their own couple interaction while indicating via wireless perception analyzer dials their feelings (positive versus negative) towards their partner during each moment. Continuous self-report has not been used regularly in couple research but represents an innovative way of understanding experience and change (Gardner, 2004; Gottman & Levenson, 1985, 1992; Griffin, 1993; Levenson & Gottman, 1983). After reporting in each moment their feelings towards their partner, participants provided a global assessment of their overall experience and interpersonal distress across all interactional conditions. Having two contrasting measures of self-report also provided further insight into whether attachment strategies influence how interactions are perceived (globally or continuously).

Other Variables

To assess possible confounds, self-report data were gathered on several other variables that may influence how couples interact and ultimately experience their interaction during semi-natural and/or therapy-like interactions. These included participant gender, level of disruptive couple conflict, global feelings towards one's partner, and individual symptom distress.

Participants

Couples

Participant recruitment. A total of 65 couples blind to the specific research questions

and study purposes participated in the research project. Participants were recruited over a seven month period using flyers posted at various locations in the community, including grocery stores, thrift stores, laundromats, doctor's offices, therapy offices, and Michigan Head Start Association offices in Lansing, Michigan, and surrounding areas. Two online methods of recruitment were also used: the Michigan State University Family Resource Center listserv and posts in the "general community" section of www.craigslist.org. The study advertisement invited couples who were engaged, living together, or married to participate in a 4 ½ hour research session. They were then given a very brief procedural overview and told that couples chosen to participate would receive \$100.00. Those interested in participating contacted the primary investigator and received a more detailed overview of the study and a brief telephone screening (see Appendix A) designed to ensure that they met the following inclusion criteria: (a) participants were 18 years or older; (b) partners were engaged, cohabiting, or married; (c) they had been in the relationship for at least one year; and (d) they had a fairly recent couple disagreement in which they felt hurt or angry with their partner.

Participant exclusion criteria. Couples were excluded from participation at both extremes of the continuum of distress. Those who reported that they rarely felt hurt, angry, or offended with their partner and had not had a fairly recent incident were screened out because of an increased risk that they would not have a topic to discuss during the experimental session. At the other extreme of couple distress, those couples where physical violence had occurred in the past year that left marks or required a hospital visit were also screened out. Prospective participants were also asked whether they considered themselves to be in a personal or relationship crisis of any kind or if they were seriously considering ending their relationship. Affirmative answers to any of those questions were probed further to ensure that participation in

the study would not compromise their mental or physical health and safety. Those chosen to participate were also asked in-person whether there had been any recent instances of physical violence since the telephone interview that left marks or required a hospital visit. If they confirmed an incident of physical violence, the research session was discontinued.

The total number of couples who expressed interest in the study was 122. Of the 122 couples who made contact regarding the study, 65 actually participated, representing a participation rate of 53.3%. Of those who did not participate, 22 (18.0%) chose not to participate or did not make contact after the initial telephone screening, 9 (7.4%) did not show for their scheduled research session, and 7 (5.7%) expressed interest in participating but had scheduling conflicts. A total of 19 prospective participants (15.6%) were screened out. Reasons for this were that they did not meet the relationship requirements ($n = 2$, 1.6%); they expressed an interest in participating after data collection was complete ($n = 4$, 3.3%); they expressed concerns about communicating in English, which was not their primary language ($n = 4$, 3.3%); they indicated that they did not have any issues to discuss ($n = 5$, 4.1%), or they reported experiencing physical violence in the previous year that had left marks or required a hospital visit ($n = 4$, 3.3%).

In addition to those who did not participate, data from two couples were set aside during the analyses. One research session was frequently disrupted by the presence of the couple's six-month-old infant, who became quite distressed during the therapy-like interaction, thereby confounding the factors that contributed to the participants' emotional experience. The other couple was the only same-sex couple who participated in the study. Although future research should address the same research questions as this study with a sample of same-sex partners, no real questions could be answered in this study with only one same-sex couple. In addition,

because the analyses in this study used gender as a distinguishing variable in order to understand actor and partner effects, it was deemed appropriate to set this couple's data aside until a later time.

Participant demographics. A summary of participant demographics may be found in Tables 1a and 1b. For the 63 couples, participant age ranged from 18 to 69, with a median age of 30.0 years. Participants represented a wide range of racial/ethnic categories, including Euro-American, African American, Mexican-American/Hispanic, American Indian or Alaska Native, Arab American, and more than one racial category. Overall, 41.3% ($n = 52$) of participants identified themselves as part of a non-White, typically under-represented population, making this a rather diverse sample. In terms of religious preference, participants identified themselves as members of a specific Christian ($n = 72$; 59.0%) or non-Christian ($n = 4$; 3.3%) denomination as well as non-denominational ($n = 30$; 24.6%) or non-religious ($n = 16$; 13.1%).

Couples were screened out during the telephone interview if they were not in some type of committed relationship (e.g., married, living together, engaged to be married) or if they had not been together for at least one year. However, one couple reported on the assessment packet that they had only been together eight months. One of the primary reasons for the requirement that participants be together at least one year and be married, engaged, or living together was to ensure that couples were in an established relationship beyond that of semi-casual dating and thereby ensure a higher likelihood that partners had actually reached the level of an attachment figure with one another. Although it was realized after their research session that one couple had been together less than a year, it was deemed appropriate in that instance to include them in the study because they were living together and had been together almost one year.

A large majority of participants had received some form of education beyond high school

($n = 97$; 77.0%). Although most couples reported that at least one of them was employed full-time ($n = 38$; 60.3%), 11 couples (17.4%) reported that one or both partners were employed only part-time, and 9 couples (14.3%) reported that both were unemployed. Four other couples (6.3%) identified themselves as students, and one couple (1.6%) reported that both were retired. In terms of couple income, there some indication of financial distress in a number of couples, with 43.5% ($n = 27$) reporting reported a couple income of less than \$40,000.

Table 1a

Descriptive Statistics of Categorical Demographic Variables

Variable Name	<i>n</i> (%)
Race / Ethnicity	
American Indian or Alaska Native	3 (2.4)
African American / Black	31 (24.6)
Caucasian / White	73 (57.9)
Mexican-American / Hispanic	6 (4.8)
Biracial	12 (9.5)
Other	1 (.8)
TOTAL	126
White / Caucasian / Euro-American	74 (58.7)
Under-Represented Minority	52 (41.3)
TOTAL	126
Religious Preference	
Catholic	24 (19.7)
Protestant / Non-Catholic Christian	48 (39.3)
Non-Denominational	30 (24.6)
Non-Christian	4 (3.3)
Non-Religious	16 (13.1)
TOTAL	122
Highest Level of Education Completed	
High School Diploma / GED or less	29 (23.0)
Undergraduate College Experience	75 (59.5)
Advanced College Degrees	22 (17.5)
TOTAL	126

Table 1a (cont'd)

Variable Name	<i>n</i> (%)
Employment Status	
Full-Time	50 (39.7)
Less than Full-Time	62 (49.2)
Student	14 (11.1)
TOTAL	126
Annual Income	
< \$20,000	63 (50.4)
\$20,000 - \$49,999	42 (33.6)
> \$50,000	20 (16.0)
TOTAL	125
Current Relationship Status	
Committed, Non-Marriage Relationship	54 (42.9)
Marriage Relationship	72 (57.1)
TOTAL	126
Number of Children	
No Children	34 (27.0)
1-2 Children	64 (50.8)
> 3 Children	28 (22.2)
TOTAL	126

Table 1b

Descriptive Statistics of Continuous Demographic Variables

Variable Name	<i>n</i>	<i>M</i> (<i>SD</i>)	Range
Age	122	32.52 (9.95)	18-69
Time in Relationship	126	7.27 (7.21)	.75 -41

Therapists

Five therapist/coaches (three women; two men) were recruited from the Michigan State University Couple and Family Therapy Clinic. All therapists/coaches had completed their master's degree and were pursuing their doctoral degrees in marriage and family therapy with at least 700 hours of direct clinical experience. Training consisted of five sessions lasting

approximately two hours each, occurring over a period of three weeks. Each training session included both didactic and experiential components. In addition, core principles were reviewed and highlighted regularly for each therapist/coach based upon his/her individual questions, concerns, and experiences with participants. Overall, four of the coaches facilitated at least 12 research sessions with participants, with the other therapist/coach completing only 4 due to scheduling constraints.

Therapist/coaches were trained regarding their role and responsibility in the process, as well as those necessary skills that are common across therapeutic modalities in facilitating and processing emotional content (see Appendix B for the training manual containing a theoretical and training overview of how to facilitate emotional content with couples). The primary focus of therapist/coach training was not to introduce an entirely new set of therapeutic skills but to emphasize the adaptation and use of the therapists' existing skill set to accessing and re-processing emotion following the guidelines in the training manual. Therapist/coach roles and responsibilities were distinguished according to two segments for each topic. For the sake of clarity, the person whose issue was being discussed was referred to as the speaking partner, while the person who did not introduce the issue was labeled the listening partner. The core techniques the therapist/coach utilized during the interactions were several of those identified by EFT for "accessing and reformulating emotion" (Johnson, 2004, p. 78). These included reflection, validation, evocative responding, heightening, empathic conjecture, enactment, and promoting positive interaction.

Many of these skills are also utilized in some form by other empirically-supported couple therapies but with slightly different labels. For example, enhanced cognitive behavioral therapy (Epstein & Baucom, 2002) provides guidelines of how to alter "both the experience and

expression of emotions” (p. 375), including accessing, processing, and expanding the range of primary emotions that have previously been minimized or avoided. Interventions include creating a safe environment; amplifying emotional experience through questions; helping the client recognize emotional meaning beyond what is stated; helping clients understand the relationship between emotions, cognitions, and behaviors; and heightening their experience.

Behavioral marital therapy (Jacobson & Margolin, 1979) focuses a great deal on decreasing interpersonal distress by enhancing positivity and helping the couple learn problem-solving skills. This is done by coaching each partner to listen by expressing “validation, reflection, and generalized acceptance” (p. 206) to one another. In addition to learning the importance of positive communication, clients also learn how to express their negative feelings to their partners more appropriately. Insight-oriented marital therapy (Snyder, 2002) emphasizes affective reconstruction in an effort to promote insight by “enabling interventions of increasing depth and emotional challenge” (Snyder, 1999, p. 350) that ultimately leads to increased empathy and support (Snyder & Mitchell, 2008). Thus, each of these couple therapy approaches utilize emotions in some way to help clients (a) access and understand their emotional experience, (b) process, expand, and potentially transform that experience, and (c) utilize it to then enact new patterns of interaction with their partners.

Significant time was spent during training to help therapist/coaches adapt the skills required for this research study in coaching couple interaction into their existing therapeutic approach, without the expectation that they were “doing EFT” or any other specific treatment model. Rather, during the training, therapist/coaches learned to identify how some of the common change mechanisms across modalities involve the accessing and re-processing of emotions. In addition, they were instructed that the primary goal for the high structure, therapy-

like interaction with the speaking partner was to emotionally process his/her experience using primary, softer emotions so that the listening partner would be more likely to be engaged in and *really hear* what the speaking partner was expressing. At the same time, the therapist/coach was modeling healthy responding for the listening partner. The purpose of the interaction with the listening partner was to check for and facilitate understanding and an empathic response to the needs expressed by the speaking partner.

Training also focused on explaining the purpose of the low structure, semi-natural interaction as well as the role of the therapist/coach during this condition. During the beginning stages of therapy, clients may be asked to discuss an area of disagreement as they would at home while the therapist shifts to the periphery and observes (Gottman, 1999). This allows the therapist to assess interaction patterns and strategies that the couple uses when attempting to resolve conflict. Training was designed to help therapist/coaches understand that their role during the semi-natural interaction was to remain in the room while not interfering with the couple interaction. They were asked to time the interaction and indicate to the participants when they should switch topics. Therapist/coaches were present in the room during both interactions in order to control for the influence a third person's presence might have on the experience.

Procedure

Couple Data Collection Procedure

Phase 1: Informed consent and Adult Attachment Interview (AAI). Data collection for this study consisted of four phases occurring during a 3 ½ to 4 ½ hour experimental session. Couples were randomly assigned to one of two sequences. Within the first sequence, phase one (45-90 minutes) consisted of each participant meeting separately with a research associate (the person administering the AAI for sequence one and the primary investigator for sequence two)

who summarized the session layout (see Appendix C for the research session procedure manual) and discussed issues of informed consent, including assessing for violence and any other safety issues (see Appendix D). If both partners provided written consent to participate and no violence or safety issues arose, they remained in separate rooms and the Adult Attachment Interview (AAI) was administered and digitally recorded for later transcription (Main, 1996). The AAI is a 20-item, semi-structured interview designed to explore early childhood experiences and relationships with attachment figures (Hesse, 2008). Six graduate research associates were trained didactically and experientially in the administration of the AAI over a period of two weeks for approximately 10 hours, including administering at least one practice interview during that time.

Phase 2: Discussion topic development. During phase two (30-45 minutes), the couple completed a packet of self-report assessments. A research associate, who functioned as the therapist/coach during the therapy-like interaction, also met individually with each partner for 5-10 minutes during this time. This meeting had two primary goals: (a) to begin to establish a rapport with each person that would allow them to effectively interact with the couple; and (b) to help the participant recall a recent time in the relationship when s/he felt hurt, angry, or offended by his/her partner and about which s/he still had feelings (Gardner, 2004; Waldinger, Moore, & Schulz, 2003). Once the participant chose an incident to discuss, the research associate verified that the participant was willing and able to discuss it during the couple interaction without feeling unsafe or too distressed. If either of those criteria was not met, another topic was chosen.

Phase 3: Baseline, semi-natural, and therapy-like interactions. After each partner met with the research associate and chose a discussion topic, they entered the same room to prepare for the baseline, semi-natural, and therapy-like interactions (phase three; 60 minutes). At this

point, a physiological measurement device was attached to the middle and ring fingers of each participant's non-dominant hand for the duration of phase three. After approximately five minutes that allowed for the electrode paste to establish an adequate connection with the each participant's skin, they were instructed to clear their minds and focus on relaxing for three minutes to establish a physiological baseline of skin conductance levels (SCL). After that time, the therapist/coach entered the room and asked the participants to begin discussing how they met for five minutes. This served as an interactional warm-up and established an interaction. It also paralleled a portion of the Oral History Interview, which has been found predictive of relationship outcome (Buehlman, Gottman, & Katz, 1992; Carrere, Buehlman, Gottman, Coan, & Ruckstuhl, 2000).

At the conclusion of the five minute interactional warm-up, the therapist/coach explained the process of the semi-natural couple interaction and identified which partner's issue had been randomly chosen to be discussed first. The therapist/coach also explained that the goal of the semi-natural interaction was to take steps towards a resolution of the topic. Even though the couple had likely discussed their issue previously, they were encouraged to focus on processing their experience—including their thoughts and feelings—so that both partners could gain a better understanding of the incident and how it occurred (Gardner, 2004). After eight minutes, the therapist/coach directed the couple to shift to the other partner's issue. Although the therapist/coach remained present during the semi-natural interaction in order to control for the presence of a third person, s/he functioned from the periphery and remained inactive during the couple interaction process. After both semi-natural interactions, the therapist/coach facilitated the therapy-like interaction, which consisted of discussing the same two topics with the therapist/coach over four, 3-5 minute segments (two segments per issue). The goal of the

therapy-like interaction was to help facilitate emotional processing and expression in the speaking partner as well as understanding and empathy in the listening partner.

The first segment of the therapy-like interaction began with the therapist/coach asking about the speaking partner's experience of the situation. The primary goal was to validate, explore, and deepen the experience of the person who introduced the issue while helping him/her to express feelings in a non-threatening, softened way. During the second segment, the therapist/coach then shifted to the partner who did not introduce the issue and checked for understanding of both content and emotions while also helping him/her offer comfort to the distressed partner, when possible. At the conclusion of each segment, the therapist/coach sought to heighten the experience that both partners had by encouraging the participant who had been interacting with the therapist/coach to share his/her primary emotions and attachment needs, threats, or longings directly with his/her partner (i.e., an enactment). At the conclusion of the second segment, the couple shifted to the other partner's topic and repeated the process. When both partners' topics had been discussed, each participant spent 3-4 minutes completing an adaptation of the couple version of the System for Observing Family Therapy Alliances (SOFTA-S; Friedlander, Escudero, & Heatherington, 2006). This cool-down period also provided an opportunity to approximate the physiological recovery towards baseline.

Phase 4: Follow-up session with participants. Following a 5-10 minute break, the participants entered a room with a television and perception analyzer dials (continuous self-report rating dials) where they reviewed all five interactions (discussion of how they met, semi-natural/own issue; semi-natural/partner's issue; therapy-like/own issue; therapy-like/partner's issue) in the order that they occurred and reflected on their interpersonal process (phase four; 60 minutes). Partners were in the same room but were separated by a portable screen that provided

each with privacy as they rated their experiences. They also wore earphones with noise canceling capabilities in order to reduce the likelihood of them influencing one another with verbal expressions. As they watched, participants rated on a scale of 0-100 how they felt in each moment towards their partner during each interaction, with 0 being the most negative possible, 50 being neutral, and 100 being the most positive possible. After viewing all of the interactions, participants provided a composite, proximal rating of their interpersonal distress by completing the 30-item Subjective Emotional Experience Questionnaire (SEEQ; Seedall, 2008) for the time period consisting of the baseline, semi-natural and therapy-like interactions.

Because it was unknown if or how participating in the AAI would influence the interactions, two sequences were planned that counterbalanced the AAI with the interaction segments. The first sequence ($n = 31$ couples) consisted of completing the informed consent, administering the AAI, completing the assessment packet, participating in the baseline, semi-natural, and therapy-like interactions, and then watching and reporting on each interaction. The second sequence ($n = 32$ couples) consisted of completing the informed consent, completing the assessment packet, participating in the baseline, semi-natural, and therapy-like interactions, watching and reporting on each interaction, and then administering the AAI. In this manner, the AAI was counterbalanced with the interaction phase in the two sequences by occurring immediately following the informed consent or after participants had watched and reported on their interactions, with the order for all other activities remaining the same.

Confirmation of Conditions

Occurrence of each condition. During each research session, the primary investigator observed and confirmed that five interactions occurred (the interactional baseline, two semi-natural and two therapy-like interactions). The criteria for the interactional baseline were (a) the

couple was interacting directly; (b) the therapist was present but inactive; and (c) the couple was reminiscing about how they first met. The criteria for the semi-natural interaction were (a) the couple was interacting directly; (b) the therapist was present but inactive; and (c) each partner discussed a moderately distressing issue with the other partner. The criteria for the therapy-like interaction were (a) a therapist/coach was present and facilitating emotional content; (b) each partner interacted directly with the therapist/coach with the exception of an enactment at the conclusion of each segment; and (c) each partner discussed his/her issue as well as his/her partner's issue with the therapist/coach. Because identification of these conditions was observationally straightforward, no reliability coding was deemed necessary.

Integrity of the therapy-like condition measured by self-report. Both participant self-report and observational coding measured the overall quality of the therapist/coach's facilitation of emotional content during the therapy-like interactions. Immediately following the therapy-like interaction, participants completed an adapted, 12-item version of the System for Observing Family Therapy Alliances scale (SOFTA-S) as an indicator of effectiveness in terms of the alliance each participant felt with the therapist/coach across the following three dimensions: engagement in the process, emotional connection, and safety (Friedlander, Escudero, Horvath, Heatherington, Cabero, & Martens, 2006). Reliability for the revised, 12-item version in this sample was ($\alpha = .81$), similar to the reliability found for the original, 16-item version ($\alpha = .87$; Friedlander et al., 2006). Although theoretically ranging from 12 to 60, actual participant scores ranged from 31 to 60 ($M = 50.2$; $Mdn = 50.0$; $SD = 5.67$), providing evidence in terms of participant self-report of high quality intervention implementation by the therapist/coach.

Integrity of the therapy-like condition measured by observational coding. Eight undergraduate research associates also rated the overall quality of the therapist/coach's

implementation of the intervention as well as the couple's response using a six-item, multiple choice scale for each of the four therapy-like interaction segments (segment one: partner one talks with the therapist/coach about own issue; segment two: partner two talks with the therapist/coach about partner's issue; segment three: partner two talks with therapist/coach about own issue; segment four: partner one talks with therapist/coach about partner's issue; see Appendix E for more information). Specifically, coders used a four-point Likert scale to rate how effectively the therapist/coach (a) explored emotional experience; (b) validated emotional experience; (c) reframed feelings and experience in terms of primary emotions and attachment needs; and (d) highlighted and encouraged positive behaviors through the use of an enactment (i.e., direct couple interaction). They also rated the couple's response to the intervention in terms of (a) softening; and (b) the overall effectiveness of the intervention in facilitating couple progress and change.

Training for these coders occurred over a 2-3 week period, during which coders met for 3-5 hours with the primary investigator. Both didactic and experiential training occurred, including (a) defining the key terms and indicators for each question; (b) coding practice segments together; (c) talking about each item; and (d) answering any questions coders had regarding the coding process. Each week of the training process, coders were assigned to code five research sessions. Training ended only after reliability and validity were deemed sufficient to begin coding actual research sessions. Weekly meetings lasting one to two hours continued throughout the coding process to review and discuss difficult-to-code sessions and answer any coder questions. Coding of each research session lasted approximately one hour. The coders first watched the semi-natural interactions in order to gain a basic idea of the couple's typical interaction process. Next, they watched each therapy-like interaction and rated the overall

intervention quality with the first four questions. They then used their knowledge of the semi-natural interactions to rate the overall effect of the intervention on the couple with the final two questions.

Only the first four questions were used as a measure of intervention integrity. For reliability purposes, 31 cases (49.2%) were coded separately by two coders. Typical reliability statistics were not possible because of the low variability between coder scores. As a result, only percentages of exact matches, close matches, and non-matches are reported here. Exact matches were those where coders did not disagree. Close matches were those where both coders agreed the therapist was in the range of proficiency, but they disagreed on whether the therapist was extremely proficient (4) or proficient (3). Non-matches occurred when one coder rated the therapist as proficient (3-4), while the other coder rated the therapist as non-proficient (0-2). For the 31 double-coded cases, coders matched exactly on 82.5% of the items ($n = 409$), closely on 15.5% ($n = 77$), and did not match on 1.6% ($n = 8$) of items (there were also two missing items). Because of the high match, coder scores were averaged on each item, and the aggregate score was used to calculate the integrity of the intervention delivery. Ratings for intervention integrity were in the proficient-extremely proficient range ($M = 3.85$, $SD = .39$, $n = 1006$), and therapists were rated as non-proficient on only 2.1% of items ($n = 21$). As a result, overall therapist delivery of the intervention was deemed proficient in all cases.

Measures

Continuous Measures

Physiological arousal. Participant physiological experiencing was measured using skin conductance (also known as galvanic skin response; GSR). Psychophysiological measures represent measurement of unique processes not under conscious awareness or control, thereby

increasing the potential for a more valid, sensitive measurement of individual, moment-by-moment emotional arousal. Skin conductance was specifically chosen for this study because (a) it is a valid indicator of stress levels in the autonomic nervous system (ANS) and is not affected by the parasympathetic nervous system (Dawson et al., 2007); (b) it is a relatively unobtrusive measure and would not impede couple interaction; (c) it has been linked to stressful experiencing and attempts to regulate emotions (Katz & Gottman, 1995); and (d) research has already identified it as a valuable indicator of how attachment (especially deactivation) relates to physiological arousal (Diamond et al., 2006; Dozier & Kobak, 1992; Roisman et al., 2004).

The apparatus consisted of a digital biofeedback device (M150, Biopac, Goleta, CA) and an amplifier module (GSR100C, Biopac, Goleta, CA) with the gain switch set to 5.0 micromhos, a low pass filter set to 1.0 Hz, and other filters set to provide absolute readings from each participant. A constant voltage (0.5 V) technique was applied through two disposable adhesive disks containing isotonic gel and silver-silver chloride electrodes that were attached to the palmar surface of each participant's distal phalanges on the middle and ring fingers of the non-dominant hand.

Scores for skin conductance level (SCL) were recorded 10 times per second. At the conclusion of each research session, mean SCLs were calculated for the relaxation baseline, as well as the baseline, semi-natural, and therapy-like interactions (see Table 2). In addition to mean SCLs, deviation scores from the relaxation baseline were calculated for each of the interactions. As an indicator of skin conductance response (SCR), the standard deviation was also calculated for each interaction because it provided information regarding the wave's variability, with the assumption that higher magnitude waves also would yield higher standard deviation scores.

Table 2

Descriptive Statistics for Physiological Arousal and Interpersonal Distress

Variable Name	<i>n</i>	<i>M (SD)</i>	Range
Physiological Arousal – Skin Conductance			
Relaxation Baseline	126	8.46 (4.21)	.79 – 31.25
Baseline Interaction	124	9.29 (4.13)	.85 – 32.31
Semi-Natural Interaction	124	9.51 (4.17)	.86 – 30.28
Therapy-Like Interaction	124	9.27 (4.27)	.83 – 29.40
Baseline Change from Relaxation	124	1.01 (.99)	-1.48 – 4.10
Semi-Natural Change from Relaxation	124	1.23 (1.61)	-1.85 – 10.33
Therapy-Like Change from Relaxation	124	.99 (2.25)	-8.46 – 10.34
Interpersonal Distress – Perception Analyzer			
Baseline Interaction	126	75.16 (19.45)	4.32 – 100.00
Semi-Natural Interaction	124	52.63 (19.08)	.11 – 100.00
Therapy-Like Interaction	126	61.19 (16.94)	.50 – 98.87
Semi-Natural Change from Baseline	124	-22.47 (21.05)	-78.36 – 27.65
Therapy-Like Change from Baseline	124	-13.97 (19.55)	-60.92 – 31.92

Interpersonal distress. Interpersonal distress in couple interaction research has been primarily measured using either global self-report or global or continuous observational coding. Although both are important ways to understand couple interaction, neither provides continuous construct measurement of each partner's perceptions of the interaction. As a result, such measures end up being a conglomerate of the entire interaction, making it difficult to understand more subtle occurrences or nuances. Continuous self-report (Biocca, David, & West, 1994) represents a reliable way to understand couple interaction through interpersonal process recall (Gardner, 2004; Gottman & Levenson, 1985, 1992; Griffin, 1993; Levenson & Gottman, 1983). In fact, Gottman and Levenson (1985) found that couples who reported on their interaction even one week after it occurred appeared to physiologically relive their emotional experience. It also provides another method in making distinctions between the effects of the different attachment

strategies on couple interaction patterns.

Moment-to-moment self-report of feelings of connection, support, and understanding were measured using the Perception Analyzer system (Model IV, MS Interactive, Portland, OR), consisting of a computer and a wireless handheld electronic dial by which the participants continuously indicated their responses to the question, “In each moment, how did you feel towards your partner?” Numbers on the dial ranged from 0 (extremely negative feelings) to 100 (extremely positive feelings), with 50 being a neutral rating. The wireless handheld electronic device sends signals to the computer once every second, which saves the data in a file format that can be exported to statistical software. The Perception Analyzer has been used for marketing research, assessment of teaching effectiveness, and nutrition education (Papakonstantinou, Hargrove, Huang, Crawley, & Canolty, 2002), and represents a potentially powerful tool in therapeutic process research.

The continuous self-report data was divided in a similar manner to the physiological data for SCL, with the levels calculated for the baseline, semi-natural, and therapy-like interactions (see Table 2). This allowed for parallel statistical comparisons to be made regarding the influence of attachment on physiological arousal and interpersonal distress. Differences from the baseline interaction were calculated for the semi-natural and therapy-like interactions. The variability of the data was also calculated using the standard deviation for each interaction. Lastly, the correlation between the physiological data and perception analyzer data was calculated for each participant during all three interactions.

Self-Report Measures

Attachment: The Experiences in Close Relationships questionnaire (ECR). With a variety of self-report measures available to choose from and little empirical knowledge of their

convergence or divergence from one another, a factor analysis was performed in the late 1990's on all self-report measures of attachment that had been created that decade in order to establish a valid, internally consistent measure (Brennan et al., 1998). Results led to the development of the Experiences in Close Relationships scale (ECR; Brennan et al., 1998) consisting of two, 18-item subscales. Each subscale represents one of the higher order factors common to the measures analyzed: avoidance and anxiety. One of the greatest strengths of the ECR that sets it apart from many of the other self-report attachment measures is its strong internal consistency ($\alpha > .90$) in numerous studies (Mikulincer & Shaver, 2007). See Table 3 for a summary of the psychometric data for all covariates used in this study.

Table 3

Psychometric Properties of Predictor Variables and Covariates

Variable Name	<i>n</i>	<i>M</i>	<i>SD</i>	α	Range	
					Potential	Actual
Attachment Avoidance	126	3.18	1.08	.92	1.00 – 7.00	1.06 – 6.25
Attachment Anxiety	126	3.61	1.12	.91	1.00 – 7.00	1.56 – 6.89
Feelings towards Partner	126	-11.8	18.4	.94	-90.0 – 30.0	-61.0 – 25.0
Individual Symptom Distress	126	55.5	21.0	.93	0 – 180.0	15.0 – 134.0
Conflict Frequency / Severity	126	10.6	3.42	.81*	3.0 – 18.0	3.0 – 18.0
Disruptive Conflict	126	60.3	22.9	.81*	-18.0 – 192.0	-3.0 – 116.0
Conflict Resolution	126	38.9	6.00	.81*	13.0 – 52.0	20.0 – 50.0
Relationship Satisfaction	126	46.4	8.52	.84	0 – 69.0	20.0 – 63.0

* α reported is for the entire CPS rather than its subscales.

Emotional tone of the relationship: The Subjective Emotional Experience Questionnaire (SEEQ). The Subjective Emotional Experience Questionnaire is a 30-item self-report measure

designed to assess participants' emotional experiences (15 items) as well as their perceptions of their partners' emotional experience (15 items). Responses range along a continuum of softened, hostile, and withdrawn emotions and represent an adaptation of Seedall and Butler's (2006) conceptual dimensions: (1) level of emotional evenness and stability (calming); (2) amount of comprehension about self, partner, and the problem (understanding); (3) perceptions of accessibility, receptivity, and responsiveness (closeness); (4) how much partners feel open to express their thoughts, feelings, and concerns (safety); and (5) felt optimism concerning relationship improvement and change (hope). A recent study (Seedall, 2008) has found strong indications of the SEEQ's reliability ($\alpha = .96$) and validity in terms of two measures of marital satisfaction ($r = .73 - .74$) and a measure of the level of conflict resolution ($r = .74$).

Total scores were calculated by adding each item (1-5 Likert scale) pertaining to both self and partner softening and then subtracting scores for withdrawal and hostility. One of the strengths of the SEEQ's construction is that the wording describes couple experience for any length of time. As a result, couples completed the SEEQ as part of the assessment packet as a report of their relationship's emotional tone for the week prior to the research session (distal measure of emotional tone). They also completed the same questionnaire when reporting on their overall emotional tone for the semi-natural and therapy-like interactions (proximal measure of emotional tone). Participant scores ranged from -61.0 to 25.0 on the distal measure ($M = -11.8$; $Mdn = -9.5$; $SD = 18.4$) and -45.0 to 30.0 on the proximal measure ($M = 3.30$; $Mdn = 8.0$; $SD = 17.4$). The correlation between the two time-point measures was .49, providing some indication that the instrument is able to detect changes in emotional tone and experience over varying time periods.

Intrapersonal distress: Outcome Questionnaire-45.2 (OQ). Prior to participating in the

couple interactions, participants completed the Outcome Questionnaire-45.2 (OQ). The OQ is a 45-question, general measure of global psychological distress with questions intended to access three primary domains: symptomatic distress, interpersonal relations, and social role (Lambert, Burlingame, Umphress, Hansen, Vermeersch, Clouse, & Yanchar, 1996; Mueller, Lambert, & Burlingame, 1998). It has well-established validity, including concurrent (.51 to .88) and construct, and good reliability, including test-retest (.83) and internal consistency (.93; Mueller et al., 1998). It also discriminates between clinical and non-clinical samples (Lambert et al., 1996). Mean scores for participants in this study were slightly below the established cut-off for distress (63).

Couple conflict experiences: Conflicts and Problem-Solving Scales (CPS). General couple conflict was also measured as part of the assessment packet using the Conflicts and Problem-Solving Scales (CPS; Kerig, 1996). The CPS assesses the following dimensions of conflict: frequency/severity, conflict strategies employed, and resolution. Conflict frequency/severity is measured using a two-item, six-point ordinal scale with scores ranging from *once a year or less* to *just about every day* in regards to how frequently each partner perceived that the couple engaged in minor or major disagreements in the past year. The conflict strategies dimension is measured by a 46-item, 4-point Likert scale where participants describe how often they utilized cooperation, avoidance/capitulation, stonewalling, verbal aggression, and/or physical aggression during their conflicts. They also complete the same items related to their partner's behavior. Each participant's scores for self and partner are averaged to come up with one measure for each sub-scale. In addition, to establish one measure of disruptive conflict strategies, the averages of all sub-scales were added except cooperation, which was subtracted from the total. Finally, a 13-item scale of conflict resolution measured couple conflict outcomes.

Measures of the psychometric properties of the CPS have yielded satisfactory test-retest reliability as well as satisfactory convergent and divergent validity in terms of other measures of couple conflict and marital satisfaction (Kerig, 1996).

Relationship satisfaction. The Revised Dyadic Adjustment Scale (RDAS). The RDAS is a 14-item instrument with seven sub-scales designed to measure adjustment in both distressed and non-distressed relationships (Busby, Crane, Larson, & Christensen, 1995). Items represent three potential couple dimensions: consensus (decision-making, values, and affection), satisfaction (stability and conflict), and cohesion (activities and discussion). All but one item has a 0 to 5 rating scale with the other item being 0 to 4. The RDAS has demonstrated strong construct validity, criterion validity, and internal consistency/split-half reliability (Busby et al., 1995). Mean RDAS scores for this sample were slightly below the established cut-off of 48, indicating some relationship distress in this sample.

CHAPTER IV

RESULTS

The overarching objective of this study was to increase the understanding of how attachment influences a person's emotional experience in terms of the level, variability, and change from baseline of moment-to-moment physiological arousal and feelings towards one's partner. In addition, it was important to understand how the relationship between attachment and emotional experience varied according to interactional conditions. In this case, this study compared two conditions commonly used in research on couples: a semi-natural interaction, where the couple discussed the problem as they would at home; and a therapy-like interaction facilitated by a therapist/coach. The following sections outline the general approach to data analysis, the preliminary analyses used to organize and structure the data, and the statistical analyses used to answer the primary research questions.

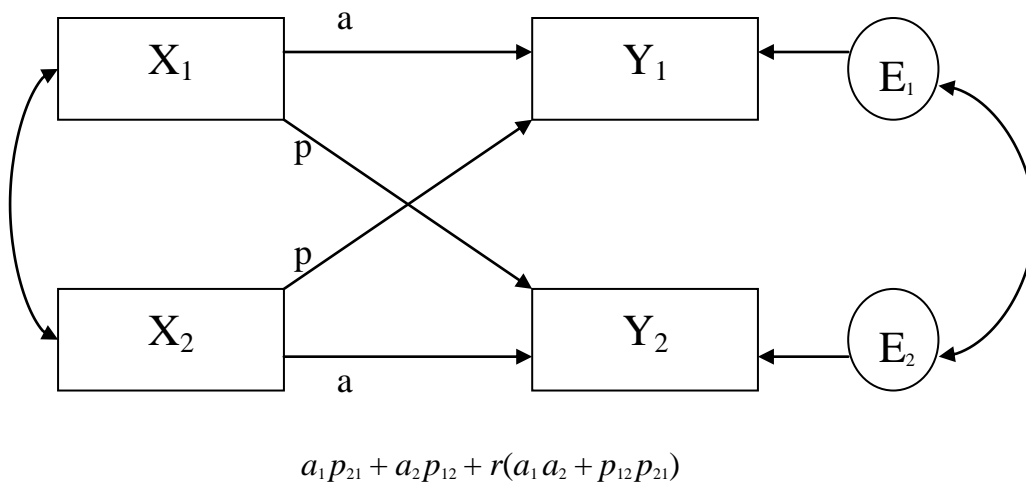
General Approach to Data Analysis

This study used a dyadic approach to data analysis for statistical tests of the hypotheses. Because partners in a committed relationship were participating together, their results were more likely to be inter-related. After many years in which "interpersonal concepts have been studied by examining individuals in isolation" (Kenny, Kashy, & Cook, 2006, p. 3), dyadic analysis has become a more commonly used approach. Treating the individual as the unit of analysis carries the assumption that participant scores are independent from one another. This may be the case, except when a relationship exists between two participants that might enhance the likelihood of their scores being similar. Discounting the potential non-independence of participant scores increases the likelihood for Type I or II errors, depending on the analytic context. Dyadic analysis treats partner data as non-independent by taking into account the potential influence that

partners have on one another's relationship outcomes (Kenny et al., 2006).

Several conceptual and statistical models and designs exist within the framework of dyadic analysis. One of these, the actor-partner interdependence model (APIM; Kenny et al., 2006; Figure 2), allows for mixed variables (i.e., both within- and between-dyads) to be analyzed through “simultaneous estimation” (West, Popp, & Kenny, 2008, p. 325) of how much a person predicts his/her own outcome (actor effects) as well as the amount that a partner contributes to the person's outcome (partner effects). In this manner, the APIM allows researchers to statistically analyze the role of mutual influence in predicting individual outcomes (Kenny et al., 2006). This study used mixed predictor variables measured at interval levels and treated as distinguishable by gender. A series of multilevel models using either restricted maximum likelihood estimation (REML; research questions one and three) or maximum likelihood estimation (ML; research question two) was used to test how the actor and partner effects for attachment avoidance and anxiety influence the level, variability, and change associated with physiological arousal and interpersonal distress.

Figure 2. The Actor-Partner Interdependence Model (APIM; Kenny et al., 2006)



Preliminary Analyses

Missing data. In order to prepare the data for the statistical tests of hypotheses using dyadic data analysis, a variety of preliminary analyses were undertaken. The issue of missing data was a relatively minor one. None of the 11 demographic variables or 270 self-report items had more than 5% of responses missing, with 81.8% of demographic variables ($n = 9$) and 81.5% of self-report items ($n = 220$) having less than 1% missing. For all missing self-report data, the SYSTAT EM Method was used to estimate values using maximum likelihood. Little's MCAR test statistic for each series of imputed values used in this study's analyses was non-significant, indicating that the null hypothesis of data missing completely at random was retained. No demographic data were imputed.

Predictor variables. Preliminary analyses also helped examine the relationship between attachment (ECR; avoidance and anxiety) and the other variables measured in this study (Table 4). Relationships were as expected, with self-reported attachment avoidance and anxiety negatively correlated with conflict resolution strategies, relationship satisfaction (RDAS), and global feelings towards one's partner (SEQ). Attachment avoidance and anxiety were also both positively correlated with disruptive conflict (CPS) and intrapersonal distress (OQ-45.2).

Table 4

Bivariate Correlations between Predictor Variables and Covariates ($n = 126$ for all)

	Avoid.	Anx.	Partner Feelings	Symp. Distress	Conflict		
					Freq/Sev	Disrupt.	Resolve
Avoidance	--	--	--	--	--	--	--
Anxiety	.12	--	--	--	--	--	--
Partner Feelings	-.45***	-.31***	--	--	--	--	--

Table 4 (cont'd)

	Avoid.	Anx.	Partner Feelings	Symp. Distress	Conflict		
					Freq/Sev	Disrupt.	Avoid.
Symptom Distress	.45***	.53***	-.44***	--	--	--	--
Conflict Freq. / Sev.	.35***	.39***	-.55***	.46***	--	--	--
Disruptive Conflict	.37***	.28**	-.71***	.46***	.55***	--	--
Conflict Resolution	-.40***	-.14	.72***	-.36***	-.53***	-.66***	--
Relationship Satisfaction	-.49***	-.31***	.76***	-.52***	-.54***	-.66***	.72***

** $p < .01$ *** $p < .001$

Outcome variables. This study focused on emotional experience in terms of moment-to-moment physiological arousal as well as feelings towards one's partner. Research questions addressed emotional experience across two primary conditions: a semi-natural, low structure condition where partners talked as they would at home and a therapy-like, high structure condition facilitated by a therapist/coach. Emotional experience data were also measured for a baseline interaction where partners reminisced with each other about how they met and how their relationship progressed to greater commitment. A relaxation baseline was also established for partners in terms of their physiological arousal. Because so many individual factors and biological characteristics vary within and across individuals that influence the actual skin conductance level (Dawson et al., 2007; Venables & Mitchell, 1996) and make meaningful interpretation difficult, "residualizing" scores by controlling for baseline skin conductance levels in the variability and change from baseline analyses was especially important (Diamond et al., 2006). As a result, the physiological relaxation baseline was used as a covariate in all variability

and change analyses with a physiological outcome variable. Although physiological arousal was also measured during a cool-down period, it was not included in the primary analyses because it did not involve structured couple interaction that had a parallel with the continuous self-report data and it was a measure of return to baseline rather than a baseline condition.

Dyadic data preparation. To prepare for dyadic data analysis, a pairwise data set was created, categorical variables were effect coded (e.g., gender was coded -1 for men and +1 for women), and all continuous predictor variables without a meaningful zero-point were grand mean centered (see Kenny et al., 2006). In addition, a bivariate correlation between men and women for each variable was calculated as a measure of non-independence (Table 5). All but one correlation (see Cohen, 1988) between men and women for attachment and physiological arousal were small ($.3 > r > .1$) or trivial ($r < .1$). The one exception was a medium-sized ($.5 > r > .3$) correlation between men and women for skin conductance change between the relaxation baseline and baseline interactions. Correlations between men and women for the level of moment-to-moment feelings towards partner were medium, ranging from .37 to .43. However, the correlations for moment-to-moment change from the interaction baseline were small for both the semi-natural ($r = .18$) and therapy-like ($r = .22$) conditions. Lastly, individual symptom distress, couple conflict, conflict resolution, satisfaction, and feelings towards partner during the communication segments yielded medium to large ($r > .5$) correlations ranging from .32 to .73. Overall, results of these preliminary analyses indicated at least some non-independence of the data, especially when considering the large number of dyads that are typically required to generate sufficient power to detect non-independence (Kenny et al., 2006).

Table 5

Bivariate Correlations between Data for Men and Women

Variable Name	<i>n</i> (dyads)	<i>r</i>
Attachment Avoidance	63	.23
Attachment Anxiety	63	.01
Individual Symptom Distress	63	.32*
Conflict: Frequency / Severity	63	.48***
Conflict: Disruptive Conflict	63	.61***
Conflict: Conflict Resolution	63	.65***
Relationship Satisfaction	63	.73***
Global Feelings towards Partner	63	.62***
Proximal Feelings towards Partner	63	.64***
Physiological Arousal – Skin Conductance		
Relaxation Baseline	63	.27*
Baseline Interaction	62	.20
Semi-Natural Interaction	62	.21
Therapy-Like Interaction	62	.21
Baseline Change from Relaxation	62	.37**
Semi-Natural Change from Relaxation	62	.22
Therapy-Like Change from Relaxation	62	.19
Interpersonal Distress – Perception Analyzer		
Baseline Interaction	63	.37**
Semi-Natural Interaction	62	.39**
Therapy-Like Interaction	63	.43***
Semi-Natural Change from Baseline	62	.18
Therapy-Like Change from Baseline	63	.22

* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

Demographic variable inclusion. In order to get a sense of what demographic variables, in addition to gender, might be influencing outcomes, demographic variables were grouped conceptually and compared through a series of analyses (ANOVA or regression). The

Bonferroni method was used for post hoc comparisons in the ANOVAs. This made it possible to select influential demographic variables that would be included as covariates in the analyses (see Table 6 for ANOVA and regression results). As a result of the preliminary analyses, four demographic variables were chosen that demonstrated the strongest relationships to the outcome variables: education, age, race/ethnicity, and relationship status. Religion was not retained because it did not significantly predict any of the outcome variables.

Lower education was associated with more negative outcomes and appeared to be more predictive than income or employment. Taken as a whole, age also appeared to be slightly more predictive than either relationship time or number of children with respect to skin conductance level during all communication segments and the difference in interpersonal distress between the therapy-like and semi-natural interactions, with higher ages being associated with lower skin conductance levels and less difference between the therapy-like and semi-natural interactions. Preliminary results for ethnicity and relationship status showed some significant associations with the outcome variables, making it important to retain them. In order to increase the meaningfulness of the results, both ethnicity (Caucasian/Euro-American: $n = 74$, 58.7%; under-represented minority: $n = 52$, 41.3%) and relationship status (committed, non-marriage relationship: $n = 54$, 42.9%; married: $n = 72$, 57.1%) were transformed into dichotomous variables and effect coded (-1 and 1).

Table 6a

One-Way ANOVA Omnibus F Values for Categorical Demographic Predictors of Physiological Arousal

Demographic Variable	⁺ Baseline Mean	SN Mean	TL Mean	Baseline SD	SN SD	TL SD	SN - Baseline	TL - Baseline
Gender	.08	.15	.001	4.7*	9.5**	7.5**	.17	.48
Children	5.2**	5.7**	5.2**	.13	.92	2.1	.45	.07

Table 6a (cont'd)

Demographic Variable	⁺ Baseline Mean	SN Mean	TL Mean	Baseline SD	SN SD	TL SD	SN - Baseline	TL - Baseline
Religion	.43	.48	.55	.70	.69	.61	.15	.65
Income	3.6*	2.8	2.0	1.9	1.8	1.7	.46	.83
Education	3.4*	3.2*	2.7	.66	.01	.27	.27	.80
Employment	.03	.10	.37	.11	.16	1.6	.36	1.5
Relationship	5.4*	3.6	2.2	4.7*	.08	.32	1.9	2.9
Ethnicity	.68	1.2	1.3	1.3	.18	.04	1.1	.54

* $p < .05$ ** $p < .01$ *** $p < .001$ SN = Semi-Natural TL = Therapy-Like

⁺The baseline referred to here is baseline interaction.

Table 6b

Linear Regression Standardized Beta Values for Continuous Demographic Predictors of Physiological Arousal

	⁺ Baseline Mean	SN Mean	TL Mean	Baseline SD	SN SD	TL SD	SN - Baseline	TL - Baseline
Age	-.40***	-.39***	-.36***	-.19*	-.20*	-.20*	.04	.07
Relate Time	-.31***	-.31***	-.29**	-.16	-.15	-.15	-.01	.02

* $p < .05$ ** $p < .01$ *** $p < .001$ SN = Semi-Natural TL = Therapy-Like

⁺The baseline referred to here is baseline interaction.

Table 6c

One-Way ANOVA Omnibus F Values for Categorical Demographic Predictors of Moment-to-Moment Feelings towards Partner

Demographic Variable	Baseline Mean	SN Mean	TL Mean	Baseline SD	SN SD	TL SD	SN - Baseline	TL - Baseline
Gender	4.9*	.29	1.8	.003	4.5*	4.4*	6.5*	12.1**
Children	3.1*	4.6*	4.4*	.89	.06	.81	4.0*	1.8
Religion	.43	1.1	2.0	.57	.40	.60	.87	1.5
Income	4.7*	.76	.32	7.1**	.40	2.4	1.9	3.1*
Education	4.6*	.51	.83	6.2**	.12	.05	3.9*	7.0**
Employment	.04	.33	.52	2.2	.08	2.7	.46	.32
Relationship	.88	4.1*	.42	5.9*	.17	3.6	.94	.14
Ethnicity	3.4	.001	.58	10.6**	3.7	4.7*	2.9	1.3

* $p < .05$ ** $p < .01$ *** $p < .001$ SN = Semi-Natural TL = Therapy-Like

Table 6d

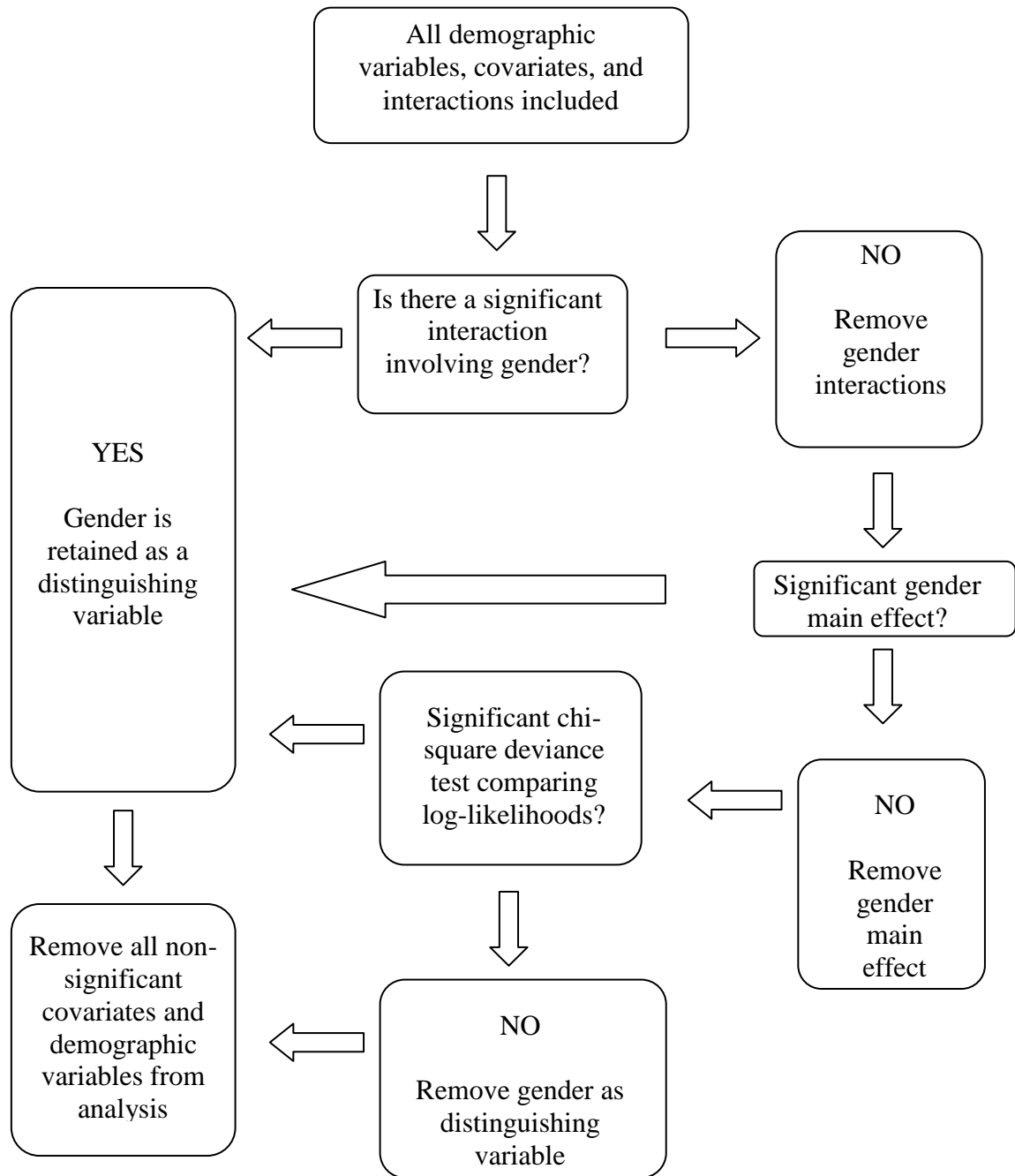
Linear Regression Standardized Beta Values for Continuous Demographic Predictors of Moment-to-Moment Feelings towards Partner

	⁺ Baseline Mean	SN Mean	TL Mean	Baseline SD	SN SD	TL SD	SN - Baseline	TL - Baseline
Age	-.11	.08	-.09	-.04	-.09	-.07	.17	.03
Relate Time	.11	.17	-.05	-.12	-.01	-.09	.05	-.15
* $p < .05$ ** $p < .01$ *** $p < .001$ SN = Semi-Natural TL = Therapy-Like								

Decision process for the analysis of demographic variables, covariates, and interactions.

Each analysis initially included gender as a distinguishing variable as well as the aforementioned demographic variables and covariates. The following decision-making process guided the retention or removal of variables to increase parsimony and power (see Figure 3). If there were significant interactions and no main effect involving gender, it was retained as a distinguishing variable. However, if there was no significant interaction or main effect, then a deviance test analyzed whether the additional complexity gender introduced as a distinguishing variable was justified. The deviance test consisted of running the same analysis twice using maximum likelihood estimation, with one version treating the data as distinguishable by gender and the other treating the data as non-distinguishable. A chi-square test then compared the log-likelihood results for each, with a significant difference indicating that the complexity introduced by gender as a distinguishing variable was justified. If there were no significant gender interactions or a main effect, then gender was removed and the data treated as non-distinguishable. If the deviance tests indicated that the additional complexity introduced by gender was justified, then only the non-significant gender interactions were removed from the analysis.

Figure 3. General Approach to Data Analysis



Disruptive conflict (CPS), global feelings towards one's partner (SEEQ), and individual symptom distress (OQ) were the three covariates, in addition to the demographic variables, included in the analyses. These three variables were chosen because they offered a broad

representation of factors that might influence, in addition to attachment avoidance and anxiety, proximal measures of physiological arousal and interpersonal distress. Non-significant main effects of both covariates and demographic variables were removed from the analyses. No interactions between covariates or demographic variables and gender were analyzed. However, if a main effect was found for any covariate or demographic variable, interactions between the variable and attachment avoidance and anxiety were added to the analysis and tested.

Two methods helped further probe significant two-way interactions. If the interaction involved gender and attachment, then a post hoc analysis was conducted within the context of the APIM. Two variables (man, woman) with dummy codes for each (0 and 1) were created and substituted in the analysis for gender. This generated interactions between man and woman separately with actor and partner attachment avoidance and anxiety. For significant interactions involving a continuous predictor and a different categorical variable or two continuous variables, a high and low value for each predictor variable (+1 standard deviation above the mean and -1 standard deviation below the mean) was substituted into the original regression equation (Cohen, Cohen, West, & Aiken, 2003; Keith, 2006; West, 1991). The simple slope of each resulting regression line was then analyzed for significance within the same dyadic framework as the original analysis.

Statistical Tests of Hypotheses

Research Questions and Their Analyses

Research Question 1: Are higher levels of self-reported attachment avoidance and/or anxiety associated with a more negative emotional experience for partners in each of the interactional conditions?

Level of physiological arousal (see Table 7). For the purposes of this study, the level of

physiological arousal refers to the moment-to-moment skin conductance occurring during each interactional condition. Increases in skin conductance indicate higher stress or physiological arousal. The actual level of skin conductance has been shown to vary according to a variety of individual factors, including where the electrodes are placed on the hand, characteristics relating to the hand's surface (e.g., cuts or calluses), ambient temperature, and time of day (Dawson et al., 2007). An established way to “residualize” results is to use a relaxation baseline as a covariate in all analyses (Diamond et al., 2006). The analyses of skin conductance variability and change from baseline used this method of “residualizing” results, while raw level scores were used in the analysis involving the level of physiological arousal. Accordingly, results will be reported in this section for comparison purposes rather than for the purpose of developing specific implications.

For each communication segment, there was no significant interaction or main effect involving gender. In addition, the data were treated as non-distinguishable because deviance tests revealed that the additional complexity introduced by distinguishing the data by gender was not justified. The only significant main effects involving attachment were for partner attachment anxiety during the semi-natural, $b = .65$, $t(110.6) = 1.96$, $p = .05$, and therapy-like, $b = .81$, $t(110.2) = 2.36$, $p = .02$, communication segments, with higher skin conductance levels associated with higher levels of attachment anxiety reported by that person's partner. There were also significant age main effects for the baseline, $b = -.16$, $t(62.9) = -4.51$, $p < .001$; semi-natural, $b = -.16$, $t(63.4) = -4.25$, $p < .001$; and therapy-like, $b = -.15$, $t(63.5) = -3.85$, $p < .001$ communication segments. Specifically, younger age was associated with higher skin conductance levels. Lastly, no interaction between age and attachment was significant when included in the analyses for any of the segments.

Thus, when raw level scores were used for skin conductance, one of the most salient individual characteristics that influenced outcome was age, with increased age associated with lower levels of physiological arousal. This may be related to the long-established finding that thermoregulation changes as people age, including decreases in palmar sweat (Ferreira & Winter, 1965). It might also coincide with the finding that suppression as a regulatory strategy decreases with age (John & Gross, 2004). In addition, partner attachment anxiety also related to physiological arousal during the therapy-like communication segment. Higher levels of attachment anxiety appeared linked to increases in physiological arousal for the other partner, even though the couple interaction was being filtered through the therapist/coach.

Table 7

Research Question 1 – Level of Physiological Arousal (Non-Residualized)

Communication Segment	⁺ Predictor Variables	<i>b</i>	SE	df	<i>t</i>	β
Baseline Interaction	Avoidance (A)	-.28	.35	112.1	-.81	-.07
	Avoidance (P)	-.05	.35	112.2	-.15	-.01
	Anxiety (A)	.27	.33	111.5	.82	.07
	Anxiety (P)	.48	.33	111.7	1.45	.13
	Age	-.16***	.04	62.9	-4.51	-.39
Semi-Natural Interaction	Avoidance (A)	-.35	.35	112.9	-1.00	-.09
	Avoidance (P)	-.06	.35	113.0	-.18	-.02
	Anxiety (A)	.29	.33	110.3	.86	.08
	Anxiety (P)	.65*	.33	110.6	1.96	.18
	Age	-.16***	.04	63.4	-4.25	-.38
Therapy-Like Interaction	Avoidance (A)	-.42	.36	113.1	-1.17	-.11
	Avoidance (P)	-.22	.36	113.2	-.61	-.05
	Anxiety (A)	.37	.34	109.9	1.08	.10
	Anxiety (P)	.81*	.34	110.2	2.36	.21
	Age	-.15***	.04	63.5	-3.85	-.34

* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

⁺The following variables were removed from the final analysis for all communication segments due to non-significance: Gender, Symptom Distress (A, P), Conflict (A, P), and Global Partner Feelings (A, P), Race / Ethnicity, Relationship Status, and Education.

Variability of physiological arousal (see Table 8). Variability of skin conductance level

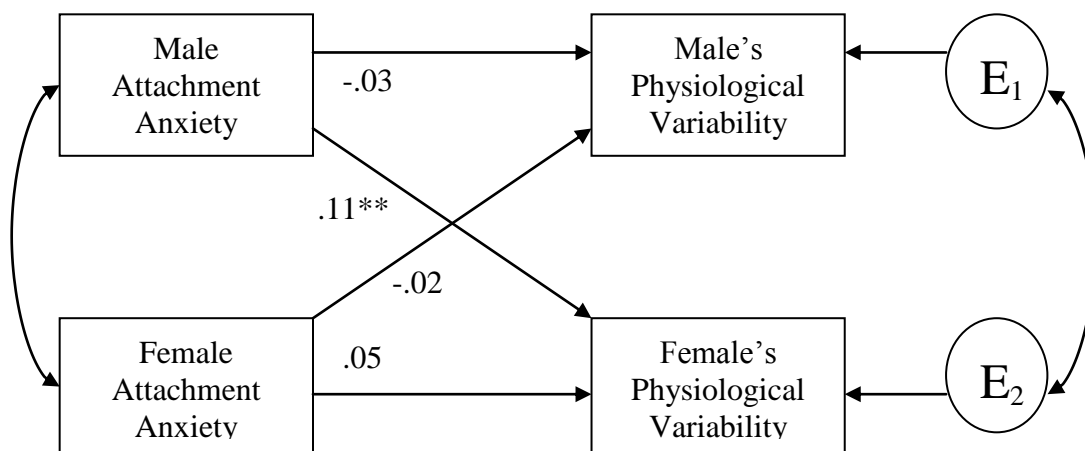
was measured in this study using the standard deviation scores. Past attachment literature has analyzed physiological arousal using skin conductance level (SCL), which refers to levels and their change from baseline. Skin conductance response (SCR), however, focuses primarily on the fluctuations in skin conductance, including the number, magnitude, and/or length of changes in skin conductance (Andreassi, 2007). Standard deviation represents an approximate indicator of skin conductance response because it provides a value representing change in skin conductance over the course of each interaction. In this manner, the standard deviation permitted an analysis of whether attachment influenced skin conductance level as well as its fluctuations

Although there was no significant interaction or main effect involving attachment, there were significant gender main effects for the baseline, $b = .09$, $t(55.8) = 2.95$, $p < .01$, and semi-natural, $b = .11$, $t(59.7) = 3.69$, $p < .001$, communication segments. For each of these segments, higher variability in physiological arousal was exhibited by women. There were also significant main effects for disruptive couple conflict reported by one's partner, $b = .01$, $t(71.1) = 3.79$, $p < .001$, and relationship status, $b = -.10$, $t(59.2) = -3.36$, $p = .001$, during the baseline communication segment. Greater variability in an individual's physiological arousal was associated with higher reported levels of disruptive conflict by that person's partner as well as being in a committed, non-marriage relationship. There was no significant interaction between attachment and relationship status or disruptive couple conflict reported by one's partner when they were added to the model. There were also no significant main effects besides gender for the semi-natural communication segment.

For the therapy-like communication segment, there was a significant interaction between gender and partner attachment anxiety, $b = .06$, $t(86.5) = 2.03$, $p < .05$. A post hoc analysis that created two variables (man, woman) with dummy codes for each was used to generate

interactions between attachment and each gender. Results showed a significant effect of partner attachment anxiety for women, $b = .11$, $t(123.2) = 2.20$, $p = .01$, with more variability in physiological arousal for women whose partners reported higher levels of attachment anxiety (see Figure 4). However, the effect of attachment anxiety for men was not significant, $b = -.02$, $t(123.2) = -.51$, $p = .61$. Although the results of this study did not link attachment and the variability of physiological arousal during the baseline or semi-natural communication segments, women whose partners reported higher levels of attachment anxiety demonstrated more variability in their physiological arousal during the therapy-like segment. This indicates that for women, having a male partner with a more anxious attachment strategy leads to greater fluctuations in physiological arousal during a therapy-like setting.

Figure 4. Research Question 1 – The Effect of Attachment Anxiety and Gender on the Variability of Physiological Arousal during the Therapy-Like Interaction



* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

Table 8

Research Question 1 – Variability of Physiological Arousal

Communication Segment	⁺ Predictor Variables	<i>b</i>	SE	df	<i>t</i>	β
Baseline Interaction	Gender	.09**	.03	55.8	2.95	.23
	Avoidance (A)	.01	.03	95.2	.50	.04
	Avoidance (P)	-.02	.03	79.6	-.87	-.07
	Anxiety (A)	-.06	.03	104.8	-1.91	-.16
	Anxiety (P)	-.05	.03	69.2	-1.82	-.14
	Relaxation Baseline Level	.03	.01	76.5	4.14	.32
	Conflict (P)	.04***	.001	71.1	3.79	.31
	Relationship Status	-.10***	.03	59.2	-3.36	-.27
Semi-Natural Interaction	Gender	.11***	.03	59.7	3.69	.29
	Avoidance (A)	.01	.03	104.6	.28	.02
	Avoidance (P)	.01	.03	89.0	.38	.03
	Anxiety (A)	-.01	.03	113.4	-.22	-.02
	Anxiety (P)	.01	.02	82.1	.57	.04
	Relaxation Baseline Level	.04***	.01	84.7	5.51	.41
	Conflict (P)	--	--	--	--	--
	Relationship Status	--	--	--	--	--
Therapy-Like Interaction	Gender	.10***	.03	54.1	3.45	.28
	Avoidance (A)	-.01	.03	107.9	-.52	-.04
	Avoidance (P)	-.02	.03	95.2	-.55	-.05
	Anxiety (A)	.01	.03	112.3	.50	.04
	Anxiety (P)	.05	.03	86.2	1.63	.15
	Relaxation Baseline Level	.03***	.01	87.8	5.00	.40
	Conflict (P)	--	--	--	--	--
	Relationship Status	--	--	--	--	--
	Gender * Avoidance (A)	.002	.03	104.9	.06	.005
	Gender * Avoidance (P)	-.05	.03	94.4	-1.85	-.16
	Gender * Anxiety (A)	.04	.03	112.7	1.60	.14
	Gender * Anxiety (P)	.06*	.03	86.5	2.03	.19

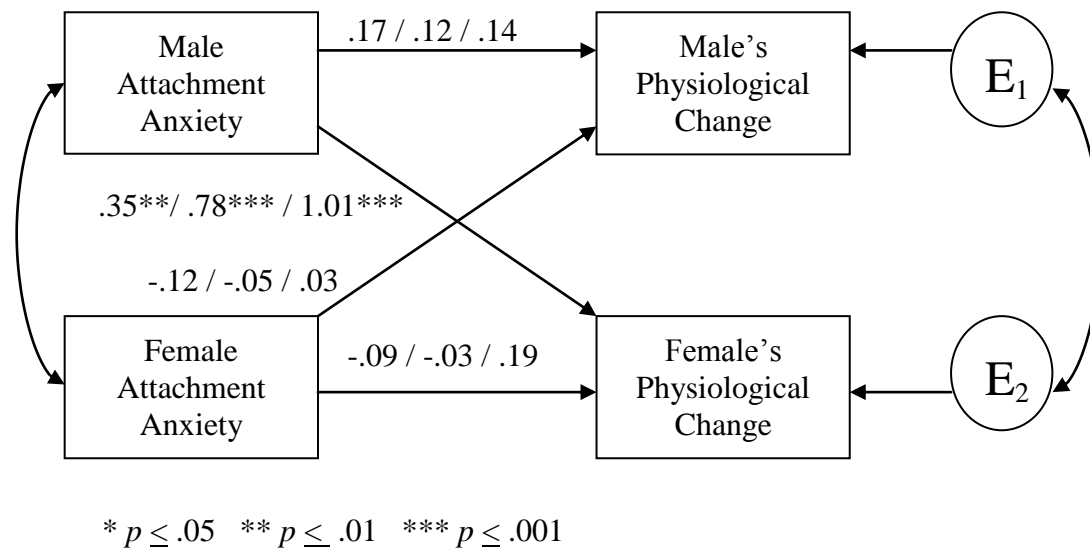
* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

⁺The following variables were removed from the final analysis for all communication segments due to non-significance: Symptom Distress (A, P), Conflict (A), Global Partner Feelings (A, P), Age, Race / Ethnicity, and Education.

Change in physiological arousal (see Table 9). For this study, change in physiological arousal refers to the moment-to-moment skin conductance level changes from the relaxation

baseline that occurred during each interactional condition. There was a significant interaction between gender and partner attachment anxiety for the baseline, $b = .23$, $t(82.3) = 2.73$, $p < .01$; semi-natural, $b = .40$, $t(80.4) = 2.64$, $p = .01$; and therapy-like, $b = .49$, $t(81.8) = 2.29$, $p = .02$, communication segments. Post hoc analyses using man/woman dummy codes showed a significant effect of partner attachment anxiety for women's changes in skin conductance during the baseline, $b = .35$, $t(108.1) = 2.83$, $p < .01$; semi-natural, $b = .78$, $t(119.7) = 3.52$, $p = .001$; and therapy-like, $b = 1.01$, $t(120.3) = 3.27$, $p = .001$, communication segments, with greater increases in skin conductance levels for women whose partners reported higher levels of attachment anxiety (see Figure 5). However, no significant effect of attachment for men was found during the baseline, $b = -.12$, $t(108.6) = -1.27$, $p = .21$, semi-natural, $b = -.05$, $t(119.9) = -.29$, $p = .77$; and therapy-like, $b = .03$, $t(120.5) = .13$, $p = .90$, communication segments. This finding provides evidence that the increase in physiological arousal for women whose male partners were higher in attachment anxiety occurs across interactional conditions, whether the couple is discussing a positive issue or an emotionally charged issue by themselves or with a therapist/coach.

Figure 5. Research Question 1 – The Effect of Attachment Anxiety and Gender on Changes in Physiological Arousal during the Baseline / Semi-Natural / Therapy-Like Interactions



For the baseline communication segment, there were also interactions between age and attachment avoidance, $b = .02$, $t(94.2) = 2.12$, $p = .04$. A post hoc analysis revealed a significant effect of attachment avoidance for young individuals (-1 SD), $b = -.24$, $t(101.4) = -2.06$, $p = .04$, but not for older individuals ($+1$ SD), $b = .10$, $t(101.6) = .91$, $p = .36$ (see Figure 6). For younger individuals, high levels of attachment avoidance were associated with smaller changes in skin conductance levels from the relaxation baseline to the baseline communication segment. Thus, when controlling for relaxation baseline levels of skin conductance, age did not have a significant association with skin conductance, except during the baseline communication segment when partners reminisced about how they met. During that segment, younger individuals who were high in attachment avoidance evidenced smaller changes in skin conductance.

Figure 6. Research Question 1 – The Effect of Attachment Avoidance and Age on Physiological Arousal during the Baseline Interaction

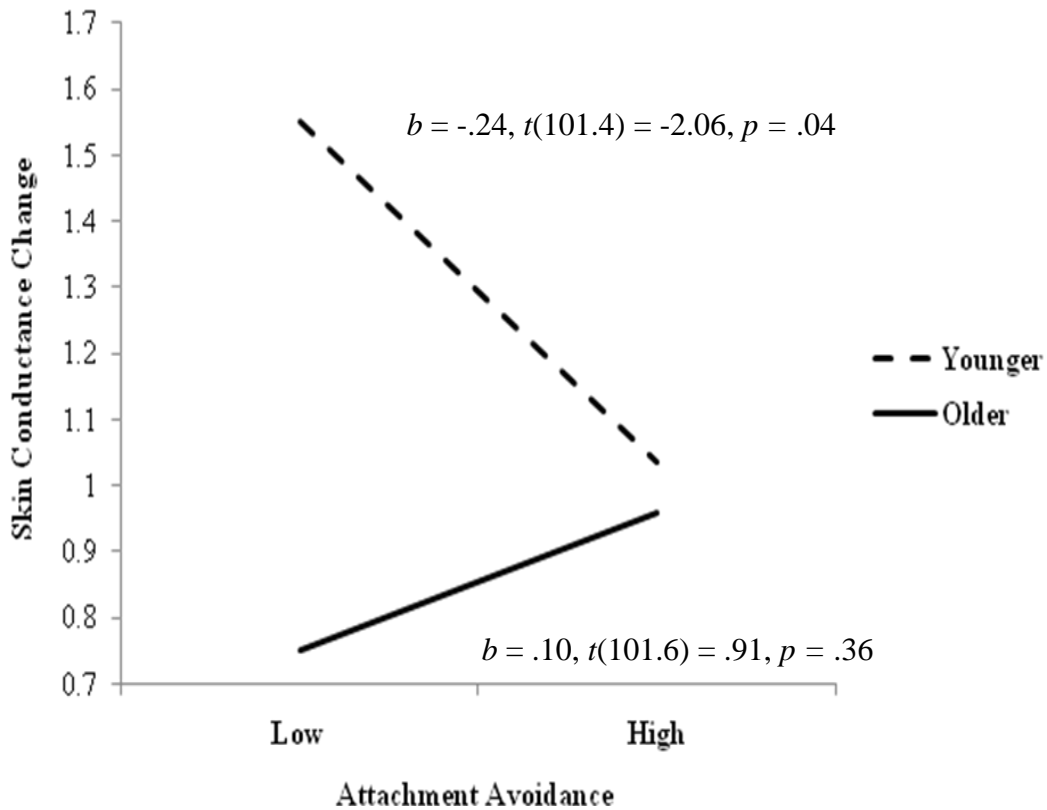


Table 9

Research Question 1 – Change from Relaxation Baseline of Physiological Arousal (Residualized)

Communication Segment	⁺ Predictor Variables	<i>b</i>	SE	df	<i>t</i>	β
Baseline Interaction	Gender	.24**	.07	53.5	3.29	.24
	Avoidance (A)	-.07	.07	101.8	-.91	-.08
	Avoidance (P)	.07	.08	93.3	.84	.07
	Anxiety (A)	.04	.08	89.6	.50	.05
	Anxiety (P)	.12	.08	80.5	1.42	.14
	Relaxation Baseline Level	.02	.02	79.0	.73	.06
	Age	-.02*	.01	67.6	-2.24	-.22
	Gender * Avoidance (A)	-.12	.08	85.1	-1.51	-.14
	Gender * Avoidance (P)	.10	.08	83.6	1.11	.10
	Gender * Anxiety (A)	-.13	.08	90.9	-1.62	-.15
	Gender * Anxiety (P)	.23**	.08	82.3	2.73	.26

Table 9 (cont'd)

Communication Segment	⁺ Predictor Variables	<i>b</i>	SE	df	<i>t</i>	β
Baseline Interaction (cont'd)	Age * Avoidance (A)	.02*	.01	94.2	2.12	.18
	Age * Avoidance (P)	-.003	.01	81.7	-.36	-.03
	Age * Anxiety (A)	-.02*	.01	99.0	-1.96	-.17
	Age * Anxiety (P)	-.01	.01	95.4	-1.83	-.17
Semi-Natural Interaction	Gender	.34*	.14	56.8	2.48	.21
	Avoidance (A)	-.08	.14	103.9	-.60	-.05
	Avoidance (P)	.01	.14	90.1	.08	.01
	Anxiety (A)	.06	.14	107.0	.41	.04
	Anxiety (P)	.37*	.15	79.9	2.44	.26
	Relaxation Baseline Level	.97***	.03	83.5	29.7	-.09
	Age	--	--	--	--	--
	Gender * Avoidance (A)	-.23	.14	94.2	-1.65	-.15
	Gender * Avoidance (P)	.03	.15	84.7	.18	.02
	Gender * Anxiety (A)	-.08	.13	107.6	-.57	-.05
	Gender * Anxiety (P)	.40**	.15	80.4	2.64	.28
Therapy-Like Interaction	Gender	.19	.19	56.9	1.01	.09
	Avoidance (A)	-.12	.19	104.8	-.65	-.06
	Avoidance (P)	-.16	.20	91.3	-.78	-.07
	Anxiety (A)	.17	.19	107.9	.87	.08
	Anxiety (P)	.52*	.21	81.2	2.45	.26
	Relaxation Baseline Level	.92***	.05	84.8	20.2	-.14
	Age	--	--	--	--	--
	Gender * Avoidance (A)	-.33	.20	95.5	-1.66	-.16
	Gender * Avoidance (P)	-.11	.21	86.0	-.55	-.05
	Gender * Anxiety (A)	.02	.19	108.5	.12	.01
	Gender * Anxiety (P)	.49*	.21	81.8	2.29	.24

* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

⁺The following variables were removed from the final analysis for all communication segments due to non-significance: Symptom Distress (A, P), Conflict (A, P), Global Partner Feelings (A, P), Race / Ethnicity, Relationship Status, and Education.

Level of moment-to-moment feelings towards one's partner (see Table 10). For the purposes of this study, the level of feeling towards one's partner refers to how much moment-to-moment positive versus negative feelings towards one's partner were felt by an individual. Level is conceptually similar to the level of physiological arousal, with the primary difference being that the level of feeling towards one's partner provides meaningful information without

controlling for baseline levels. As a result, baseline level of feelings towards one's partner was used as a covariate only in the analysis of change in baseline with respect to feelings toward one's partner.

In terms of the level of feeling towards one's partner during the baseline communication segment, there were significant main effects for partner avoidance, $b = -2.94$, $t(114.9) = -2.14$, $p = .03$; and actor anxiety, $b = 3.16$, $t(88.6) = 2.43$, $p = .02$. Higher levels of attachment avoidance reported by an individual were associated with lower levels of positivity felt by that person's partner, whereas higher levels of attachment anxiety reported by a person actually were associated with more positivity felt by that person towards his/her partner during the baseline segment. There were also significant main effects for gender, $b = 3.45$, $t(61.5) = 2.46$, $p = .02$; education, $b = 5.03$, $t(88.6) = 2.21$, $p = .03$; and disruptive couple conflict, $b = -.36$, $t(88.6) = -5.21$, $p < .001$. Being a woman, higher levels of education, and lower levels of disruptive conflict were associated with higher levels of positivity felt towards one's partner during the baseline communication segment. There was no significant interaction between education or conflict and attachment.

There was no significant interaction involving attachment for either segment, but there was a significant main effect for attachment anxiety, $b = 3.74$, $t(101.5) = 2.76$, $p < .01$, during the therapy-like communication segment. Similar to the baseline communication segment, higher levels of attachment anxiety were associated with higher levels of positivity felt towards one's partner. For both the semi-natural, $b = -.38$, $t(112.4) = -4.68$, $p < .001$, and therapy-like, $b = -.32$, $t(114.6) = -4.41$, $p < .001$, communication segments, higher levels of disruptive conflict were significantly associated with less positivity felt towards one's partner. However, there was no significant interaction between conflict and attachment when tested as part of the model.

Thus, during positive communication and more highly structured, emotionally-focused communication, attachment anxiety contributed to more positive feelings towards one's partner. Attachment avoidance appeared to dampen positive feelings experienced by partners during couple communication centered on a positive topic.

Table 10

Research Question 1 – Level of Moment-to-Moment Feelings

Communication Segment	⁺ Predictor Variables	<i>b</i>	SE	df	<i>t</i>	β
Baseline Interaction	Gender	3.45*	1.40	61.5	2.46	.18
	Avoidance (A)	-2.36	1.38	101.3	-1.71	-.13
	Avoidance (P)	-2.94*	1.37	114.9	-2.14	-.16
	Anxiety (A)	3.16*	1.30	88.6	2.43	.18
	Anxiety (P)	.41	1.37	114.7	.30	.02
	Conflict (A)	-.36***	.07	88.6	-5.21	-.42
	Relationship Status	--	--	--	--	--
	Education	5.03*	2.28	88.6	2.21	.26
Semi-Natural Interaction	Gender	--	--	--	--	--
	Avoidance (A)	.69	4.58	110.8	.44	.04
	Avoidance (P)	-1.58	1.51	110.6	-1.04	-.09
	Anxiety (A)	1.39	1.54	95.7	.90	.08
	Anxiety (P)	1.26	1.52	95.0	.83	.07
	Conflict (A)	-.38***	.08	112.4	-4.68	-.46
	Relationship Status	3.46	1.81	75.9	1.91	.18
	Education	--	--	--	--	--
Therapy-Like Interaction	Gender	--	--	--	--	--
	Avoidance (A)	.38	1.40	115.6	.27	.02
	Avoidance (P)	-.71	1.35	115.7	-.53	-.05
	Anxiety (A)	3.74**	1.36	101.5	2.76	.25
	Anxiety (P)	1.11	1.34	101.0	.83	.07
	Conflict (A)	-.32***	.07	114.6	-4.41	-.43
	Relationship Status	--	--	--	--	--
	Education	--	--	--	--	--

* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

⁺The following variables were removed from the final analysis for all communication segments due to non-significance: Symptom Distress (A, P), Conflict (P), Global Partner Feelings (A, P), Age, and Race / Ethnicity.

Proximal self-report of the level of feelings towards partner. A proximal self-report measure of feelings towards one's partner during all communication segments was also obtained using the Subjective Emotional Experience Questionnaire (SEEQ). Although there was not a significant gender main effect, there were significant gender interactions with actor avoidance, $b = -2.81$, $t(73.5) = -2.23$, $p = .03$, and anxiety, $b = -3.76$, $t(79.0) = -3.19$, $p < .01$. A post hoc analysis using man/woman dummy codes showed a significant effect for men and their own attachment anxiety, $b = 7.24$, $t(90.8) = 4.02$, $p < .001$, and for women and their own attachment avoidance, $b = -4.39$, $t(93.5) = -2.86$, $p < .01$ (see Figures 7 and 8). Higher levels of reported attachment anxiety in men were associated with more positive feelings towards one's partner during the communication segments. In addition, attachment avoidance in women was associated with more negative feelings towards one's partner during the segments as a whole.

Figure 7. Research Question 1 – The Effect of Attachment Avoidance and Gender on Proximal Feelings towards Partner for all Combined Interactions

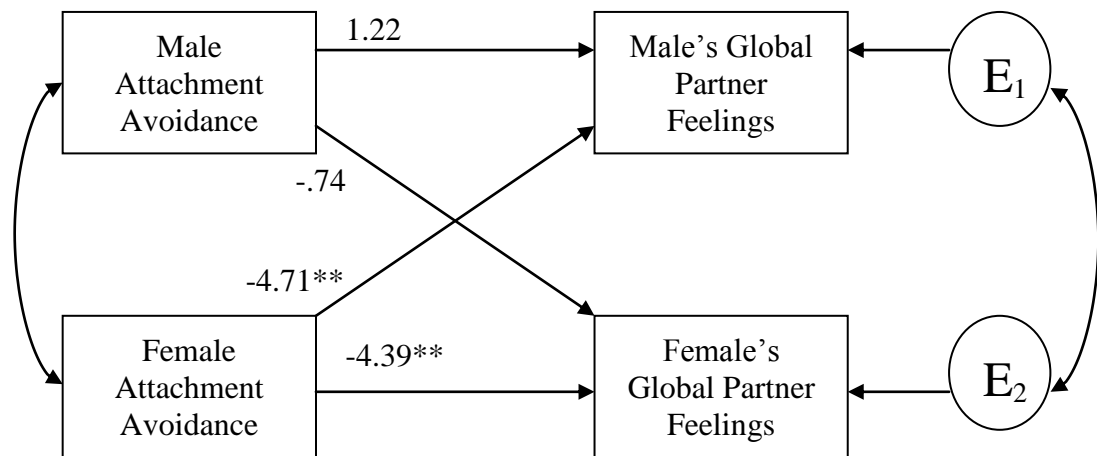
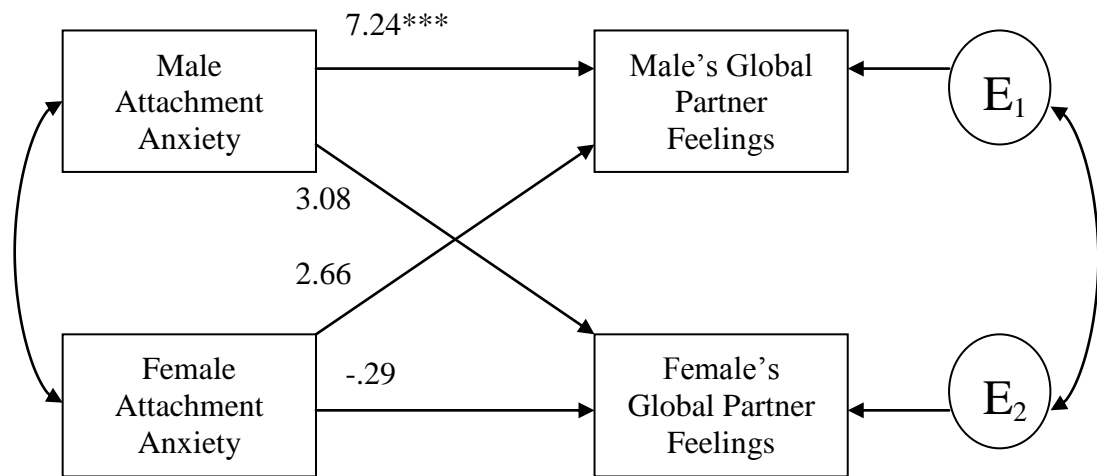


Figure 8. Research Question 1 – The Effect of Attachment Anxiety and Gender on Proximal Feelings towards Partner for all Combined Interactions



There were also significant main effects for partner avoidance, $b = -2.74$, $t(90.4) = -2.44$, $p = .02$, and partner anxiety, $b = 2.84$, $t(79.4) = 2.37$, $p = .02$. A person's attachment avoidance was associated with more negative feelings, while attachment anxiety was associated with more positive feelings towards one's partner. Lastly, there were significant main effects for relationship status, $b = 7.18$, $t(88.0) = 2.57$, $p = .01$, as well as for disruptive couple conflict, $b = -.39$, $t(107.5) = -6.91$, $p < .001$, with being in a marriage relationship and lower levels of couple conflict associated with more emotional safety felt during the communication segments taken as a whole. However, there were no significant interactions between any of these variables and attachment when tested as part of the model. Overall, attachment-related results for a proximal measure of feelings towards one's partner are similar to those reported moment-to-moment. Attachment avoidance in women was linked to more negative feelings towards the man, whereas attachment avoidance in an individual was associated with more negative feelings felt by his/her partner. Conversely, attachment anxiety led to more positive feelings for anxious men, and partners of those higher in anxiety reported more positive feelings when rating the

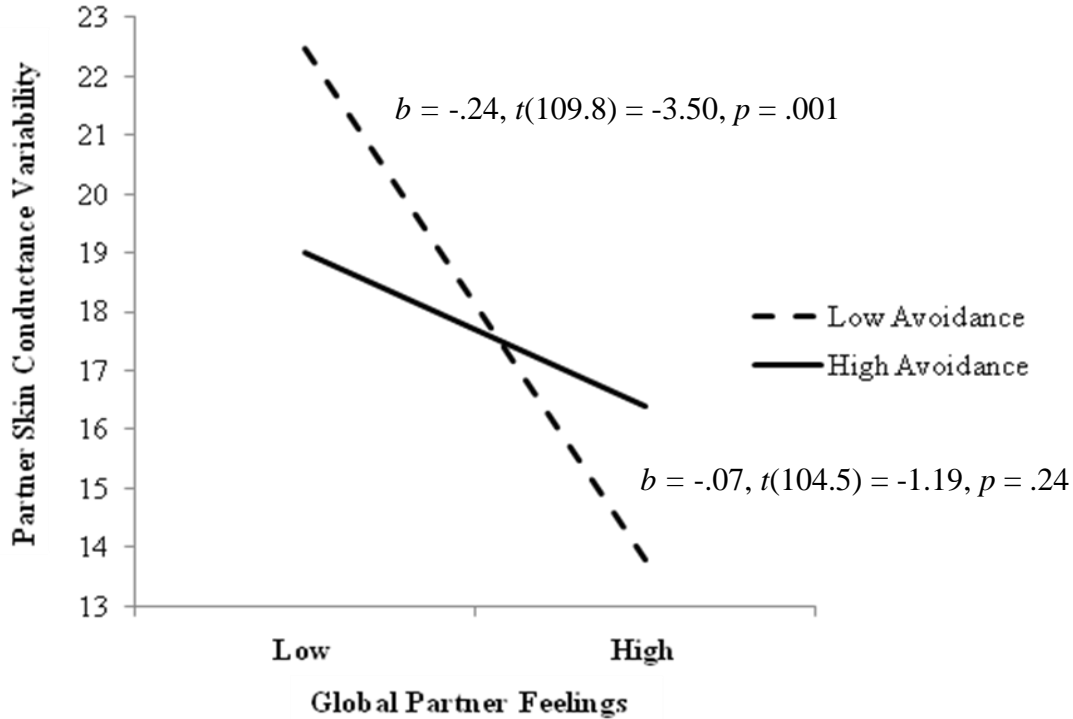
communication segments as a whole.

Variability of moment-to-moment feelings towards one's partner (see Table 11). For moment-to-moment feelings towards one's partner, the construct of variability is parallel to variability of moment-to-moment physiological arousal. In other words, it refers to the amount each person's responses deviate from his/her mean level of feelings towards one's partner (i.e., the standard deviation). There was no significant gender main effect or interaction for the baseline communication segment, and the additional complexity introduced from distinguishing the data by gender was not justified. As a result, gender was removed from the analysis. Although there was no significant interaction or main effect involving attachment during the original analysis, a significant interaction between partner attachment avoidance and global feelings towards one's partner, $b = .08$, $t(109.1) = 2.19$, $p = .03$, was found when it was added to the model.

A post hoc simple slopes analysis revealed a significant effect of partner feelings for lower levels, $b = -.24$, $t(109.8) = -3.50$, $p = .001$, but not higher levels, $b = -.07$, $t(104.5) = -1.19$, $p = .24$, of attachment avoidance (see Figure 9). In this manner, for those with lower levels of attachment avoidance, more positive global feelings reported by their partner were associated with less variability in their partner's moment-to-moment feelings during the baseline communication segment. Although the relationship direction was similar for those with higher attachment avoidance, the simple slope test was not statistically significant. In addition to global feelings towards one's partner, there were significant main effects for ethnicity, $b = 1.98$, $t(85.5) = 2.47$, $p = .02$, and education, $b = -3.81$, $t(88.0) = -3.10$, $p < .01$. Both identifying as a member of a racially non-white minority group and lower education were associated with greater variability in feelings towards one's partner during the baseline communication segment. There

was no significant interaction between ethnicity or education and attachment when analyzed.

Figure 9. Research Question 1 – The Effect of Attachment Avoidance and Global Feelings towards Partner on the Variability of Moment-to-Moment Feelings during the Baseline Interaction



For the semi-natural communication segment, there was no significant main effect or interaction involving attachment. However, there were significant main effects for gender, $b = 1.59, t(60.7) = 2.18, p = .03$, and ethnicity, $b = 1.66, t(83.2) = 2.41, p = .02$, with being a woman and identifying as a member of a non-white minority group being associated with greater variability in moment-to-moment feelings toward one's partner. For the therapy-like communication segment, there was no significant interaction involving attachment, but there was a significant main effect for attachment anxiety, $b = 1.49, t(117.9) = 2.15, p = .03$, with higher levels of anxiety also associated with more variability. Similar to the results for the other two segments, individuals who identified as members of a non-white minority group were more likely to have greater variability in their feelings toward their partner during the therapy like interaction, $b = 2.00, t(80.6) = 2.82, p < .01$. However, there were no significant interactions

between attachment and any demographic variable or covariate when added to the model.

In sum, variability in feelings towards one's partner differed by condition. For those lower in attachment avoidance, more positive global feelings reported by their partner led to less variability in the partner's feelings during the baseline segment. This provides some evidence that having a partner lower in attachment avoidance leads to more consistent feelings towards that partner during a neutral to positive relationship discussion. During the therapy-like communication segment, higher levels of attachment anxiety were also associated with greater variability, indicating that, even though attachment anxiety appeared related to more positive feelings towards one's partner during the therapy-like communication segment, hyperactivating tendencies are associated with more fluctuations in feelings towards one's partner.

Table 11

Research Question 1 – Variability of Moment-to-Moment Feelings

Segment	⁺ Predictor Variables	<i>b</i>	SE	df	<i>t</i>	β
Baseline	Gender	--	--	--	--	--
	Avoidance (A)	-.42	.78	112.7	-.54	-.05
	Avoidance (P)	-.20	.80	113.7	-.25	-.02
	Anxiety (A)	-.72	.75	111.0	-.97	-.09
	Anxiety (P)	-1.01	.75	111.2	-1.34	-.12
	Global Partner Feelings (A)	--	--	--	--	--
	Global Partner Feelings (P)	-.15**	.05	91.5	-3.03	-.31
	Race / Ethnicity	1.98*	.80	85.5	2.47	.22
	Education	-3.81**	1.23	88.0	-3.10	-.42
	Global Feelings (P) * Avoidance (A)	-.04	.04	113.9	-.79	-.08
	Global Feelings (P) * Avoidance (P)	.08*	.04	109.1	2.19	.17
	Global Feelings (P) * Anxiety (A)	-.06	.04	113.8	-1.72	-.14
	Global Feelings (P) * Anxiety (P)	-.01	.04	113.5	-.21	-.02
Semi-Natural	Gender	1.59*	.83	60.7	2.18	.21
	Avoidance (A)	-.63	.68	112.8	-.93	-.09
	Avoidance (P)	-.03	.66	104.6	-.05	-.004
	Anxiety (A)	.65	.65	115.4	1.01	.10
	Anxiety (P)	.33	.62	101.1	.53	.05

Table 11 (cont'd)

Segment	⁺ Predictor Variables	<i>b</i>	SE	df	<i>t</i>	β
Semi-Natural (cont'd)	Global Partner Feelings (A)	--	--	--	--	--
	Global Partner Feelings (P)	--	--	--	--	--
	Race / Ethnicity	1.66*	.69	83.2	2.41	.22
	Education	--	--	--	--	--
Therapy-Like	Gender	--	--	--	--	--
	Avoidance (A)	-.54	.77	105.3	-.71	-.07
	Avoidance (P)	-.17	.76	105.0	-.22	-.02
	Anxiety (A)	1.49*	.69	117.9	2.15	.20
	Anxiety (P)	-.18	.69	117.7	-.26	-.02
	Global Partner Feelings (A)	--	--	--	--	--
	Global Partner Feelings (P)	--	--	--	--	--
	Race / Ethnicity	2.00**	.71	80.6	2.82	.23
	Education	--	--	--	--	--

* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

⁺The following variables were removed from the final analysis for all communication segments due to non-significance: Symptom Distress (A, P), Conflict (A, P), Age, and Relationship Status.

Change in moment-to-moment feelings towards one's partner (see Table 12). Similar to the change analyses for skin conductance, baseline levels were included as covariates in the analyses of the moment-to-moment changes in feelings towards one's partner. One primary difference in the analyses of change in feelings towards one's partner is the baseline used in the analysis. There was no baseline established for moment-to-moment feelings towards one's partner prior to any couple communication (i.e., during the relaxation baseline). As a result, the baseline used for comparison was the neutral- to positively-toned couple communication segment about how the couple met. In this manner, change from baseline related to how much of a drop in positive feelings towards one's partner was experienced during the semi-natural and therapy-like communication segments when the couple was discussing a problem compared to the segment when they were discussing how they met.

For the change between baseline and both the semi-natural and therapy-like communication segments, there was no significant main effect or interaction involving attachment or gender. The only significant main effect for the change between baseline and the

semi-natural segments was disruptive couple conflict, $b = -.30$, $t(115.0) = -3.53$, $p = .01$, with lower levels of disruptive conflict associated with less of a decrease in positivity toward one's partner from the baseline to semi-natural communication segment. However, there was no significant interaction between conflict and attachment when added to the analysis. For the change between the baseline and therapy-like segments, there was a significant gender main effect, $b = -4.04$, $t(60.1) = -3.46$, $p = .001$, with men reporting less of a decrease in positivity towards their partner.

Overall, the analyses involving research question one generated some interesting results. In terms of physiological arousal, there was a significant effect of attachment avoidance for younger individuals, with higher attachment avoidance being associated with smaller skin conductance changes occurring from the relaxation baseline to the baseline interaction. In addition, women whose male partners reported high attachment anxiety demonstrated increased physiological arousal and subsequent suppression during each of the interaction conditions. With respect to feelings towards partner, attachment avoidance was associated with less positive feelings reported by the person's partner during the baseline interaction. Attachment anxiety was also associated with more positive moment-to-moment feelings towards one's partner during the baseline and therapy-like interactions but not during the semi-natural interaction.

Table 12

Research Question 1 – Change from Baseline in Moment-to-Moment Feelings

Communication Segment	⁺ Predictor Variables	<i>b</i>	SE	df	<i>t</i>	β
Semi-Natural Interaction	Gender	--	--	--	--	--
	Avoidance (A)	.98	1.58	111.3	.62	.05
	Avoidance (P)	-.89	1.51	112.0	-.59	-.05

Table 12 (cont'd)

Communication Segment	⁺ Predictor Variables	<i>b</i>	SE	df	<i>t</i>	β
Semi-Natural Interaction (cont'd)	Anxiety (A)	-.17	1.57	100.1	-.11	-.01
	Anxiety (P)	.84	1.48	96.2	.57	.04
	Baseline Interaction Level	-.74***	.09	107.9	-8.10	-.69
	Conflict (A)	-.30***	.08	115.0	-3.53	-.32
	Education	-4.60	2.73	112.6	-1.69	-.22
Therapy-Like Interaction	Gender	-4.04***	1.17	60.1	-3.46	-.21
	Avoidance (A)	.50	1.35	116.1	.37	.03
	Avoidance (P)	-.17	1.31	110.6	-.13	-.01
	Anxiety (A)	2.39	1.30	101.5	1.84	.14
	Anxiety (P)	-.15	1.27	94.4	-.12	-.01
	Interaction Baseline Level	-.63***	.08	110.5	-8.34	-.62
	Conflict (A)	--	--	--	--	--
	Education	--	--	--	--	--

* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

⁺The following variables were removed from the final analysis for all communication segments due to non-significance: Symptom Distress (A, P), Conflict (P), Global Partner Feelings (A, P), Age, Race / Ethnicity, and Relationship Status.

Research Question 2: How do the effects of self-reported attachment account for the differences in emotional experience between the semi-natural and therapy-like conditions?

The analyses for this research question were similar to those for the first research question (dyadic analysis using the APIM). The primary difference was that the data were treated as non-distinguishable and interactional condition (semi-natural versus therapy-like) was analyzed as a predictor variable in order to understand whether there was a main effect for condition as well as whether it interacted with actor and partner attachment effects to influence physiological arousal and feelings towards one's partner. Although the data were treated as non-distinguishable by gender, it should be noted that tests for gender main effects and interactions were conducted and only removed from the analysis if non-significant. In addition, the same covariates and demographic variables were included in the final analysis if they were significant. Nonetheless, the primary focus of results for this question was on the main effect for condition or any interactions involving condition and attachment. In this manner, it was important to

understand whether emotional experience in these segments varied not only according to attachment characteristics of both actors and partners but also according to the interactional condition.

Physiological arousal (see Table 13). In terms of the raw scores for skin conductance level, there was no significant interaction between condition and attachment. However, there was a significant main effect for condition, $b = .12$, $t(60.0) = 2.30$, $p = .03$, with higher skin conductance more likely during the semi-natural communication segment. There was also no condition main effect or interaction with attachment when considering physiological variability, meaning that variability did not change from the semi-natural to the therapy-like segments. For physiological change from the relaxation baseline there again was no significant interaction between condition and attachment, but there was a significant main effect for condition, $b = .12$, $t(62.0) = 2.32$, $p = .02$, with more change from the baseline to semi-natural segments. In this manner, participants typically evidenced higher levels of physiological arousal when they were talking about a difficult issue with their partner with no coaching from the therapist than when talking about that issue with a therapist/coach while their partner was present.

Table 13

Research Question 2 – Condition Comparison of Physiological Level, Variability, and Change

Type	⁺ Predictor Variables	<i>b</i>	SE	df	<i>t</i>	β
Level	Condition	.12*	.05	62.0	2.32	.03
	Gender	.27	.15	62.0	1.75	.06
	Avoidance (A)	-.10	.15	114.7	-.67	-.03
	Avoidance (P)	-.07	.16	99.7	-.46	-.02
	Anxiety (A)	.11	.15	117.6	.73	.03
	Anxiety (P)	.45**	.17	88.3	2.64	.12
	Relaxation Baseline Level	.94***	.04	93.3	25.9	.94
	Global Partner Feelings (A)	--	--	--	--	--

Table 13 (cont'd)

Type	⁺ Predictor Variables	<i>b</i>	SE	df	<i>t</i>	β
Level (cont'd)	Education	--	--	--	--	--
	Gender * Avoidance (A)	-.28	.16	103.7	-1.78	-.07
	Gender * Avoidance (P)	-.04	.16	93.5	-.26	-.01
	Gender * Anxiety (A)	-.03	.15	118.3	-.18	-.01
	Gender * Anxiety (P)	.45**	.17	89.0	2.63	.12
Variability	Condition	.01	.01	62.0	.92	.03
	Gender	.10***	.03	62.0	3.78	.26
	Avoidance (A)	.01	.02	117.6	.23	.02
	Avoidance (P)	.004	.02	102.8	.19	.01
	Anxiety (A)	.01	.02	122.4	.41	.03
	Anxiety (P)	.02	.02	92.1	.77	.05
	Relaxation Baseline Level	.04***	.01	96.6	6.10	.43
	Relationship Status	--	--	--	--	--
	Education	.07	.04	102.3	1.56	.18
Change	Condition	.12*	.05	62.0	2.32	.08
	Gender	--	--	--	--	--
	Avoidance (A)	-.12	.12	102.8	-1.06	-.08
	Avoidance (P)	-.09	.11	91.8	-.85	-.06
	Anxiety (A)	-.005	.11	118.8	-.04	-.004
	Anxiety (P)	.21*	.10	87.6	2.15	.15
	Relaxation Baseline Level	-.07*	.03	85.8	-2.47	-.18
	Global Partner Feelings (A)	-.01*	.01	90.6	-2.06	-.18
	Education	--	--	--	--	--

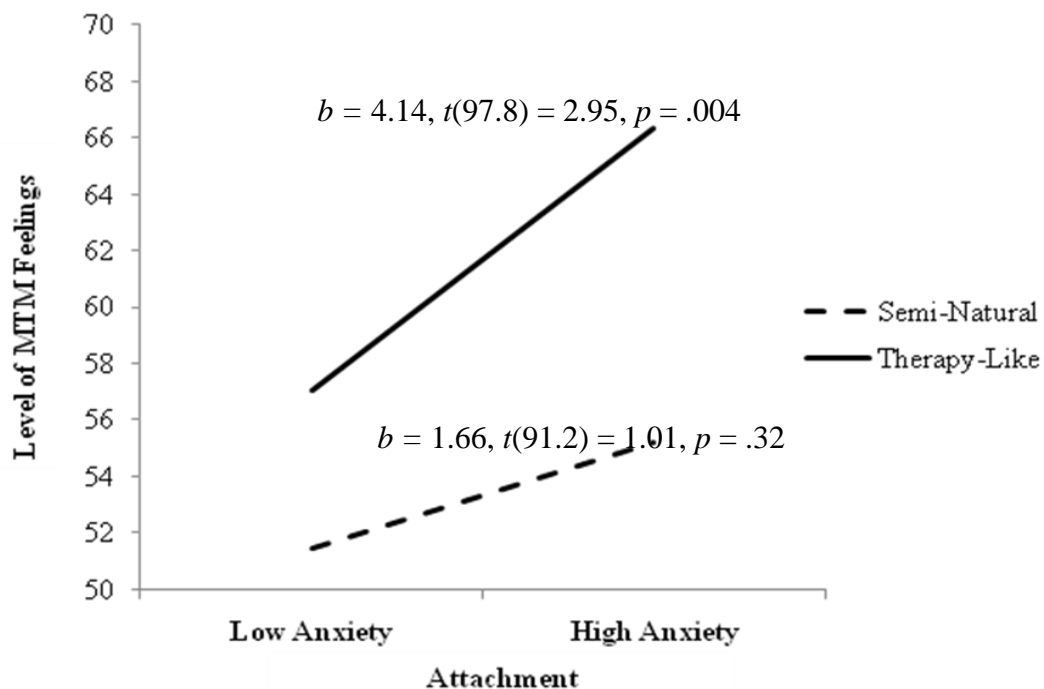
* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

⁺The following variables were removed from the final analysis for all measurement types due to non-significance: Symptom Distress (A, P), Conflict (A, P), Global Partner Feelings (P), Age, Race / Ethnicity, and Relationship Status.

Feelings towards one's partner (see Table 14). In terms of the level of feelings (positive versus negative) towards one's partner during the communication segments, there was a significant condition by attachment anxiety interaction, $b = -1.58$, $t(113.0) = -3.02$, $p < .01$. A post hoc analysis indicated a significant simple slope for the therapy-like, $b = 4.14$, $t(97.8) = 2.95$, $p = .004$, but not for the semi-natural, $b = 1.66$, $t(91.2) = 1.01$, $p = .32$, condition (see Figure 10). Specifically, higher levels of attachment anxiety were associated with more positive feelings towards one's partner during the therapy-like condition. There was no condition main effect or interaction with respect to the variability of feelings towards one's partner, indicating

that variability was not significantly different across conditions. However, when considering the changes from baseline and controlling for original baseline levels, the two conditions differed significantly. There was a significant interaction between condition and attachment anxiety, $b = -1.58$, $t(113.1) = -3.01$, $p < .01$. A post hoc analysis revealed a significant slope for the therapy-like, $b = 3.30$, $t(101.0) = 2.48$, $p = .02$, but not the semi-natural $b = .86$, $t(93.3) = .53$, $p = .60$, communication segment (see Figure 11). Higher levels of attachment anxiety were associated with less of a decrease in positive feelings felt towards one's partner from the baseline to the therapy-like communication segments. As a result, attachment anxiety was linked to a more positive emotional experience during the therapy-like communication segment, suggesting that greater interactional structure focused on primary emotions and attachment needs may be especially useful for those higher in attachment anxiety.

Figure 10. Research Question 2 – The Effects of Condition and Attachment Anxiety on Level of Moment-to-Moment Feelings towards Partner



In sum, several significant results were found when looking at the effects of attachment and condition on emotional experience. There were no statistically significant interactions

between attachment and condition for physiological arousal. However, there was a significant condition main effect, indicating that participants evidenced more physiological arousal and subsequent suppression during the semi-natural communication segment. When considering moment-to-moment feelings towards one's partner, there was a significant interaction between attachment anxiety and condition, indicating that those higher in attachment anxiety felt more positively toward their partner during the therapy-like rather than the semi-natural condition.

Figure 11. Research Question 2 – The Effects of Condition and Attachment Anxiety on Change from Baseline in Moment-to-Moment Feelings towards Partner

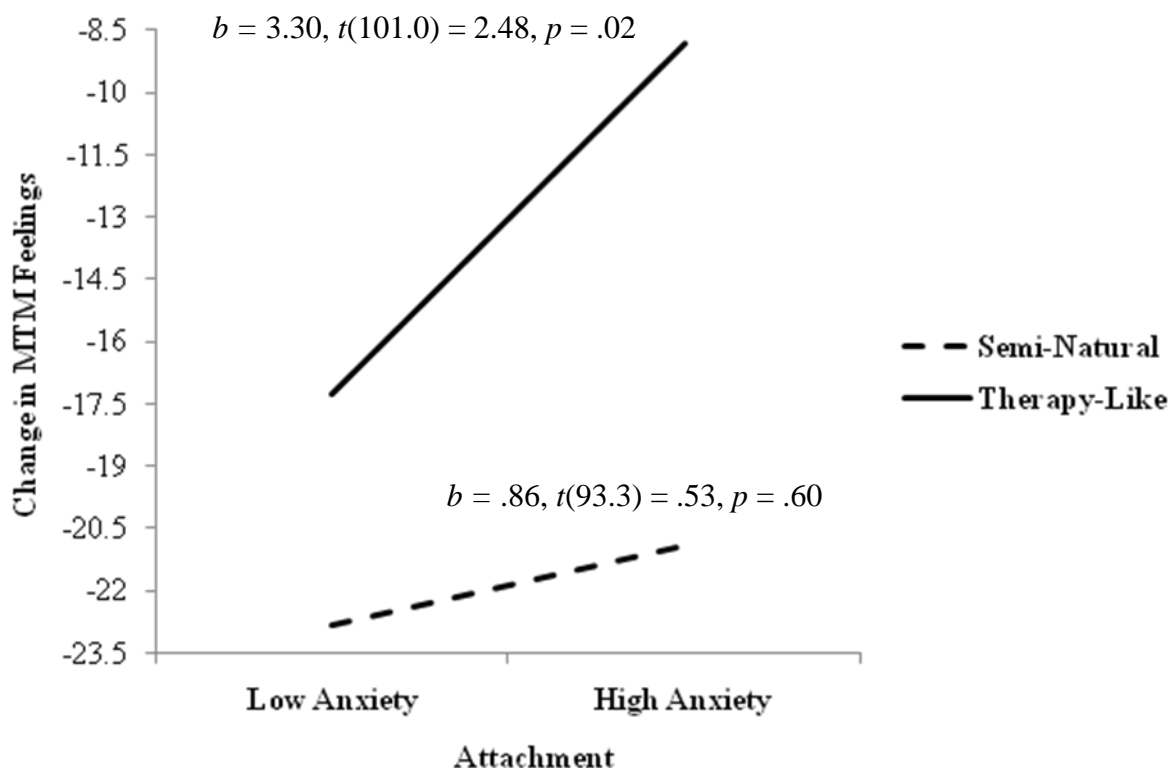


Table 14

Research Question 2 – Condition Comparison of Moment-to-Moment Level, Variability, and Change in Feelings towards Partner

Type	⁺ Predictor Variables	<i>b</i>	SE	df	<i>t</i>	β
Level	Condition	-4.27***	.62	62.4	-6.93	-.23
	Gender	-1.40	1.09	63.7	-1.29	-.08
	Avoidance (A)	.50	1.33	119.2	.38	.03
	Avoidance (P)	-.86	1.27	119.1	-.68	-.05
	Anxiety (A)	2.85*	1.34	104.3	2.12	.17
	Anxiety (P)	1.12	1.32	104.4	.85	.07
	Conflict (A)	-.33***	.07	119.4	-4.90	-.41
	Global Partner Feelings (A)	--	--	--	--	--
	Race / Ethnicity	--	--	--	--	--
	Condition * Gender	.92	.49	62.5	1.90	.05
	Condition * Avoidance (A)	-.12	.53	123.5	-.23	-.01
	Condition * Avoidance (P)	-.55	.53	123.4	-1.05	-.03
	Condition * Anxiety (A)	-1.58**	.52	113.0	-3.02	-.10
	Condition * Anxiety (P)	.02	.52	113.0	.04	.001
	Gender * Avoidance (A)	-1.30	1.35	98.0	-.96	-.08
	Gender * Avoidance (P)	2.68*	1.35	98.5	1.99	.16
	Gender * Anxiety (A)	-1.37	1.30	105.4	-1.06	-.08
	Gender * Anxiety (P)	1.27	1.29	106.9	.99	.08
Variability	Condition	.26	.27	62.4	.98	.03
	Gender	1.55*	.72	64.2	2.16	.19
	Avoidance (A)	-1.02	.67	120.2	-1.52	-.14
	Avoidance (P)	-.34	.64	111.5	-.53	-.04
	Anxiety (A)	.66	.62	121.7	1.06	.09
	Anxiety (P)	.08	.59	109.8	.13	.01
	Conflict (A)	--	--	--	--	--
	Global Partner Feelings (A)	-.08*	.04	92.2	-1.98	-.17
	Race / Ethnicity	1.72**	.61	86.9	2.81	.21
	Condition * Avoidance (A)	-.06	.26	122.5	-.24	-.01
	Condition * Avoidance (P)	.02	.26	122.5	.09	.003
	Condition * Anxiety (A)	-.28	.25	121.7	-1.15	-.04
	Condition * Anxiety (P)	.10	.25	121.7	.41	.01
Change	Condition	-4.27***	.62	62.5	-6.93	-.21
	Gender	-2.43*	1.10	65.0	-2.20	-.12
	Avoidance (A)	1.39	1.28	121.2	1.09	-.07
	Avoidance (P)	.02	1.22	122.3	.02	.001
	Anxiety (A)	2.03	1.28	108.1	1.58	.11
	Anxiety (P)	1.06	1.24	107.2	.86	.06
	Interaction Baseline Level	-.72***	.08	114.0	-9.46	-.67
	Conflict (A)	-.23***	.07	124.5	-3.36	-.25

Table 14 (cont'd)

Type	⁺ Predictor Variables	<i>b</i>	SE	df	<i>t</i>	β
Change	Global Partner Feelings (A)	--	--	--	--	--

(cont'd)	Race / Ethnicity	--	--	--	--	--
	Condition * Gender	.93	.49	62.6	1.90	.04
	Condition * Avoidance (A)	-.12	.53	123.5	-.24	-.01
	Condition * Avoidance (P)	-.55	.53	123.5	-1.05	-.03
	Condition * Anxiety (A)	-1.58**	.52	113.1	-3.01	-.09
	Condition * Anxiety (P)	.02	.52	113.1	.04	.001
	Gender * Avoidance (A)	-1.55	1.27	101.1	-1.22	-.08
	Gender * Avoidance (P)	2.84*	1.26	101.5	2.25	.15
	Gender * Anxiety (A)	-1.22	1.22	108.1	-1.00	-.07
	Gender * Anxiety (P)	1.29	1.21	109.9	1.06	.07

* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

⁺The following variables were removed from the final analysis for all measurement types due to non-significance: Symptom Distress (A, P), Conflict (P), Global Partner Feelings (P), Age, Relationship Status, and Education.

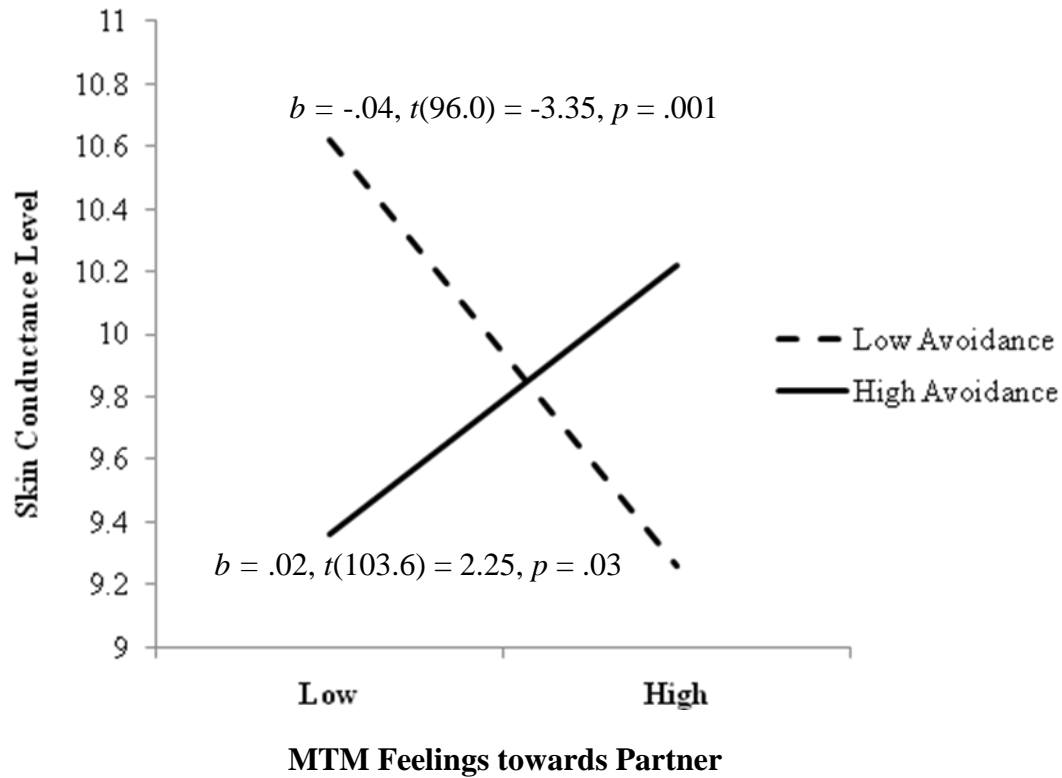
Research Question 3: How will self-reported attachment influence the congruence between the observed physiological arousal of participants and their moment-to-moment feelings towards their partner?

It was also valuable to use multilevel modeling and the APIM to understand whether attachment influences the congruence between the physiological arousal a participant experiences and their reported feelings towards their partner in each moment (in terms of level, variability, and change from baseline). For example, would someone with a deactivating attachment strategy demonstrate a weaker relationship between their self-report and physiological data because they were more likely to deny their emotional experience? This question was answered using similar analyses to those performed for previous questions, and the same decision-making process was used to determine which covariates and demographic variables remained in the analysis. The primary difference was that moment-to-moment feelings towards one's partner were included in the analysis to predict the corresponding measure of moment-to-moment physiological arousal (level, variability, and change). Covariates were used in the same manner as previous analyses, with skin conductance level during the relaxation

baseline used as a covariate in each analysis. The results of interest were the main effect for the physiological arousal variable and any interactions it had with attachment.

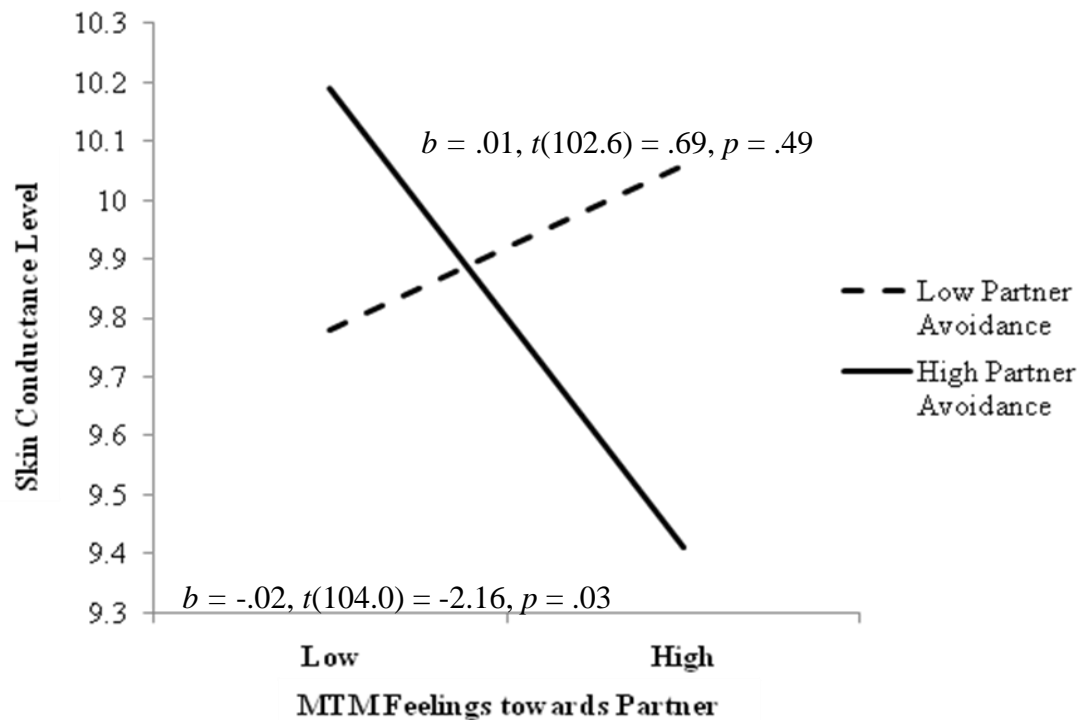
Congruence between level of physiological arousal and feelings towards one's partner (see Table 15). For the baseline communication segment, there was no significant main effect or interaction, indicating a lack of congruence between physiological arousal and feelings towards one's partner. There were, however, significant interactions for the semi-natural communication segment between both actor, $b = .03$, $t(79.7) = 4.13$, $p < .001$, and partner, $b = -.01$, $t(69.5) = -2.20$, $p = .03$, avoidance and feelings towards one's partner. For actor avoidance, post hoc simple slope analyses showed a significant effect of moment-to-moment feelings towards one's partner for those who report lower levels, $b = -.04$, $t(96.0) = -3.35$, $p = .001$, as well as higher levels, $b = .02$, $t(103.6) = 2.25$, $p = .03$, of attachment avoidance (see Figure 12). In other words, those individuals who reported higher levels of attachment avoidance as well as more positive moment-to-moment feelings towards their partner demonstrated higher levels of physiological arousal. The converse was true for lower levels of attachment avoidance. Those who reported more positive feelings towards their partner demonstrated lower levels of physiological arousal.

Figure 12. Research Question 3 – The Effect of Attachment Avoidance on the Congruence between the Level of Physiological Arousal and Moment-to-Moment Feelings towards Partner during the Semi-Natural Interaction



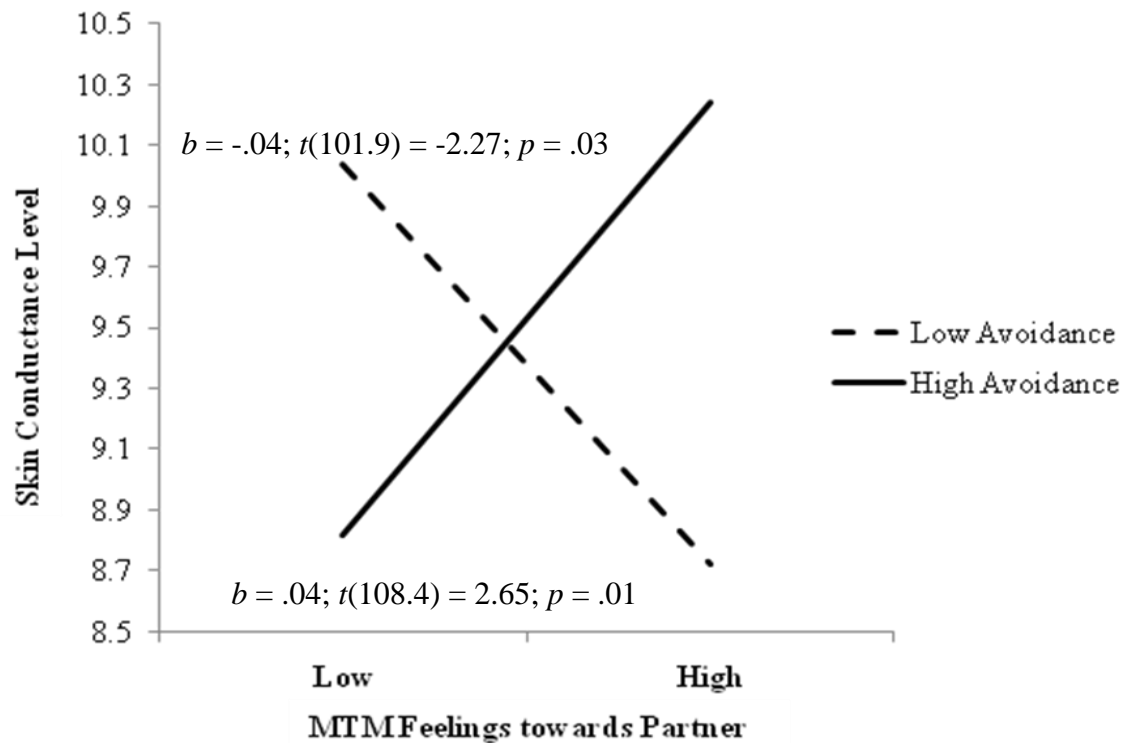
Post hoc simple slope analyses also showed a significant effect of moment-to-moment feelings towards one's partner for those whose partners were higher in attachment avoidance, $b = -.02, t(104.0) = -2.16, p = .03$, but not for those whose partners were low in attachment avoidance, $b = .01, t(102.6) = .69, p = .49$ (see Figure 13). When partner attachment avoidance was higher, those who reported higher moment-to-moment feelings towards their partner demonstrated lower levels of physiological arousal. This relationship shows that, unlike those high in attachment avoidance, partners of those high in attachment avoidance demonstrate the expected relationship between moment-to-moment feelings and physiological arousal, with more positive feelings being associated with lower levels of physiological arousal.

Figure 13. Research Question 3 – The Effect of Partner Attachment Avoidance on the Congruence between Level of Physiological Arousal and Moment-to-Moment Feelings towards Partner during the Semi-Natural Interaction



There was also a significant interaction between attachment avoidance and feelings towards one's partner for the therapy-like communication segment. Post hoc simple slope analyses were similar to those for the semi-natural communication segment, with a significant effect of moment-to-moment feelings towards one's partner for both high, $b = .04; t(108.4) = 2.65; p = .01$, and low, $b = -.04; t(101.9) = -2.27; p = .03$ (see Figure 14), levels of attachment avoidance. As such, those high in attachment avoidance who reported more positive feelings towards their partner also demonstrated higher physiological arousal. With respect to partner effects of attachment avoidance during the therapy-like interaction, post hoc simple slope analyses were not significant for high, $b = -.02; t(87.6) = -1.27; p = .21$, or low, $b = .02; t(91.3) = 1.28; p = .20$, attachment avoidance, although it should be noted that the slopes were in the same direction as the partner effects during the semi-natural interaction.

Figure 14. Research Question 3 – The Effect of Attachment Avoidance on the Congruence between Physiological Arousal and Moment-to-Moment Feelings towards Partner during the Therapy-Like Interaction



Overall, there was little overall evidence of congruence between moment-to-moment physiological arousal and moment-to-moment feelings towards one's partner. However, there was congruence between both measures of emotional experience when considering attachment avoidance during the semi-natural communication segment. Specifically, higher levels of attachment avoidance coupled with moment-to-moment reports of positive feelings towards one's partner were actually associated with higher levels of physiological arousal. Interestingly, partners of those high in attachment avoidance actually demonstrated congruence similar to those low in attachment avoidance. Those who indicated feeling more positively towards their partner demonstrated lower levels of physiological arousal.

Table 15

Research Question 3 – Comparison of the Congruence between the Level of Physiological Arousal (PH) and Level of Moment-to-Moment Feelings towards Partner (MTM)

Segment	⁺ Predictor Variables	<i>b</i>	SE	df	<i>t</i>	β
Baseline	Gender	.26***	.07	54.7	3.53	.06
	Avoidance (A)	-.09	.08	103.7	-1.06	-.02
	Avoidance (P)	.03	.08	96.4	.40	.01
	Anxiety (A)	.02	.08	90.1	.21	.005
	Anxiety (P)	.09	.09	83.4	1.09	.03
	MTM Baseline	-.01	.005	98.4	-1.44	-.03
	PH Relaxation Baseline	1.02***	.02	83.9	48.1	1.04
	Age	-.03*	.01	68.4	-2.60	-.06
	Gender * MTM Baseline	-.003	.004	75.8	-.76	-.02
	Gender * Avoidance (A)	-.15	.09	89.4	-1.72	-.04
	Gender * Avoidance (P)	.07	.09	84.7	.76	.02
	Gender * Anxiety (A)	-.10	.08	92.5	-1.20	-.03
	Gender * Anxiety (P)	.24**	.09	85.4	2.87	.07
	Gender	.44***	.13	50.4	3.41	.10
	Avoidance (A)	-.07	.13	95.7	-.51	-.02
	Avoidance (P)	-.06	.14	88.7	-.41	-.01
Semi-Natural	Anxiety (A)	.08	.13	97.6	.62	.02
	Anxiety (P)	.38*	.15	73.8	2.61	.10
	MTM Semi-Natural	-.01	.01	91.3	-.87	-.03
	PH Relaxation Baseline	.98***	.03	77.1	31.0	.99
	Age	--	--	--	--	--
	Gender * MTM Semi-Natural	-.01	.01	73.9	-.79	-.03
	Gender * Avoidance (A)	-.19	.14	85.6	-1.39	-.05
	Gender * Avoidance (P)	.06	.14	80.8	.38	.01
	Gender * Anxiety (A)	-.14	.13	98.9	-1.06	-.04
	Gender * Anxiety (P)	.41**	.15	76.0	2.77	.11
	MTM Semi-Natural * Avoidance (A)	.03***	.01	79.7	4.13	.13
	MTM Semi-Natural * Avoidance (P)	-.01*	.01	69.5	-2.20	-.06
	MTM Semi-Natural * Anxiety (A)	.01	.01	93.1	1.47	.05
	MTM Semi-Natural * Anxiety (P)	.002	.01	66.2	.35	.01
Therapy-Like	Gender	.16	.18	61.2	.89	.04
	Avoidance (A)	.07	.18	104.1	.39	.02
	Avoidance (P)	-.17	.18	91.6	-.97	-.04
	Anxiety (A)	.16	.19	106.2	.82	.04
	Anxiety (P)	.22	.17	84.1	1.32	.06
	MTM Therapy-Like	.001	.01	94.5	.14	.01
	PH Relaxation Baseline	.94***	.05	85.7	20.7	.93
	Age	--	--	--	--	--
	MTM Therapy-Like * Avoidance (A)	.04***	.01	102.7	3.48	.16

Table 15 (cont'd)

Segment	⁺ Predictor Variables	<i>b</i>	SE	df	<i>t</i>	β
Therapy-Like	MTM Therapy-Like * Avoidance (P)	-.02*	.01	73.5	-2.18	-.07
	MTM Therapy-Like * Anxiety (A)	.01	.01	98.7	.89	.05
(cont'd)	MTM Therapy-Like * Anxiety (P)	.001	.01	86.5	.09	.004

* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

⁺The following variables were removed from the final analysis for all communication segments due to non-significance: Symptom Distress (A, P), Conflict (A, P), Global Partner Feelings (A, P), Race / Ethnicity, Relationship Status, and Education.

Congruence between variability of physiological arousal and variability of feelings towards one's partner (see Table 16). There was no significant main effect for feelings towards one's partner or interaction between feelings towards one's partner and attachment avoidance or anxiety for the baseline or therapy-like communication segments, suggesting no congruence between the variability of moment-to-moment feelings towards one's partner and variability of moment-to-moment physiological arousal. There was a significant interaction involving attachment avoidance and the variability of feelings towards one's partner for the semi-natural segment. However, post hoc simple slope analyses revealed no significant effect of the variability in moment-to-moment feelings towards partner for higher, $b = -.01$, $t(105.3) = -1.29$, $p = .20$, or lower, $b = .01$, $t(98.8) = 1.55$, $p = .12$, levels of attachment avoidance.

Table 16

Research Question 3 – Comparison of the Congruence between the Variability of Physiological Arousal (PH) and Variability of Moment-to-Moment Feelings towards Partner (MTM)

Segment	⁺ Predictor Variables	<i>b</i>	SE	df	<i>t</i>	β
Baseline	Gender	.09**	.03	55.4	2.94	.23
	Avoidance (A)	.02	.03	92.6	.56	.04
	Avoidance (P)	-.02	.03	77.8	-.82	-.06
	Anxiety (A)	-.05	.03	103.2	-1.88	-.16
	Anxiety (P)	-.05	.03	67.9	-1.88	-.14
	MTM Baseline	-.003	.003	101.9	-1.18	-.09
	PH Relaxation Baseline	.03***	.01	75.0	4.19	.32
	Conflict (P)	.01***	.001	70.0	3.96	.32
	Relationship Status	-.11***	.03	57.9	-3.60	-.28
	Education	--	--	--	--	--
Semi-Natural	Gender	.10***	.03	54.4	3.40	.26
	Avoidance (A)	.01	.03	98.1	.33	.03
	Avoidance (P)	.0001	.03	93.9	.01	.001
	Anxiety (A)	.02	.03	107.5	.53	.05
	Anxiety (P)	.02	.03	80.4	.86	.06
	MTM Semi-Natural	.001	.004	105.3	.19	.02
	PH Relaxation Baseline	.04***	.01	82.6	5.42	.41
	Conflict (P)	--	--	--	--	--
	Relationship Status	--	--	--	--	--
	Education	--	--	--	--	--
	Gender * MTM Semi-Natural	-.004	.004	105.4	-.93	-.07
	MTM Semi-Natural * Avoidance (A)	-.01*	.004	107.9	-2.00	-.16
	MTM Semi-Natural * Avoidance (P)	-.003	.004	102.7	-.74	-.06
	MTM Semi-Natural * Anxiety (A)	-.01	.004	102.5	-1.51	-.13
	MTM Semi-Natural * Anxiety (P)	-.002	.004	91.4	-.67	-.05
Therapy-Like	Gender	.10***	.03	53.1	3.58	.29
	Avoidance (A)	-.01	.03	106.9	-.30	-.02
	Avoidance (P)	-.01	.03	95.0	-.50	-.04
	Anxiety (A)	.02	.03	107.9	.69	.06
	Anxiety (P)	.05	.03	85.9	1.84	.17
	MTM Therapy-Like	-.003	.003	99.9	-.95	-.07
	PH Relaxation Baseline	.04***	.01	88.3	5.35	.43
	Conflict (P)	--	--	--	--	--
	Education	--	--	--	--	--
	Gender * MTM Therapy-Like	.08	.05	88.4	1.68	.22
	Gender * Avoidance (A)	-.01*	.003	105.7	-2.18	-.17
	Gender * Avoidance (P)	-.002	.03	102.5	-.08	-.01
	Gender * Anxiety (A)	-.04	.03	95.1	-1.41	-.12
	Gender * Anxiety (P)Relationship Status	.05	.03	108.6	1.72	.15
	Status	.06*	.03	86.1	2.13	.19

* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

⁺The following variables were removed from the final analysis for all communication segments due to non-significance: Symptom Distress (A, P), Conflict (A), Global Partner Feelings (A, P), Age, and Race / Ethnicity.

Congruence between change in physiological arousal and change in feelings towards one's partner (see Table 17). There was no significant main effect or two-way interaction that pointed to any congruence between change in physiological arousal and change in feelings towards one's partner when considering the change from the baseline to the semi-natural communication segment or from the baseline to therapy-like segment. This lack of statistically significant results may be due to the fact that change in physiological arousal was measured using baseline values at rest, while the change in feelings towards one's partner was measured using baseline values during a typically positive interactional warm-up where couples talked about how they met.

Overall, any congruence between physiological arousal and moment-to-moment feelings towards one's partner involved attachment avoidance. Specifically, for those higher in attachment avoidance, more positive reported moment-to-moment feelings towards one's partner were associated with higher levels of physiological arousal and subsequent suppression during both the semi-natural and therapy-like communication segments. Conversely, for those who reported low levels of attachment avoidance, higher reported moment-to-moment positive feelings towards one's partner were associated with decreases in physiological arousal. Partners of those high in attachment avoidance evidenced a similar pattern as those low in attachment avoidance, with more positive feelings being associated with less physiological arousal.

Table 17

Research Question 3 – Comparison of the Congruence between Change in Physiological Arousal (PH) and Change in Moment-to-Moment Feelings towards Partner (MTM)

Communication Segment	⁺ Predictor Variables	<i>b</i>	SE	df	<i>t</i>	β
Semi-Natural Interaction	Gender	.12	.11	62.1	1.11	.10
	Avoidance (A)	-.14	.10	90.4	-1.42	-.13
	Avoidance (P)	-.03	.09	80.1	-.31	-.03
	Anxiety (A)	-.05	.10	102.5	-.48	-.04
	Anxiety (P)	.15	.08	72.9	1.90	.15
	MTM Semi-Natural Change	.005	.004	76.8	1.10	.09
	PH Relaxation Baseline	-.05*	.02	74.5	-2.10	-.17
	Global Partner Feelings (A)	-.01*	.01	80.9	-2.25	-.22
Therapy-Like Interaction	Gender	-.01	.18	67.3	-.04	-.004
	Avoidance (A)	-.19	.16	97.8	-1.15	-.11
	Avoidance (P)	-.16	.14	84.5	-1.10	-.09
	Anxiety (A)	.01	.16	108.7	.06	.01
	Anxiety (P)	.26*	.13	78.4	1.99	.16
	MTM Therapy-Like Change	.01	.01	87.3	1.08	.09
	PH Relaxation Baseline	-.09*	.04	79.3	-2.48	-.20
	Global Partner Feelings (A)	-.02	.01	83.9	-1.78	-.17

* $p \leq .05$ ** $p \leq .01$ *** $p \leq .001$

⁺The following variables were removed from the final analysis for all communication segments due to non-significance: Symptom Distress (A, P), Conflict (A, P), Global Partner Feelings (P), Age, Race / Ethnicity, Relationship Status, and Education.

CHAPTER V

DISCUSSION

Overview of the Study

A Common Factors Perspective of Client-Treatment Matching

A substantial body of research has shown that couple therapy is more effective than a no-treatment control group for a large majority of clients (Alexander, Holtzworth-Munroe, & Jameson, 1994; Christensen & Heavey, 1999; Lambert & Ogles, 2003; Sexton et al., 2003; Shadish & Baldwin, 2003). Despite these promising results, there still are a substantial number of couples who do not achieve “clinically significant positive outcomes” (Sexton et al., 2003, p. 598). Although studying the effectiveness of couple therapy is important and gives the field additional credibility, increased efforts are needed to understand more about how, why, and for whom couple therapy is effective (Jacobson & Addis, 1993; Paul, 1967).

Two research avenues offer potential for adequately addressing these objectives: client-treatment matching and process research. The goal of client-treatment matching is to identify how treatment can be adapted to specific client characteristics. For the most part, the primary focus of client-treatment matching research has been to identify those treatment modalities that most effectively treat a specific diagnosis (Treatment for Depression Collaborative Research Program-TDCRP, Elkin et al., 1989; Project MATCH Research Group, 1997a, 1997b, 1998). Efforts in this area have been disappointing, however, with few indications of significant differences among treatments. This lack of significant findings may be attributed to the fact that the models tested in the studies likely have many of the same core ingredients that bring about change, thereby confounding results.

In this manner, client-treatment matching with a common factors perspective may yield a more comprehensive understanding of those factors that ultimately influence. In addition to utilizing a common factors perspective to conceptualize client-treatment matching, process research is necessary to identify those change mechanisms that occur during therapy to bring about positive outcomes, independent of treatment model. By identifying those elements of therapy process that contribute to positive outcomes, researchers can then work to understand how various common factors (e.g., client characteristics) interact with therapy process.

Attachment Theory as an Important Client Characteristic

This study sought to understand how one client characteristic (self-reported attachment avoidance or anxiety) influenced the emotional experience of participants (as measured by skin conductance and self-reported, moment-to-moment feelings towards partner). Emotions are a central organizing feature of intrapersonal and interpersonal experience (Frijda, 1986; Izard, 1991; Johnson & Greenberg, 1994). In addition, appropriate regulation and processing of emotions have been linked to positive therapeutic outcomes (Beutler et al., 2003; Bridges, 2006; Greenberg & Pascual-Leone, 2006; Wiser & Arnou, 2001). The effects of attachment on emotional experience (i.e., the level, variability, and change from baseline for physiological arousal and moment-to-moment feelings towards one's partner) were investigated within the context of two contrasting conditions. During the semi-natural interaction, couples talked about an issue as they would at home. The therapy-like interaction was designed to promote and facilitate couple-responsible and couple-focused process, an intervention which has been associated with more positive outcomes (Butler & Wampler, 1999). In this manner, the therapist/coach worked to facilitate a new emotional experience and more softened couple interaction by reframing secondary emotions in terms of primary emotions and attachment needs.

One of the core tenets of attachment theory is that humans are pre-programmed to seek safety from close relationships (Bowlby, 1973, 1982). This assurance of a secure base provides the foundation for exploration but also makes it possible for the individual to seek and receive comfort when emotionally distressed. Unmet attachment needs often lead to the formation of disruptive coping strategies in the form of deactivation or hyperactivation of the attachment system (Kobak et al., 1993). These strategies also impede an individual's ability to clearly and appropriately signal their attachment needs. Attachment deactivation forms in response to consistent rejection of requests to have needs met and typically manifests itself as an inhibition of thoughts and emotions related to attachment (Diamond et al., 2006). Although deactivating individuals do not necessarily demonstrate outward distress, physiological measures of distress provide evidence that attempts at suppression actually may *increase* stress (Sroufe & Waters, 1977). On the other hand, hyperactivation of the attachment system typically occurs in response to inconsistency in responding to attachment needs, which makes it difficult for the individual to predict when their needs will be met and leads to an exaggerated stress response where the person's requests actually serve to push the attachment figure away.

Relatively few studies have empirically analyzed how self-report attachment influences a person's physiological response to stress. Those that have addressed this issue have looked at various physiological measures, including blood pressure, cortisol levels, heart rate, skin conductance, and vagal tone (Carpenter & Kirkpatrick, 1996; Diamond & Hicks, 2005; Diamond et al., 2006; Kim, 2006; Powers et al., 2006). Findings have varied, but one of the more promising findings has been that attachment deactivation leads to higher levels of skin conductance, a valid measure of emotional arousal and its suppression (Dawson et al., 2007). Several studies addressing narrative/discourse (Dozier & Kobak, 1992; Roisman et al., 2004) as

well as self-report (Diamond et al., 2006) attachment have found a link between attachment deactivation and greater change from baseline in terms of skin conductance level. At the same time, studies of skin conductance have found no link to hyperactivating attachment strategies. One purpose of this study was to further understand the link between self-report attachment and physiological arousal as measured by skin conductance.

In addition, no previous study has analyzed how attachment influences moment-to-moment reported feelings towards one's partner. Although global and proximal self-report measures have been used to understand participant experience, the potential for various biases in these measures has limited the ability to generalize such findings. Observer ratings have often been used but do not tap into actual participant experience, an understanding of which is also important, especially in clinically-oriented research. Moment-to-moment self-report allows a much richer and potentially valid understanding of participant experience to be gained. Another unique element of this study is its incorporation of a therapeutic component. Most attachment-related studies have focused on relationship process rather than how it influences therapy process. This study analyzed and compared both.

Research Questions and a Brief Summary of Findings

This study focused on three primary research questions. The first addressed how attachment avoidance and/or anxiety would influence physiological arousal as well as moment-to-moment feelings towards one's partner. For raw levels of skin conductance (not controlling for baseline skin conductance levels), age was predictive of lower skin conductance for the baseline, semi-natural, and therapy-like interactions. The only other significant result was that partners of those high in attachment anxiety demonstrated higher physiological arousal and subsequent suppression during the therapy-like interaction (Table 7). For physiological

variability, women whose partners reported higher levels of attachment anxiety exhibited more physiological variability during the therapy-like interaction (Table 8). Women in general also exhibited more variability during the baseline and semi-natural interactions. Being in a committed, non-marriage relationship and partner reports of higher conflict were associated with more variability during the baseline interaction. With respect to change from baseline, women whose partners were high in attachment anxiety demonstrated increased physiological arousal and subsequent suppression during all interaction segments (Table 9). In addition, during the baseline interaction, attachment insecurity interacted with age. Older adults who were low in avoidance or high in anxiety demonstrated less of an increase in physiological arousal from the relaxation baseline to the baseline interaction. Conversely, younger adults in these two attachment categories exhibited greater change from the relaxation baseline during the interaction baseline (Figure 6).

In terms of moment-to-moment feelings towards one's partner, a few patterns emerged in the analysis of research question one. Either self- or partner-reported couple conflict was predictive of the level of feelings reported for each of the interaction segments (Table 10). Attachment anxiety was actually associated with more positive feelings towards one's partner during the baseline and therapy-like interactions. In addition, partner avoidance led to less positive feelings towards one's partner during the baseline interaction, while being a woman and having attained a higher education level were associated with more positive moment-to-moment feelings. Attachment avoidance also interacted significantly with global feelings towards one's partner. Higher attachment avoidance and more positive reported feelings towards one's partner were associated with greater variability in moment-to-moment feelings towards one's partner during the baseline interaction (Table 11). Participants also completed a measure of their overall

feelings towards their partner for all of the interaction segments combined. Partner avoidance and anxiety were associated with less positive proximally-reported feelings towards one's partner. Women who reported higher levels of attachment avoidance also felt less positively towards their partner, while men who reported higher attachment anxiety actually reported more positive feelings towards their partner. Lastly, higher reported levels of conflict and being in a committed, non-marriage relationship were associated with less positive feelings.

Somewhat surprisingly, actor and partner attachment avoidance were not predictive of the level, variability, or change in physiological arousal, with the exception of the previously mentioned relationship between avoidance, age, and physiological change from baseline. In addition, actor avoidance was not predictive of moment-to-moment feelings towards one's partner, with the exception of interacting with global feelings towards one's partner to influence moment-to-moment variability. It was also predictive of a proximal report of women's feelings towards their male partners for all interactions combined. In terms of covariates and demographic variables, only gender (variability) and age (level) demonstrated a pattern of association for physiological arousal. For moment-to-moment feelings towards one's partner, couple conflict (level), and ethnicity (variability) demonstrated a pattern of association across interactional contexts.

The second research question addressed how attachment accounted for any differences between participant emotional experience during the semi-natural and therapy-like interactions. As stated previously, similar covariates, demographic variables, and interactions to research question one were used in the analyses for research question two. However, of primary interest was an interaction between condition and attachment or a main effect for condition. As a result, only those findings are reported here. Although there were physiological level and change

differences between the semi-natural and therapy-like conditions, and participants were less physiologically aroused during the therapy-like condition, these differences did not appear to be the result of attachment anxiety or avoidance (Table 13). This finding that attachment did not interact with condition to influence physiological arousal was somewhat unexpected. However, there was a significant interaction between attachment and condition for moment-to-moment feelings towards one's partner (Table 14). Those higher in attachment anxiety felt more positively towards their partner during the therapy-like interaction. Interestingly, this analysis did not find any difference in condition for those who reported high levels of attachment avoidance.

The final research question looked at the congruence between participant physiological arousal and the moment-to-moment feelings they reported toward their partner and how attachment influenced that congruence. The covariates, demographic variables, and interactions used in the analyses for research question three were the same as for the first two research questions. However, the primary focus was on a potential main effect or interactions involving moment-to-moment feelings towards one's partner on physiological arousal. Interestingly, all evidence of congruence or a lack thereof involved attachment avoidance rather than attachment anxiety. Results yielded no evidence of congruence for level during the baseline interaction. However, those high in attachment avoidance who reported more positive moment-to-moment reports of feelings towards their partner during the semi-natural (Figure 12) and therapy-like (Figure 14) conditions were more likely to demonstrate higher levels of physiological arousal and subsequent suppression. Conversely, those low in attachment avoidance who reported positive moment-to-moment feelings towards their partner were more likely to demonstrate lower levels of physiological arousal. Interestingly, results for partners of those high in

attachment avoidance were similar to those who were low in avoidance during the semi-natural interaction (Figure 13). A similar effect was observed for partners of those high in attachment avoidance during the therapy-like interaction, but the simple slope analysis was not significant.

In terms of variability, those individuals high in attachment avoidance who reported low variability in their feelings towards their partner demonstrated higher variability in their physiological arousal during the semi-natural interaction. For those low in attachment avoidance, higher variability in their moment-to-moment feelings towards their partner were associated with higher variability in physiological arousal (Table 17). There was no evidence of congruence between physiological arousal and moment-to-moment feelings towards one's partner in terms of the change from baseline, possibly because the baseline used for physiological arousal was a relaxation baseline, while the baseline used for moment-to-moment feelings was actually focused on reminiscing about what was likely to be a positive time in the couple's relationship.

This section has briefly outlined all of the findings for each of this study's three research questions. Overall, there were a number of significant findings regarding the influence of attachment on emotional experience. The next sections will synthesize and discuss the most salient implications of this study's results for couple relationship process, clinical work with those who report higher levels of attachment anxiety or avoidance, and future directions for research in this area.

Relationship Process Implications

Attachment Avoidance and Repressive Coping

Repressive coping has been defined as low reported anxiety coupled with high defensiveness and the employment of distraction strategies to submerge and avoid negative

affect (Myers, 1998; Weinberger, 1990). As such, repressive coping represents the suppression of unwanted thoughts and feelings in an effort to mask behavioral expressions of distress. However, even though that distress is not reported or demonstrated outwardly, physiological measures reveal “*heightened and escalating* sympathetic nervous system reactivity” (Diamond et al., 2006, p. 221). Most studies have used social desirability scales coupled with assessments of anxiety to measure repressive coping (Vetere & Myers, 2002). However, physiological measures are also important to actually verify that individuals are experiencing distress even in the absence of their self-report of it.

Although several narrative/discourse attachment studies (Dozier & Kobak, 1992; Roisman, 2007; Roisman, Tsai, & Chiang, 2004) have linked attachment deactivation and emotional inhibition as measured by skin conductance, this study represents only the second attempt to understand the influence of self-report attachment on physiological arousal as measured by skin conductance and the first that did not screen out moderately distressed couples. As a result, this section will outline findings and implications from research questions one and three as they compare with Diamond et al. (2006). This is especially important because the elevated sympathetic nervous system activity that accompanies repressive coping has been linked to various health risks (Repetti, Taylor, & Seeman, 2002). In a similar vein, individuals in a cardiac rehabilitation program were more likely than a control group to report avoiding problem discussions with their partner (Denton, Burleson, & Brubaker, 2009).

Interestingly, the results of research question one did not find a direct link between avoidance and elevated skin conductance levels from baseline. However, the findings from research question three regarding congruence between moment-to-moment physiological arousal and moment-to-moment feelings towards one’s partner provide evidence for an association

between attachment avoidance and repressive coping. Specifically those higher in attachment avoidance who reported more positive moment-to-moment feelings towards their partner during the semi-natural and therapy-like interactions also showed elevated physiological arousal. However, those at lower levels of attachment avoidance who reported more positive feelings towards their partner demonstrated lower levels of physiological arousal. Interestingly, the same phenomenon as those with low levels of attachment avoidance was also found for partners of those higher in attachment avoidance. During both interactions, those who reported positive feelings towards their partner also showed less physiological arousal.

In other words, reports of positive feelings from those high in attachment avoidance were incongruent with data showing that they were actually physiologically aroused and working toward emotional suppression. This was the case for both semi-natural and therapy-like interactions. These results provide additional evidence of the link between attachment avoidance and repressive coping. For those low in attachment avoidance, more moment-to-moment positive feelings reported towards their partner were associated with lower levels of physiological arousal. However, those high in attachment avoidance appeared to cope with physiological arousal by reporting increases in positive feelings. This interpretation is consistent with results from another study that indicates those high in repressive coping often distract themselves from negative affect by recalling positive thoughts and memories (Boden & Baumeister, 1997). If this is indeed the case, the short term effect in the context of couple interaction would be more positive feelings towards one's partner. However, it also points towards an unwillingness to address the more difficult issues that inevitably arise in relationships, thereby putting long-term relationship satisfaction at risk. This is supported by the fact that preliminary analyses in this study found avoidance to be negatively correlated with

conflict resolution, global relationship satisfaction, and positive feelings towards partner.

Attachment Anxiety and Partner Suppression

Because no studies of attachment (self-report or narrative/discourse measurement) had identified a link between attachment anxiety and physiological arousal as measured by skin conductance level (SCL), this study also sought to add to the current body of attachment and skin conductance research by further investigating a potential link primarily through research question one. It also looked at how attachment might influence the variability of skin conductance (i.e., the standard deviation) as a potential indicator of skin conductance response (SCR), a measure not examined in other research. Results did not reveal a predictable relationship between attachment and the variability of skin conductance. Rather, gender was the most consistent predictor across interactional conditions, with greater variability for women's skin conductance.

However, a strong link was found between the influence of gender and partner attachment anxiety on physiological arousal during each of the communication segments. Specifically, women whose male partners reported higher levels of attachment anxiety showed increased physiological arousal and subsequent emotional suppression during each of the interactional conditions, including the baseline interaction where couples talked about how they met. Conceptually, it makes sense that the intensification of emotion (both positive and negative, see Feeney, 1999) that typically accompanies attachment anxiety may elicit a complementary reaction from a person's partner in the form of emotional suppression. However, this was only the case for man-woman dyads in which the man reported anxious attachment and the woman was the person suppressing her emotion. That gender influenced this finding in the direction it did was somewhat unexpected in part because the female partners did not necessarily

report higher tendencies towards avoidance, and women have been found to typically be more outwardly expressive than men (see Kring & Gordon, 1998, for a summary)

In addition, this finding was not associated with more negative moment-to-moment feelings reported by women or men towards their partners. In fact, anxious men actually reported more positive feelings towards their partner when reporting on their interactions as a whole. However, viewed from a systemic perspective, the intensifying of emotions that accompanies the man's exaggerated attempts to have attachment needs met (Cassidy, 1994) may be counter-productive and actually push the woman further away. There is also a possibility that the woman's emotional suppression could be linked to an inhibitory behavioral response akin to withdrawing, shutting down, or pulling away, thereby impeding the woman's ability to emotionally engage and be responsive to the man's needs. As a result, although the suppression did not appear to negatively influence the interaction or the partners' feelings towards each other in this study, it is important to understand more about the potential reasons for this finding.

It may be valuable to consider relationship process as well as gender role expectations. Although the results disconfirmed that this is a dynamic of relationships at the level of attachment, it may be an element of relationship process at the level of interaction. In other words, the emotional suppression in this case may be an adaptive response and complementary process to the more intense positive or negative emotions exhibited by the partner who is higher in attachment anxiety. That this only seems to be the case for women may be related to gender role socialization. Specifically, women may modulate their responses according to the demands of each situation according to specific display rules, defined as "culture-specific prescriptions about who can show which emotions, to whom, and when" (Ekman, 1993, p. 384; see also Buck, Losow, Murphy, & Costanzo, 1992; Gross & John, 1997). It is possible that the woman's

emotional suppression represented an attempt to balance the overall emotionality of the couple discussion by dampening the overall emotional intensity of the discussion. In addition, there appears to be some indication that men are not as successful as women in interpreting nonverbal cues of specific emotions, with the exception of being able to recognize anger in men more readily (Rotter & Rotter, 1988; see also Zuckerman, Hall, DeFrank, & Rosenthal, 1976). If this is indeed the case, it would offer one potentially viable explanation of why the woman's emotional suppression did not influence the man's reported feelings.

Clinical Implications

Over twenty years ago, Bowlby (1988) emphasized the importance of informing clinical work with attachment theory. However, only recently has more attention has been given to attachment theory and its relationship to clinical work, including the development of attachment-based interventions for children and their caregivers (e.g., Cooper, Hoffman, Powell, & Marvin, 2005; Dozier, Lindhiem, & Ackerman, 2005) as well as emotionally-focused therapy (EFT), which utilizes attachment theory as a core part of its theoretical foundation and work with couples and families. Each of these focuses on helping individuals learn to more appropriately signal their attachment needs and longings while at the same time fostering responsiveness in the attachment figure. Unfortunately, little empirical work has been done—especially in couple therapy—to understand how attachment influences therapy process in general and how to thereby adapt treatment process to attachment characteristics. This study sought to lay a foundation for future research in this area by analyzing how attachment influences emotional experience during contrasting interactional conditions.

Emotional Experience during the Semi-Natural and Therapy-Like Interactions

This section will further discuss the findings of research question two regarding the

differences in emotional experience during the semi-natural and therapy-like interactions and the role of attachment in accounting for these differences. In terms of physiological arousal, individuals in this study demonstrated less physiological arousal and subsequent suppression during the therapy-like interaction. Attachment avoidance or anxiety did not influence this relationship, suggesting that regardless of attachment, the presence of a therapist/coach who focused on validating and reframing emotions as well as helping partners soften towards one another was a positive experience for couples. At least from a physiological standpoint, the presence of the therapist/coach and an emotionally-focused intervention served as a buffer against physiological arousal and suppression rather than being threatening to those who reported higher levels of attachment avoidance.

With respect to moment-to-moment feelings, there were relatively few significant associations when considering avoidance. As stated previously, partners of those higher in attachment avoidance reported less positive feelings during the baseline interaction. However, results did not reveal any other statistically significant associations, including no significant difference between the moment-to-moment feelings towards one's partner experienced during the semi-natural and therapy-like interactions. As a result, it appears that even though they may have experienced less physiological arousal and suppression during the therapy-like interaction, they did not necessarily report more positive feelings towards their partner.

Conversely, those higher in attachment anxiety reported higher levels of positive feelings towards their partner during the therapy-like interaction. More positive feelings towards partner were also reported by those higher in attachment anxiety during the baseline interaction. Attachment anxiety relates to worries about the availability and responsiveness of attachment figures. Thus, it appears that reminiscing about positive memories and discussing relationship

issues from an attachment perspective with the help of a therapist/coach diminish fears about the availability of attachment figures and provide reassurance that the partner will be responsive to the individual's attachment needs. In sum, results provide considerable evidence that the emotionally-focused intervention used in this study led to more effective outcomes than having partners talk about their issues as they would at home. Positive physiological effects were evident during the therapy-like interaction regardless of attachment, while moment-to-moment feelings towards one's partner were more positive during the therapy-like interaction only for those higher in attachment anxiety.

Nonetheless, because this was not a randomized control trial with the order of conditions varied, it is not possible to make definitive conclusions that the intervention by itself will have the same results as found in this study. Rather, the emotionally-focused intervention used in this study was preceded by the semi-natural condition. As a result, it is more accurate to conclude that the combination of the semi-natural interaction followed by the emotionally-focused intervention led to lower levels of physiological arousal and more positive moment-to-moment feelings towards one's partner for those higher in attachment anxiety than the semi-natural condition alone. In addition, the primary goal of this study was not to test the effectiveness of this specific intervention, but rather to begin developing an understanding of how attachment influences emotional experience during a variety of interactional conditions, including an emotionally-focused, therapy-like condition. As such, this study provides preliminary evidence that attachment does indeed influence the emotional experience of individuals, thereby making it necessary to identify how clinical work with couples can be further adapted according to attachment in order to improve outcomes.

Attachment Anxiety and Clinical Process

This section will build upon the previous one by discussing specific implications for the finding of research question two regarding the positive outcomes during the baseline and therapy-like interactions for those higher in attachment anxiety. Butler and Gardner (2003) explain how a developmental approach can be applied to couple interaction facilitated within therapy by adapting the interaction to couple volatility and reactivity. Put another way, the therapist structures the interaction according to varying levels of couple distress by filtering all of the interaction through the therapist when distress and volatility are high, and shifting to the periphery of the interaction and engaging in coaching when volatility is lower and the couple demonstrates greater interactional self-reliance (see also Seedall & Butler, 2006). Although this study was not an explicit test of the developmental enactment model, it did incorporate the two interactional extremes into its methodology. During the semi-natural interaction, structure was low and couples interacted as they would at home, with the only potential buffer being the presence of the therapist in the room. During the therapy-like interaction, structure was much higher and all of the interaction was filtered through the therapist, with the exception of a brief enactment designed to highlight a softened response at the conclusion of each segment.

The results of this study point towards the importance of not only taking into account couple distress and volatility when structuring the interaction, but also adapting to self-reported attachment strategies. Specifically, those higher in attachment anxiety benefited from the emotional containment provided by having a therapist/coach buffer the couple interaction. Interestingly, this benefit from the increased structure was evident independent of each person's globally reported feelings towards his/her partner or individual symptom distress and in conjunction with reports of disruptive conflict. It should also be noted that the increased

structure was accompanied by an intervention focused on dampening disruptive conflict and facilitating emotional exploration, validation, and reframing in an effort to help partners experience each other in a softened, more emotionally responsive way.

Thus, it is important for a therapist/coach working with those high in attachment anxiety to help them contain volatile emotions and learn to express and explore their issues in terms of primary emotions and core attachment needs. Because there was at least some indication that partners of those higher in attachment anxiety at times experienced greater physiological arousal and subsequent suppression, failure to contain the expression of attachment anxieties (i.e., attachment hyperactivation) may risk overwhelming the partner and thereby decrease the likelihood of responsiveness and having the individual's emotional needs met. This likely would only serve to exacerbate the attachment insecurities. However, if clinicians can instead help those higher in attachment anxiety express their issues in more contained ways by helping them look below the surface of secondary emotions and become aware of their primary emotions and attachment needs, their partners will likely see the person and their needs in new ways that help them soften as well as be more responsive. This will then, in turn, offer much needed reassurance to the person higher in attachment anxiety that their needs can and will be met if they can signal them more appropriately.

Attachment Avoidance and Clinical Process

As mentioned previously, the results of research question three provided evidence that during the semi-natural interaction, the more physiologically aroused those high in attachment avoidance became, the more positively they indicated feeling toward their partner. This provides additional evidence for the link between attachment avoidance and repressive coping, which explains that the more distressed an individual becomes, the more they suppress that emotion in

an attempt to mask any outward signs of distress (Diamond et al., 2006). The limiting of any outward expression of emotional distress is also accompanied by self-reports of non-distress, thus evidencing substantial incongruence between what is experienced physiologically and what is actually reported.

From an attachment perspective, there are conceptual and empirical links between avoidance and repressive coping. Sroufe and Waters (1977) found that, although avoidant infants did not show any outward signs of needing comfort from their caregiver after being separated during the Strange Situation, physiological measures indicated that they were just as distressed as other infants. When caregiver-infant interactions were observed in the home, avoidant infants as classified in the Strange Situation were more likely to have their expressions of need met with rejection rather than responsiveness (Ainsworth, 1963; Ainsworth et al., 1978). These infants develop an internal working model that relationships are not a safe haven from which to seek comfort when distressed. This results in a preemptive approach to emotion regulation “involving disengagement of attention from distressing experiences *before* negative affect has been encoded and experienced” (Diamond et al., 2006; see also Fraley, Garner, & Shaver, 2000). When also taking into account the finding that avoidant individuals lacked awareness of their own physiological signs of anger (Mikulincer, 1998), it appears that the incongruence of experience found in this study relates more to an adaptive lack of awareness than conscious misrepresentation.

Thus, it appears that one important clinical process with individuals who report higher levels of attachment avoidance would be helping them develop greater self- and other-awareness. One prerequisite to doing this is emotional safety within the session. Because individuals higher in avoidance have developed their attachment strategies in response to a lack of safety in their

attachment relationships, fostering this within session is essential. Although ways to foster relationship safety were not explicitly tested as part of the study, one consideration might be to normalize the difficulty that these individuals have with safety in relationships and the adaptive response of preemptively suppressing more vulnerable emotions. This can begin the process of helping both the individual and partner become aware of and understand their relationship and interaction patterns.

In addition, emotional suppression is only one approach to decrease the behavioral expression of negative emotion, and it is associated with impairment in memory, communication, and problem-solving (Richards & Gross, 1999; Richards, 2004). However, reappraising and reinterpreting one's situation also limits the outward expression of negative emotion, but without the negative consequences. In addition, research has found that reappraisal actually decreases subjective distress (Gross, 1998). However, reappraisal is only possible once these processes are brought into conscious awareness. In this manner, helping those higher in attachment avoidance become aware and then learn to reappraise and reinterpret their situations may be an effective way to help individuals high in avoidance to cope with distress.

Results from this study also seem to indicate that an intervention focused on emotional exploration, validation, reframing, and softening may need to incorporate some important initial steps to increase awareness and guard against the preemptive, nearly-automatic disengagement from difficult emotions and distressing experiences typical of avoidance. That is not to say that an emotionally-focused intervention may not be effective with those higher in attachment avoidance. Rather, the intervention may need to be adapted to normalize their experience, help them become more emotionally aware, and facilitate reappraisal and reinterpretation of their experiences, all while gradually incorporating emotionally-focused interventions that will help

them appropriately signal their attachment needs and also receive responsiveness from their partners. Future research will need to empirically test these potential implications. Until that time, these clinical considerations should be considered tentative.

Research Implications

Process Research from a Common Factors Perspective

Having just addressed some of the most salient implications of this research for couple relationship process as well as clinical work with couples, this section will discuss specific research implications and how future research can build upon the findings of this study. From a broad perspective, this study demonstrates the importance of process research using a common factors lens. This study looked at how attachment (a client characteristic) within the context of two interactional conditions (low structure, semi-natural and high structure, therapy-like) influenced emotional experience that has previously been linked to positive outcomes. Findings yielded some important information regarding couple interaction process as well as how treatment process may be adapted to improve client experience.

It is hoped that future research will continue to look beyond identifying the specific treatment models that most effectively treat specific diagnoses to looking at how individual (e.g., hope, motivation, individual distress), relationship (e.g., couple conflict, relationship satisfaction), and contextual characteristics (e.g., life events, stressors) interact with one another to influence couple relationship process, experiences, and outcomes. In addition, those characteristics may also be combined with therapist characteristics (e.g., attachment, therapist skill) and the therapeutic context (e.g., process, techniques) to understand more about how to improve and adapt treatment in therapy. In sum, there are a vast array of potential research opportunities in terms of couple relationship and therapy process from a common factors

perspective that can ultimately improve couple relationships.

Research on Attachment and Therapy

In addition to process research generally, this study has provided important evidence for incorporating attachment theory into how we understand couple relationships and especially how we conceptualize cases in therapy. Very little research has looked at the relationship between attachment and therapy. This includes understanding the effects of therapy on attachment as well as how attachment influences therapy. As mentioned earlier in this paper, empirical research that analyzes how attachment influences client experience as well as outcome in therapy will allow clinicians to appropriately adapt their approaches to specific client characteristics and needs. Some of the most salient research questions regarding attachment that need to be addressed are understanding further how to adapt treatment process to attachment avoidance. This study provided some initial indications, but much more work is needed to really understand what adaptations will yield better outcomes for couples where at least one partner is high in attachment avoidance.

In a similar vein, research is needed not only to understand how to adapt treatment to individual attachment characteristics, but also to understand how to adapt treatment to various dyadic attachment constellations. For example, treating a couple where both partners are low in attachment avoidance and anxiety will likely be fundamentally different from treatment of a couple where both partners report high attachment anxiety or where one reports high anxiety while the other reports high avoidance. This will be especially useful in helping therapists know how to adapt treatment process in ways that will avoid being effective for one partner but ineffective for the other. One other consideration that was not addressed in this study but is extremely important is how therapist attachment interacts with client attachment to influence

outcomes (see Tyrrell et al., 1999). There is a strong likelihood that the therapist's own response to distress and negative affect will greatly influence how s/he attends to those issues in therapy. As more research is done in this area, it will allow training programs to help therapists explicitly address these issues and be more aware of them in the process of therapy. Overall, the opportunities for attachment-related research in these areas are plentiful. Nonetheless, a concerted effort needs to be made to begin to address these process questions and issues.

Conclusion

Limitations and Suggestions for Future Research

Although this study has a number of strengths that have been demonstrated throughout this paper, it is not without its limitations that point to the importance of future research in this area. For example, this study included a diverse sample across a variety of demographic variables. Nonetheless, it is difficult to know whether findings can be generalized to the population as a whole for several reasons. One of the most important considerations involves study participation. Slightly more than 50% of people who expressed interest in the study actually ended up participating. Reasons for non-participation were that they did not meet the inclusion criteria or elected later not to participate. It is unclear whether other unknown factors limited the participation of these individuals and whether their results would have changed the findings in any way. In addition, it is possible that the incentive of \$100 may have led to a selection bias that influenced the demographics of participants. However, it should be noted that incentives, or the lack thereof, in any study may influence the sample. The best way to address these questions is for future research to ask similar questions and attempt to replicate findings.

In addition to the potential limitations regarding the sample, it should be noted that this study did not use an experimental design with a comparison group or a quasi-experimental

design with counterbalanced conditions. This was actually intentional, as an experimental design would have been useful had the primary purpose of this study been to explicitly test the effectiveness of the intervention. Rather, the goal of this study was to understand how attachment influenced emotional experience within two interaction conditions. The intervention used in the therapy-like condition focused on exploring and reprocessing emotions and reframing experience in terms of primary emotions and attachment needs. The core components of the intervention were used across a variety of theoretical models that have been proven effective. In this manner, the focus was not on the effectiveness of the intervention, but rather how attachment influences the experience of that intervention.

With respect to not counterbalancing conditions, the rationale was provided previously. It was deemed more appropriate for each couple to first talk about the issue as they would at home and then explore the issue with a therapist/coach. Although this prevents being able to make a distinct comparison of the results between the semi-natural and therapy-like conditions, it was considered a more acceptable confound than having the couples talk about the issue first with a therapist/coach and then trying to talk about the issue as they would at home. As a result, because this was not a randomized control trial or the conditions were not counter-balanced, it is not possible to state that the findings demonstrated that the therapy-like condition was more effective than the semi-natural condition. Rather, it can be more accurately stated that the therapy-like condition as it followed the semi-natural discussion was more effective than the semi-natural condition alone.

As mentioned previously, this study's findings provide some valuable preliminary information about how to adapt therapy process to varying attachment styles. However, the clinical considerations outlined as a result of these findings should be considered tentative until

additional research specifically tests them. This is especially true regarding attachment avoidance. For example, unlike those who reported higher attachment anxiety, individuals higher in attachment avoidance did not necessarily feel more positively towards their partners during the therapy-like interaction. This may indicate that some preliminary steps are necessary in order to improve outcomes. Some clinical considerations, anchored in existing research, were provided that might improve outcomes. However, future research will need to test whether those steps actually represent useful adaptations for those higher in attachment avoidance.

Summary

Despite these potential limitations and the need for further research, this study represents an important contribution to the existing self-report attachment and therapy process literatures in couple therapy. This study analyzed how one important client characteristic, self-report attachment, was related to the emotion experience of partners within the context of semi-natural and therapy-like conditions. Findings revealed important relationships between attachment and emotional experience in the context of both conditions and point toward some important clinical considerations. It is hoped that future research will build upon this study's findings by seeking to replicate its findings as well as continuing to analyze how specific individual and couple characteristics influence an individual's experience in his/her relationship and in the context of couple therapy. This represents an important foundation upon which future process research and research regarding the effectiveness of specifically tailored interventions may build.

APPENDICES

APPENDIX A

Brief Screening Assessment

1. How often do you and your partner disagree?
 - a. Less than once a month
 - b. Monthly
 - c. Weekly
 - d. Daily
2. When was your last disagreement? _____
3. How often do you or your partner feel hurt, angry, or offended in your relationship?
 - a. Less than once a month
 - b. Monthly
 - c. Weekly
 - d. Daily
4. When did you or your partner last feel hurt, angry, or offended in your relationship?

5. During disagreements in the past year, how often have you or your partner
 - a. been physical with one another in any way? _____
 - b. been physical such that it left marks? _____
 - c. been physical such that one of you had to go to the hospital? _____

If they have been physical but it has not left marks or required a hospital visit:

 - 5d. When was the last time you or your partner were physical? _____
 - 5e. Do you feel that if you talk about difficult issues, it will threaten your safety?
6. Do you consider yourself in a personal or relationship crisis of any kind?
 - a. Yes
 - b. No
7. Are you seriously considering ending your relationship?
 - a. Yes
 - b. No

APPENDIX B

Facilitating Emotional Content: Common Treatment Processes

Theoretical Overview: Emotions in Couple Relationships and Therapy

This section will discuss the role of emotion in couple relationships and therapy. Emotional experience in some form (e.g. empathy, positive emotions, emotional processing) has consistently been identified in research as a core therapeutic process variable. More generally, emotion has been described as having semantic, motivational, and adaptive functions (Frijda, 1986; Izard, 1991) in being “involved with organizing, guiding, and driving perception, thought, and action” (Izard, 1991, p. 51). In this manner, emotion may be considered a driving force for many intrapersonal and interpersonal processes. These ideas have led Johnson and Greenberg (1994) to the conclusion that emotion is the “primary building block of adult intimate relationships” (Johnson & Greenberg, 1994, p. 10).

Because emotion is so instrumental in providing intra- and interpersonal meaning and organizing how an individual responds to a situation, the processing of felt emotion becomes a vital adaptive skill that allows for the appropriate regulation of emotion. During periods of arousal, emotional processing allows individuals to focus on, cope with, and potentially expand and/or transform emotional experience and expression (Klein et al., 1986). However, when individuals cannot adequately cope with their emotions or the arousal that they might produce, they often attempt to over- or under-regulate them, leading them towards more negative, relationship-disrupting expressions of affect.

In terms of couple relationships, Gottman (1999) identified several of these negative emotional responses that appear related to later relationship dissolution: criticism, contempt, defensiveness, and stonewalling. More generally, Gottman and Levenson (2002) found that, over a 14-year period, couples who divorced early demonstrated high expressivity, anger, and wife negativity (i.e., under-regulation). Those who divorced later during the longitudinal study were more likely to demonstrate prolonged periods of neutral affect during conflict characterized by physiological evidence of emotional suppression and withdrawal (i.e., over-regulation). The alternative to withdrawal and hostility is softening. In emotionally focused therapy (EFT) literature, softening is a bonding process contributing to positive outcomes (Bradley & Furrow, 2004; Johnson & Greenberg, 1988), whereby “a newly vulnerable spouse reaches out to a now accessible and engaged partner and asks for his or her attachment needs to be met” (Johnson, 2003a, p. 108).

In terms of psychotherapy, emotional processing and regulation have been described as key factors that influence the facilitation of therapeutic change across models (Bridges, 2006; Greenberg & Pascual-Leone, 2006). A deeper awareness and processing of emotions allows for personal meaning to be explored (see also Wiser & Arnou, 2001) and impels one to work for change (see also Linehan, 1993). Beutler et al. (2003) cite several major reviews that conclude that “emotional arousal will increase positive outcomes, especially if applied early in the treatment” (p. 263). However, Greenberg and Pascual-Leone (2006) point out that some incorrectly equate emotional arousal with felt intensity instead of representing emotional experience or the depth of emotional processing. This level of processing can be achieved when, in the context of an empathic and validating therapeutic relationship, the therapist helps clients to experience, explore, and restructure their emotions in an effort to create new meaning (Greenberg & Paivio, 2003).

Training Overview

Four coaches will be recruited from the Michigan State University Family and Child Clinic. All coaches will be pursuing master's or doctoral degrees from a COAMFTE accredited MFT program and have at least 200 hours of direct clinical experience. Training is expected to consist of five two-hour segments occurring over a period of five weeks, with one-hour "booster" training sessions occurring at least bi-weekly throughout the study to ensure that core principles remain salient for coaches. Each training session will include both didactic and experiential components (e.g., vignettes and role plays). The primary focus of training is not to introduce an entirely new set of therapeutic skills but to emphasize the adaptation and use of the coaches' existing skill set to accessing and re-processing emotion. Rather, the goal is for coaches to be able to facilitate emotional content in a way that focuses on primary, attachment-based emotions that invite a softened response from both partners. Training will be completed when each coach can demonstrate, through role play, the ability to facilitate emotional content in the context of a wide variety of couple dynamics.

Theoretical Underpinnings of the Coach's Role

Coaches will be trained regarding their role and responsibility in the process, as well as those necessary skills that will help couples process emotional content and exist across therapeutic modalities (see below). These roles and responsibilities will be distinguished according to two segments for each topic. For the sake of clarity, the person whose issue is being discussed will be referred to as the speaking partner, while the person who did not originate the issue will be labeled the listening partner. The core techniques the coach will utilize during the interactions will be several of those identified by EFT for "accessing and reformulating emotion" (Johnson, 2004, p. 78). These include reflection, validation, evocative responding, heightening, empathic conjecture, enactment, and promoting positive interaction.

However, a significant part of training will be to help coaches adapt these skills into their existing therapeutic approach, without the expectation that they will be "doing EFT" or any other specific approach. Rather, during the training, coaches will learn to identify how some of the common change mechanisms across modalities involve the accessing and re-processing of emotions. Many of these skills are also utilized in some form by other empirically supported couple therapies but with slightly different labels. For example, enhanced cognitive behavioral therapy (Epstein & Baucom, 2002) provides guidelines of how to alter "both the experience and expression of emotions" (p. 375), including accessing, processing, and expanding the range of primary emotions that have previously been minimized or avoided. Their interventions include creating a safe environment; amplifying emotional experience through questions; help the client recognize emotional meaning beyond what is stated; helping clients understand the relationship between emotions, cognitions, and behaviors; and heightening their emotional experiences.

Behavioral marital therapy (Jacobson & Margolin, 1979) focuses a great deal on decreasing interpersonal distress by enhancing positivity and helping the couple learn problem-solving skills. They do this by coaching each partner to learn to listen by expressing "validation, reflection, and generalized acceptance" (p. 206) to one another. In addition to learning the importance of positive communication, clients also learn how to more appropriately express their negative feelings to their partners. Insight-oriented marital therapy (Snyder, 2002) emphasizes affective reconstruction in an effort to promote insight by "enabling interventions of increasing depth and emotional challenge" (Snyder, 1999, p. 350) that ultimately leads to increased empathy and support (Snyder & Mitchell, 2008). Thus, each of these couple therapy approaches

utilize emotions in some way to help clients (1) access and understand their emotional experience, (2) process, expand, and potentially transform that experience, and (3) utilize it to then enact new patterns of interaction with their partners.

Therapy-like Interaction

During the therapy-like interaction, partners will discuss the same topics as in the semi-natural interaction over a period of two segments per topic (lasting 3-4 minutes each). The research associate who met previously with both partners and helped them decide on an issue will enter the room and function as a process coach. The first speaker will have been previously assigned the experimenter and the person who introduced the topic will be encouraged to share his/her experience of the situation. The overall goal will be to help partners be engaged in and “really hear” what is being expressed. In this manner, they are more likely to soften towards one another as they experience their relationship in a way that increases self- and other-understanding.

Introduction with Speaking Partner:

Now that you have had some time to talk about each of your issues with each other, you are each going to talk for 3-4 minutes about your issue with me. _____ (speaking partner) will begin, and I will ask _____ (listening partner) to simply focus on listening and trying to understand his/her experience. (To the listening partner) His/her experience may not be your experience, and you may disagree, but I'll ask that you wait to respond. I'm most concerned right now in hearing your (speaking partner) experience, and then I will shift to understand your (listening partner) experience.

Initial Approach:

Tell me a little bit about your experience of the situation.

Development of the interaction:

1. Emotional Exploration and Processing

Explanation: The coach will begin by helping the speaking partner explore his/her experience, with a particular focus on emotional exploration and processing. As the speaking partner explains his/her experience, the coach models healthy interaction for the listening partner by validating and seeking to understand the speaking partner's experience *as s/he reports it*. Although this may mean occasionally validating secondary emotions (e.g., anger, frustration, etc.), it is extremely important that during this time the coach look beyond expressed content for primary emotions (e.g., sadness, hurt, etc.) and underlying attachment needs, threats, or longings (the need to feel understood, safe, important, respected, etc.).

- **Explore their experience (emotional, cognitive, and behavioral)**

What was that situation like for you?

What thoughts were going through your mind when that happened?

How did you respond?

- **Validate their experience as they report it.**

That sounds really hard.

So you were really angry when s/he responded that way.

- **Deepen processing by shifting to and validating primary emotions and attachment needs.**

So when s/he responded that way, it seems like you might have felt disrespected/unimportant/alone/unheard.

In your situation, I may have felt _____ (primary emotion/attachment need)

So your experience is when you needed him/her most, s/he wasn't there.

2. Emotion Regulation

Explanation: As emotional processing continues and those more vulnerable emotions become clear, the coach briefly addresses emotion regulation by reframing the person's experience and behaviors in terms of the newly developed emotional context. At times, it may be appropriate to explore the level of congruence between the speaking partner's behaviors at the time of the issue and his/her underlying, primary emotions. This helps to establish a link for both partners between two seemingly contradictory experiences (i.e., primary emotions and attachment needs versus reactive and volatile behavior).

- **Reframe motivation and behaviors in terms of primary emotions**

How do you typically respond when you feel _____ (primary emotion/attachment need)?

So when you're feeling _____, you most often respond by _____ to your partner.

- **Check the congruency between the experience of primary emotions and what is typically expressed to the listening partner.**

Do you think your partner knew you were feeling _____?

3. Enactment

Explanation: The final step is to facilitate a brief, emotionally-heightened experience for the couple. Whereas all of the interaction to this point has been between the speaking partner and the coach, this exchange is between the speaking and listening partners. After briefly summarizing the speaking partner's experience in terms of primary emotions and ensuring that it is accurate, the coach instructs the speaking partner to express the thought in his/her own words directly to the listening partner. This creates a much deeper emotional experience than solely expressing the idea to the coach.

- **Briefly summarize (in one sentence and in positive terms) the speaking partner's experience, focusing on the primary emotion and attachment needs.**

So you really want to feel important to your partner, and _____ (experience) is one way that helps you know s/he thinks you are important?

- **Check to ensure that your summary fits the speaking partner's experience**

Does that fit?

- **Direct the speaking partner to express that idea in their own words to the listening partner.**

Will you please turn to him/he and say that in your own words, please?

Interaction with the Listening Partner

After the expression from the speaking partner, the coach shifts to the listening partner and understanding what the previous few minutes were like for him/her. It may also be useful to allow the listening partner to express what s/he heard the speaking partner say. Nonetheless, the overarching framework remains the same. The coach facilitates emotional processing by validating and exploring the listening partner's experience (as it relates to the speaking partner's experience). The coach then looks for primary emotions and underlying attachment needs in order to reframe both partners' motivation and behaviors. After a brief coach summary of the listening partner's emotional experience, the coach directs him/her to express those thoughts directly to the speaking partner.

Introduction with Speaking Partner:

Now we're going to shift and I'm going to talk for 3-4 minutes with _____ (previously the listening partner) about his/her experience. So please (previously the speaking partner) simply listen and try to understand his/her experience, even if you may not completely agree.

Initial Approach:

What were the previous few minutes like for you?

Please note that there are two primary paths that the listening partner may take: (1) S/he may discuss their explicit experience of the previous 3-4 minutes; or (2) S/he may shift and talk about his/her experience during the situation to which the speaking partner was referring. Either reaction is appropriate.

Development of the interaction:

1. Emotional Processing

- **Explore their experience (emotional, cognitive, and behavioral)**

What thoughts were going through your mind when that happened?

How might you have responded if you had been at home?

- **Validate their experience as they report it.**

So what s/he just said doesn't really fit your experience.

So you feel like you've heard this all before.

So you feel kind of bad after hearing him/her express it in that way.

- **Deepen processing by shifting to and validating primary emotions and attachment needs.**

So it sounds like you are a bit worried that s/he's not being sincere.

It seems like I might feel like I was not good enough if I heard those things from him/her.

2. Emotion Regulation

- **Reframe motivation and behaviors in terms of primary emotions**

So when s/he typically feels _____ (primary emotion/attachment need), how do you respond?

So when you're feeling _____, you most often respond by _____ to your partner.

- **Check the congruency between the experience of primary emotions and what is**

typically expressed to the listening partner.

Do you think your partner knew you were feeling _____?

How might you respond differently if you heard what s/he just expressed to you instead?

So even though you feel kind of bad, you're afraid your partner really doesn't feel you are good enough, and you kind of shut down.

3. Enactment

- **Briefly summarize (in one sentence and in positive terms) the speaking partner's experience, focusing on the primary emotion and attachment needs.**

It sounds like you really want to know that, even when she might be upset at you, she still values and admires you.

- **Check to ensure that your summary fits the speaking partner's experience**

Does that fit?

- **Direct the speaking partner to express that idea in their own words to the listening partner.**

Will you please turn to him/he and say that in your own words, please?

APPENDIX C

Research Associate Interaction with Participants

PHASE 1:

Ryan and Interviewers:

1. Couple arrives and is greeted.
2. Tell/show the couple where the water bottle, snack packs, and bathrooms are located.
3. Ask them if they are willing to turn their cell phones off, or if they would like they can leave them with Ryan and they can remain on. He will answer them to ensure that there are no emergency calls.

Interviewers:

4. Each interviewer goes into a separate room with one participant.
5. Informed Consent

The first part of this process is for you to read a basic overview of this study and provide your consent to participate. You are welcome to read it silently, or I am happy to read it for you. Do you have a preference?

- Ask if s/he has any questions about the informed consent

I just want to highlight a few things that are really important. One thing is that what you do here is completely confidential. You will be assigned a participant number, and no names or identifying information will be attached to any of your materials, including the video. In addition, everything will be locked up in a secure place that only the primary investigators can access. Also, if at any time you feel unable to continue, please notify any member of the research team, and we will let you have a break or end the research session. Do you have any questions for me?

6. *You were asked this in the brief telephone survey, but I wanted to ask again: **Has there been a physical altercation of any kind between you and your partner since the telephone interview?** If yes, make sure it was not something that left marks or required a trip to the hospital. If it was, then they cannot participate. If it was less severe, verify that the participant considers it safe to participate in the research and discuss potentially difficult issues.*
7. The research associate then administers the Adult Attachment Interview.

For the next hour or so, I am going to ask you some questions about your early childhood, especially about your relationship with your parents. There are 20 questions with a variety of additional questions that I will ask. It is likely that I will ask you a question you have already answered earlier in the interview. The interview is very structured, so I will have to ask you the question, but just know that I am listening, and I'll probably say something like, "I know you already kind of mentioned this, but..." Do you have any questions for me before we begin?

8. You will then start the recorder. The first step is to take it off of hold (on back). After that, all you need to do is hit the record button (red) and make sure that it says it is recording and begins to count up. You will also need to have made sure the batteries are not low.

Equipment needed for interviewers:

1. Informed consent
2. Digital voice recorder
3. Paper/Pen

PHASE 2:

Coach:

1. You will give both partners the assessment packet to complete (SEEQ, CPS, RDAS, OQ-45.2).
2. While one partner begins the packet, you will invite the other into room 1.
3. Use this opportunity to talk briefly with the partner and establish some rapport.
4. In room 1, you will say the following:

This meeting with me is to prepare for the interaction with your partner. I would like you to think of a fairly recent time when you felt hurt, angry, or offended by your partner, and about which you still have at least some feelings. What recent instance comes to mind when you think about that?

Let them know that they can take their time and that they can brainstorm and find one instance about which they would like to talk. After they come up with one, ask if another one comes in mind—a back-up topic, so to speak. They need to leave this brief meeting with you having at least one topic.

- Ask them to rate their distress level (1-10) regarding the issue, with 10 extremely high distress and 1 being very little distress. **Make sure that the report a distress level of 3-7.** If it falls outside of those ranges, explore whether a different topic would be better.
 - **VERIFY WHETHER THEY FEEL SAFE ABOUT DISCUSSING THAT TOPIC WITH THEIR PARTNER.** If they do not, please help them choose another issue.
5. Thank the partner for his/her time and take them back to where partner 2 is completing the assessment packet. Then take partner 2 into room 1 and repeat the process.
 6. Tell the couple that you will be attaching a measure of skin conductance to their index and middle fingers of their non-dominant hand and **encourage them to wash their hands prior to entering room 1.**

Equipment needed for the therapist/coach:

1. An assessment packet for each partner.

PHASE 3:

Ryan:

1. Open up AcqKnowledge software (it should automatically detect the hardware: #000911)
2. Make sure hardware is set to 5, 1.0 Hz, DC, and DC.
3. Select MP150 > Set Up Channels

4. Make sure both A1 and A2 channels are selected, with all boxes checked
5. Select "Scaling" (You will need to do this separately for each channel)
6. Make sure that Cal1 "Input" and "Scale" are both set at 0. Cal2 "Input" should be 1 and "Scale" should be 5. The units are "micromhos."
7. Click on Cal1. It will change the input volts value slightly.
8. Add the input volts for Cal1 to the value for Cal2 (1).
9. Click on the mean value box, and then select settings. Select 10 as the number of samples.
10. Click on "ok."
11. Select MP150 > Set Up Acquisition
12. It should read "Record" and "Append" to "Disk." The Sample Rate should be 10 samples per second.
13. The total length of all interactions should be set for 40 minutes (I can start and stop recording and it will put a small diamond at the top of the graph).
14. Select MP150 > Set Up Stimulator
15. Under "Parameters," change Seg #1 Level to 7 volts and Seg #1 Width to 2000 msec. Then change the Levels of all the others to 0 volts (it won't matter what their corresponding widths are then).
16. Under "Output," select A0 and under "Duration," select 1x. Make sure it says that it will start with Acquisition and that the sampling rate is 200 samples/sec or higher.
17. **Let the couple know that they will be in this room for the next 45-50 minutes, and that they will not be able to answer their cell phone or go to the bathroom. If they need their cell phone on, have them give it to Ryan.**
18. Partners will then both enter room 1 and the physiological equipment will be attached to the index and middle fingers of their non-dominant hand.
19. They will then have about five minutes of free time.

In order for the physiological equipment to work properly, we need to give it about five minutes, so we'll take a brief break and we'll start back up in about five minutes.

20. Turn the preview monitor on and make sure the source is "AV IN."
21. To see the couple interaction on the preview monitor, make sure the switch is on "Camera," and press "Mode" twice and "Fade" once on the CS-450.

Coach:

22. They will then be asked to clear their minds and relax for about 3 minutes.

You've already talked about quite a few things today. Now what I'd like you to do is take about three minutes and focus on relaxing and clearing your mind for the next three minutes.

Ryan:

23. **Start recording physiological data.**

Coach:

24. At the conclusion of the three minutes, enter the room and **begin recording with both cameras** (use remote).

Ryan:

25. **Stop recording physiological data when the coach enters. Count to 15. Begin collecting physiological data again.**

Coach:

26. Instruct the couple that they will then talk for 5 minutes about how they met.

For the next five minutes, I'd like for you to talk with one another about how you met. For example, you can talk about your first impressions, your dating experience, what you valued in one another, and how you decided to stay together.

- Let them know that you will be present in the room as they discuss how they met and discuss an issue as they would at home.
 - Help them to know that you will simply be off to the periphery and will not be involved in what they are doing.
 - Validate any potential anxiety they might feel at having you in the room.
 - Turn your body position away from the couple and do not look at them. Engage yourself in something else. You will be timing their interaction.
 - If at any time they try to engage you. Let them know that they need to be talking with one another, and that they will have the opportunity to talk to you in the next segment.
27. Begin recording with both cameras.

Coach:

28. They will then begin talking about one of the partner's issues (previously assigned) for 7-8 minutes).

Now I'd like (predetermined partner) to talk with your partner about your issue for about 7-8 minutes. Then you will talk for 7-8 minutes about (to partner) your issue. The goal of talking with your partner is to talk about each others' experience and to take steps towards a resolution.

29. They will then shift and talk about the other partner's issue for 7-8 minutes.
30. You will then talk to one partner for 3-4 minutes about his/her issue, with a focus on facilitating emotional content and a softening experience.

Now, I'm going to talk directly with each of you about the issues you have been discussing for a few minutes.

31. You will then shift and talk to the other partner for 3-4 minutes about his/her experience of hearing his/her partner express those thoughts and feelings.
32. You will then shift and do the same two segments for the other partner's issue.
33. After you finish discussing both partners' issues, stop video recording.
34. Thank them for their time and then excuse yourself. Let them know that Ryan will be in shortly.

Ryan:

35. **Stop recording physiological data when the coach exits. Begin collecting physiological data again.**

36. Enter the room and provide each partner with the SOFTA. Ask them to answer each question according to the interaction they just had with the coach.
37. After they have finished the SOFTA, remove the skin conductance.
38. Let them know they can take a 7 minute break. Tell them that they will need to go to the bathroom now or at the conclusion of the study.

Equipment needed for the therapist/coach:

1. Timer
2. Biopac skin conductance measure
3. Two copies of the SOFTA-S (adapted)
4. Pens

PHASE 4:

Ryan:

1. Put up the divider sheet.
2. Turn on headphones and amplifier.
3. Turn on TV
4. Make sure the computer monitor resolution is 1024*768
5. Make sure the following are turned on:
 - PA Dials
 - DVD Recorder
6. Make sure there is a DVD in the recorder.
7. Select the "PA Launch" icon
8. Select "Collect"
9. Select the appropriate session (or create one to represent the participant ID)
10. Take a few moments and instruct the participants about the perception analyzer and how it works.
11. Select the "What is your gender?" question.
12. To see on the preview monitor what participants are seeing in terms of perception analyzer questions, make sure the switch is on "PA Questions" and press "Mode" twice and "Fade" once on the CS-450.
13. Take a reading on the gender question by pressing F4 on the computer. The computer screen should then switch to the results for that question.
14. Select the "Please look at the bottom of your dial and enter the dial number" question.
15. After giving the participants a few seconds to answer it, take a reading by pressing F4 on the computer. Again, the computer screen should show the results.

16. Select the moment-to-moment question.
17. Go to "Questions"
18. Select "Subset Options."
19. Click on "Select Subset"
20. Choose "What is your gender" as the question to use as the subset.
21. Select "OK."
22. Select "Camera" on the switcher.
23. Press "Mode" twice (no "Fade")
24. Using the "tvone" remote, press "Autoset"
25. Then press "Control F"
26. Go into the room with the participants and let them know that they will be indicating, 0-100, how they felt toward their partner in the couple interaction. **They are not indicating their overall feelings in their relationship, only what they felt during the interaction.**
27. Start the camera playback.
28. **Quickly go into the research room and watch the preview monitor for the small LED light to turn on. When it turns on, press F4 on the computer and "Record" on the DVD recorder.**
29. At the conclusion of the playback, press F4 on the computer and "Stop" on the DVD recorder.
30. Enter room 1 and give the participants the SEEQ for the segments they just watched.
31. Then go through the debriefing process and thank them for their time.

Equipment needed for the research associate:

1. Divider screen
2. Two sets of ear phones
3. Two perception analyzer dials
4. Two copies of the SEEQ

To switch to the overlay mode:

1. Change switcher to "Camera"
2. Press "Mode" twice (no "Fade")
3. Using the "tvone" remote, press "Autoset"
4. Then press "Control F"
5. Begin the video, when the green light turns on, then press "F4", and begin recording DVD.

(NOT NEEDED) To switch to next moment-to-moment question:

1. Change switcher to "PA Questions"
2. Press "Fade"
3. Select the appropriate question.

APPENDIX D

Informed Consent

WHAT WE ARE DOING:

This is a study by Ryan Seedall and Dr. Karen Wampler of Michigan State University. We want to understand what affects your emotional experience when you interact with your partner. We expect to get this information by (1) having you fill out several surveys, (2) interviewing you about your early childhood with your parents, and (3) having you talk with your partner.

WHY WE ARE DOING THIS:

We really want to understand more about how couples interact and learn about possible ways that we can improve their experience when they come in for therapy.

WHAT WILL HAPPEN:

1. If you provide your consent to participate, you will be interviewed alone about your early childhood experiences with your parents. This 45-90 minute interview has been used in many studies and is called the Adult Attachment Interview. It will be digitally recorded and later transcribed and studied by Ryan Seedall and his research associates.
2. After the interview, you and your partner will meet individually with a research associate who will ask you to think about a recent time when you felt hurt, angry, or offended by your partner and about which you still have feelings. You will also fill out some surveys about your individual and couple functioning while your partner is talking with the research associate.
3. You and your partner will then enter the same room and have a painless measure of skin conductance attached to your middle and ring fingers of one of your hands. You will first focus on clearing your mind and relaxing for 3 minutes and then talk with your partner for 5 minutes about how you met one another.
4. After that, you and your partner will talk about each of your issues in a couple of different ways. One way you will do this is to talk directly with your partner for 8-10 minutes per issue. A research associate will be in the room but will not participate in the conversation.
5. The other way is that you will talk about your issue with a research associate who will act as a communication coach. When it is your issue, you and the coach will talk for 3-5 minutes about your experience while your partner listens. The coach will then shift and talk to your partner for 3-5 minutes to help him/her better understand your experience. The same thing will happen when you discuss your partner's issue.
6. Your conversations with your partner will be video recorded, and the last part of your participation will be to watch yourself talking with your partner. As you do this, you will rate with a dial how you felt towards your partner in each moment.
7. We will take breaks as needed throughout the 3-4 hour process.

CONFIDENTIALITY:

Your confidentiality will be protected to the maximum extent allowable by law. All of your information will be stored in a locked file cabinet. An identification number will be used on all of your materials so that your name will not be used. Only Ryan Seedall, Dr. Karen Wampler, and their research associates will see any of your information. No one else, including your partner, will have access to your personal information.

RISKS:

We do not expect any significant risks for participating in this research, but it is possible that you may experience some uncomfortable or upsetting feelings when you talk about your early childhood experiences (including potential abuse, loss, or trauma) as well as during your conversation with your partner. You are free to take breaks or stop participating in the study at any time. If you choose to stop, you will still receive full compensation. We may also stop the research session if we feel that your overall emotional or physical well-being is in jeopardy.

At the conclusion of the research session, you will briefly speak with a marriage and family therapist who will make sure that no emotional or relationship problems have occurred because of your participation in this study. At that time, he will provide you with information regarding potential resources if any upset feelings persist. This includes meeting with someone from the Family and Child Clinic (517-432-2272) who can talk with you. We will also contact you within two weeks of your participation to request feedback and to check on your well-being.

BENEFITS:

Although this research is not intended to be therapeutic or permanently improve your relationship, it is possible that you may experience some positive effects from participating in this research. For example, you may learn more about your own as well as your partner's emotional experience from participating in this research. Each partner will receive a \$50 gift card prior to leaving today, even if you choose to end your participation early.

IF YOU NEED ANYTHING:

If you have any concerns or questions about this research study, such as scientific issues, how to do any part of it, or if you believe you have been harmed because of this research, please contact Karen Wampler (Room 7, Human Ecology Building, MSU, East Lansing, MI 48824; kwampler@msu.edu; 517-355-0230) or Ryan Seedall (Room 1, Human Ecology Building, MSU, East Lansing, MI 48824; seedallr@msu.edu; 517-432-0893).

If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Michigan State University's Human Research Protection Program at 517-355-2180, Fax 517-432-4503, or email irb@msu.edu or regular mail at 202 Olds Hall, MSU; East Lansing, MI 48824.

CONSENT:

- I have read this form and had my questions answered by a research associate.
- I give my consent to participate in this project and have been given my own copy of the consent form.

Participant Name (Please print)

Participant Signature

Date

Karen S. Wampler, Project Director, or Authorized Rep.

Date

Witness – Research Associate

Date

APPENDIX E

Therapist/Coach Content and Quality Check

*Directions: Please watch all of the partner-coach segments and **complete one sheet for each partner**. After you have finished a rating sheet for each partner, watch the partner-coach segments one more time to verify your ratings.*

1. When talking about this partner's issue, the coach explored his/her feelings and experience.
 - 0: Not used or ineffectively used
 - 1: Rarely used or for the most part ineffective
 - 2: Used effectively in some instances but poorly in others
 - 3: Something missing but used effectively for the most part
 - 4: Used effectively in virtually all instances
2. When talking about this partner's issue, the coach communicated in a way that validated his/her feelings and experience.
 - 0: Not used or ineffectively used
 - 1: Rarely used or for the most part ineffective
 - 2: Used effectively in some instances but poorly in others
 - 3: Something missing but used effectively for the most part
 - 4: Used effectively in virtually all instances
3. When talking about this partner's issue, the coach helped to reframe his/her feelings and experience in terms of primary emotions and attachment needs.
 - 0: Not used or ineffectively used
 - 1: Rarely used or for the most part ineffective
 - 2: Used effectively in some instances but poorly in others
 - 3: Something missing but used effectively for the most part
 - 4: Used effectively in virtually all instances
4. When talking about this partner's issue, the coach utilized an enactment to heighten his/her emotional experience.
 - 0: Not used or ineffectively used
 - 1: Rarely used or for the most part ineffective
 - 2: Used effectively in some instances but poorly in others
 - 3: Something missing but used effectively for the most part
 - 4: Used effectively in virtually all instances
5. How much did this partner soften towards the other person during this segment?
 - 0: This partner did not soften at all in either segment.
 - 1: This partner softened very minimally towards the other person.
 - 2: This partner had a balance of softening moments coupled with defensive or volatile moments.
 - 3: This partner softened moderately, with minimal defensiveness or volatility.
 - 4: This partner softened substantially towards the other person.

6. How effective did the intervention seem for this partner during this segment?
- 0: The intervention had no effect or was ineffective.
 - 1: The intervention had small moments of effectiveness but was mostly ineffective.
 - 2: The intervention had a balance of effective and ineffective moments.
 - 3: The intervention had small moments of ineffectiveness but was mostly effective.
 - 4: The intervention was very effective.

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