Dyadic Research in Couple Therapy: The Link between Attachment and Relationship Satisfaction

Bryson Greaves
Dyadic Research in Couple Therapy:
The Link between Attachment and Relationship Satisfaction

by

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A Dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Philosophy in Marriage and Family Therapy

June 2017
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<tr>
<td>iRELATE</td>
<td>Intimate Relationships Awareness, Training, and Enrichment</td>
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<tr>
<td>EFT</td>
<td>Emotionally Focused Therapy</td>
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<td>PREP</td>
<td>Prevention and Relationship Enhancement Program</td>
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<td>FRO</td>
<td>Family Readiness Officer</td>
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<td>MCCS</td>
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<td>SGT/ E-5</td>
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<td>Post-Traumatic Stress Disorder</td>
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<td>Institutional Review Board</td>
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<td>SECNAVIMST</td>
<td>Secretary of the Navy Instigation</td>
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<td>MCO</td>
<td>Marine Corps Order</td>
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<td>PI</td>
<td>Principal Investigator</td>
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<td>ICD</td>
<td>Informed Consent Document</td>
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<td>USMC</td>
<td>United States Marine Corps</td>
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<tr>
<td>CITI</td>
<td>Collaborative Institutional Training Initiative</td>
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<tr>
<td>LLU</td>
<td>Loma Linda University</td>
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<td>SPSS</td>
<td>Statistical Package for the Social Sciences</td>
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<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>BIN</td>
<td>Benefit Identification Number</td>
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<td>RDAS</td>
<td>Revised Dyadic Scale</td>
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<td>IFCR</td>
<td>Individual, Family, Community Resilience Profile</td>
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<td>ECR-R</td>
<td>Revised Experiences in Close Relationships</td>
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<td>ANOVA</td>
<td>Analysis of Variance</td>
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<td>DV</td>
<td>Dependent Variable</td>
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<tr>
<td>IV</td>
<td>Independent Variable</td>
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<tr>
<td>HLM</td>
<td>Hierarchal Linear Modeling</td>
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<td>APIM</td>
<td>Actor-Partner Interactional Model</td>
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<td>MFT</td>
<td>Marriage and Family Therapy</td>
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<td>SEM</td>
<td>Structural Equation Molding</td>
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<td>RMSEA</td>
<td>Root Mean Square Error of Approximation</td>
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<tr>
<td>CFI</td>
<td>Comparative Fit Index</td>
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<td>GFI</td>
<td>Goodness of Fit</td>
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<td>DF</td>
<td>Degrees of Freedom</td>
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<td>TAU</td>
<td>Treatment as Usual Condition</td>
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ABSTRACT

Dyadic Research in Couple Therapy:
Examining the link between Attachment Security and Relationship Satisfaction

By

Bryson Greaves

Doctor of Philosophy, Graduate Program in Marital and Family Therapy
Loma Linda University, June 2017
Dr. Brian Distelberg, Chairperson

Couple therapy ranks among the most frequently and diligently researched topics in Marital and Family therapy (MFT). Additionally, intimate partner relationships are a key focal point for clinical intervention with increasingly more couples seeking therapy to address relational conflict, repair emotional injury, and increase intimacy (Lebow, Chambers, Christensen, & Johnson 2012). Rigorous empirical inquiry has suggested that attachment theory is a crucial foundation to understanding relationship distress and increasing relationship satisfaction (Wiebe & Johnson, 2016). Secure attachment between intimate partners can lead to an increase in trust (Pistole, 1993), healthy emotion regulation (Kobak & Hazan, 1991), and positive conflict resolution strategies (Feeny, 1998), resulting in higher overall relationship satisfaction, quality, and stability (Kirkpatrick & Davis, 1994; Simpson, 1990). However, research on attachment as a foundational pillar to relationship satisfaction has been largely correlational and conceptual. Therefore, there is a need to understand the causal link between attachment and relationship satisfaction. Aim one of this dissertation will address this gap in the literature by using a sophisticated Actor-Partner Interdependence Model (APIM; Kenny, Kashy, & Cook, 2006) cross-lagged design to determine the causal link between

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attachment and relationship satisfaction using data from linked dyads in the Marine Corps. This study uses a longitudinal design with data collection taking place at four time points. Aim two uses Emotionally Focused Therapy (EFT; Johnson, 2004) as a case example to highlight the need for dyadic research in MFT to strengthen the body of research for evidence-based practice and to address the gap between research evidence and clinician application.
CHAPTER ONE

INTRODUCTION

Problem Statement

This dissertation examines two specific aims. First, this dissertation will examine the link between couple relationship security and relationship satisfaction by using conjoint couple data from active duty Military couples with a Marine ranking of E-5 and below. More specifically, the interaction between partners is measured by the Experiences in Close Relationships Scale (ECR-R; Fraley, Waller, & Brennan, 2000) and the Dyadic Adjustment Scale (DAS; Spanier, 1976). A breadth of research acknowledges the connection between these two constructs pointing to securely attached partners having better conflict resolution strategies (Feeny, 1998), more trust (Pistole, 1993) and stronger bonds with higher levels of relationship stability and quality (Kirkpatrick & Davis, 1994; Weibe & Johnson, 2016).

Second, attachment theory serves as one of the most trusted underpinnings to both conceptualizing and treating couple distress. For example, Emotionally Focused Therapy (EFT; Johnson, 2004) is considered an evidence-based model for treating couple distress. Rooted in attachment theory, EFT treats relationship distress by restructuring couple bonds and increasing felt sense of attachment security between partners ultimately leading to an increase in overall satisfaction. While EFT is by comparison, perhaps the strongest empirically supported model of couple therapy, the depth and breadth of research does not explicitly address the empirical causal link between attachment security and relationship satisfaction. Therefore, there is a significant need to better understand both the contributing factors to and results of relationship distress with regard to
attachment security in intimate partner dyads. Aim two then will use EFT as a case example demonstrating the importance of using dyadic analysis in future research.

Relationship distress is among the most common presenting issue for people seeking therapy services. More and more couples are seeking therapy to address relational conflict, repair emotional injury, and increase intimacy (Lebow, Chambers, Christensen, & Johnson 2012). Although couples are presenting to therapy at increasing rates to heal relationship distress, the divorce rate in the United States continues to hover around fifty percent (Cherlin, 2010; Kessler, 1993); suggesting more research is needed to better understand and treat relationship discord. Furthermore, the link between couple attachment security and relationship satisfaction is presented in large part as theoretical and still void of in-depth empirical support. Outcome studies designed to examine the two have traditionally used independent and individual data later aggregated and compared to their partner’s data to suggest either an ebb or flow in attachment security with a correlative link to satisfaction. Moreover, studies have largely been cross-sectional. Studies in this vein prevent a more sensitive analysis of how the felt sense of security with one’s partner directly affects the level of relationship satisfaction experienced by the other. Therefore, this dissertation will use longitudinal data from Marine couples. The data will be collected by keeping couples linked together thereby allowing for the first ever dyadic casual evaluation of attachment and relationship satisfaction.
Background

The negative effects of divorce and relationship distress are well documented. The Center for Disease Control and Prevention (2011) site relationship distress as a leading cause of individual mental and emotional health concerns in the U.S. Moreover, depression and anxiety are highly correlated with relationship distress, dissolution, and divorce (Chuick, et. al., 2009; Kessler, 1993; Pollack, 1998; Potts, Burnam, & Wells, 1991; Johnson; 2004, 2005; Whisman, 2001, 2007). A multitude of couple satisfaction studies summarized by Lebow, Chambers, Christensen, & Johnson (2012) provide insight into key factors that contribute to relationship satisfaction. Among them, Attachment Theory (Bowlby, 1958; 1969) has been applied to help further an understanding of couple satisfaction and support clinicians working with couple dyads in therapy. In a landmark study, Hazan & Shaver (1987) applied attachment theory to adult romantic relationships. Their research coupled with a surge of other studies (e.g. Feeny, 1998; Kobak & Hazan, 1991) demonstrated evidentiary support for the link between childhood attachment strategies and adult behavior in adult romantic relationships helping to solidify attachment as a significant component to couple satisfaction. Given the significantly higher divorce rates among new Military enlistees and the well-defined link between relationship distress and mental health, this population presents a valuable opportunity to address the stated issues. Aim one of this dissertation will examine the effects of couple attachment security on relationship satisfaction.

By the start of the twenty-first century research on intimate partner relationships moved into center focus with researchers becoming interested in factors that contribute to couple distress and conversely, factors that foster and maintain couple connection.
Research on couple distress has found several attributions of successful or unsuccessful relationships and relationship satisfaction (Fincham, Reis, & Rusbult, 2004) including emotion (Hawkins, Carrere, & Gottman, 2002; Johnson, 2009), love (Berscheid, 2010), sexuality (Bodenmann, Ledermann, & Bradbury, 2007), hostility (Rogge, et al., 2006), conflict (Bradbury, Rogge, Lawrence, 2001), forgiveness (Fincham & Beach, 2003), neuro-science (Cozolino, 2014; Fisbane, 2007; 2013), relational exchanges (Klein, Izquierdo, & Bradbury, 2007) gender and power (Knudson-Martin & Huenegardt, 2010), and attachment (Johnson, 2013; Whiffen, 2003). Additionally, there is strong link between relationship distress and depression such that people who report depressive symptoms often experience heightened relational discord. There is subsequent evidence to suggest that the relationship between marital distress and depression is reciprocal in nature meaning that partners who experience relationship distress are more likely to become depressed (Chuick et al. 2009; Davilla, Karney, & Bradbury, 2003). In a longitudinal study, Davilla et al. (2003) studied newlywed couples and found that levels of change in relationship distress were associated with changes in levels of depression within the depressed partner.

There appears to be differences in depression and relationship distress across gender as well. Men with major depression are more likely to experience co-occurring relationship distress. Whisman (2007) indicates high rates of comorbidity between depressive symptoms and relationship distress for both men and women. In a meta-analysis, Whisman (2001) found a significant relationship between marital distress and depression, such that people struggling with depression were more likely to report relationship discord than people who were not depressed. Furthermore, one study
determined the highest indicator for a relapse into a depressive episode was initiated by how critical one’s partner was perceived to be (Hooley & Teasdale, 1989). Chuick et al. (2009) and Christiansen & Heavy (1990) suggest that men differ from women in that they are far more likely to withdraw or disengage from their partners in heterosexual relationships, which likely contributes to higher rates of relationship distress. Taken together, the effects of relationship distress can be extensively damaging. Depression, anxiety, suicidal ideation and behaviors, post-traumatic stress, substance abuse, along with physiological symptoms such as significant changes in weight are just some of the frequent complications associated with relational discord (Barbato, & D’Avanzo, 2008; Whisman & Uebelacker, 2009).

**Attachment and Relationship Satisfaction**

John Bowlby (1958) first proposed his theory of attachment following his career as a child psychiatrist in London during the 1930’s and 1940’s. At its core, attachment is a deep, enduring emotional bond that connects one person to another across time and space (Ainsworth, 1973; Bowlby, 1969). Bowlby (1969) argued our earliest attachment bonds are necessary for a child’s survival and inherently adaptive by nature. From an evolutionary point of view, a child’s proximity to safety, e.g. the nurture, care, and protection provided by the mother is directly related to a child’s chance of survival.

Over the course of research and application, attachment theory gradually shifted away from a strictly developmental model into a model of emotional adaptation and process of distress management over the lifespan. The key contributors to the development of attachment theory including Jon Bowlby, Mary Ainsworth, Mary Main,
and Patricia Ctittenden, each wrote about key effects of attachment security on adult relationships. However, early attachment theoretical writings only made suggestions of the link between early childhood attachment experiences and adult behavior. For example, if a child experienced his mother as unreliable this child would develop coping strategies to ensure his survival (Bowlby, 1969). These strategies include avoidance or emotional withdrawal, essentially mimicking the early childhood response of avoidance when this child is reunited with his primary attachment figure (Ainsworth & Bell, 1978). This person’s behaviors are saying something to the effect of, “I cannot depend on you so therefore I cannot risk to invest in you emotionally.” Conversely, secure attachment between partners tends to have positive emotional and relational benefits, reducing stress between partners and strengthening bonds (Wiebe & Johnson, 2016). Secure attachment has been linked to trust (Pistole, 1993), emotion regulation (Kobak & Hazan, 1991) and conflict resolution (Feeny, 1998), resulting in higher degrees of relationship satisfaction, overall relationship quality, and relationship stability (Kirkpatrick & Davis, 1994; Simpson, 1990). The first aim of this dissertation will contribute to this body of research both empirically and clinically by examining the causal and reciprocal link between attachment and relationship satisfaction over time helping to better understand the nature on interaction between intimate partners.

**Dyadic Research in Couple Therapy**

The second aim of this dissertation will be to contribute to methodological advancements in Marital and Family Therapy research. The field of Marital and Family Therapy (MFT) emerged as a somewhat controversial, yet innovative approach to treating
mental and emotional health issues. Building on the work from fore-thinkers like Gregory Bateson, MFT theory is rooted in systemic conceptualization. MFTs are keenly aware of patterns of interaction and suggest these dynamic feedback loops of communication are responsible for both systemic and individual distress. However, it is also true that MFT research has been hindered by linear research methods that do not typically support systemic conceptualization (Oka & Whiting, 2013).

Kenny, Kashy, and Cook (2006) proposed new data analytic and research design methodologies that are systemic in nature and better capture the true relational conceptualizations held by MFTs. In order for MFT research to continue to grow and congruently represent our theoretical underpinnings, MFT research must continue this shift toward dyadic analysis and truly systemic research methodologies (Oka & Whiting, 2013; Wittenborn, Dolbin-MacNab, & Keiley, 2013). This dissertation will address this gap in systemic MFT research by using an Actor-Partner Interaction (APIM) cross lagged design and analytic strategy (Kenny, Kashy, & Cook, 2006). In doing this, the research presented here will be able examine the causal relationship between attachment security and relationship satisfaction.

Family scientists have largely been confined to the traditional, linear methods of research which are not systemic in nature and tend to be contradictory to how systemic thinkers conceptualize relational dynamics. However, with the emergence of dyadic data analysis this is beginning to change. There are new opportunities to deepen understanding of relational dynamics through dyadic analysis. For example, many outcome studies used individual measures of analysis, e.g. the Dyadic Adjustment Scale (DAS; Spanier, 1976) to track changes in couple satisfaction over time. Yet, the problem in self-report,
individual measures when looking at dyads or family relationships, is they do not account for the covariance between partners. Studies of this nature only help us to see change in one partner but fail to help us understand whether or not that change influences a change in their partner or family system. Therefore, using the DAS individually to track couple satisfaction is limiting in that it helps us only to see a couple’s aggregate level of satisfaction, rather than the more detailed picture of their relational landscape. Questions then remain: Does one partner’s increase in satisfaction mean the other partner also increases in satisfaction? Do they increase or decrease at the same rate? Do we know what predicts movement in one partner over movement in another partner? Due to violations of collinearity in traditional MFT research methods, from a quantitative perspective, we cannot answer these questions accurately at this time.

Oka & Whiting (2013) point out that MFT research has often favored the medical model of linear causality rather than accurately representing systemic MFT theory and case conceptualization. Oka & Whiting (2013) make the argument that this misrepresentation is one of the major components contributing to the well-known and often deeply felt researcher-clinician gap in our field. In order for MFT research to continue to grow and congruently represent our theoretical underpinnings, MFT research must continue this shift toward dyadic analysis and truly systemic research methodologies (Oka & Whiting, 2013; Wittenborn, Dolbin-MacNab, & Keiley, 2013). Therefore, the second focus of this dissertation will address this gap in the literature defined by a lack of truly dyadic data collection and analysis. By using an Actor-Partner Interdependence Modeling (APIM) approach to analysis, this study will be able to comment more directly on the relationship between attachment security and relationship
satisfaction. The sensitivity of this design will also capture subtle changes in a particular partner and furthermore how those changes in one partner directly affect the other member of the dyad. Aim two will use the case example of Emotionally Focused Therapy (EFT; Johnson, 2004) to demonstrate the usefulness of dyadic methods to strengthen empirical support and increase effective clinical application.

Objectives

Aim I

The first aim of this dissertation will be to examine the link between attachment security and relationship satisfaction. Scores from linked couple dyads in the active duty Marine population on the ECR-R and the DAS will be analyzed using and Actor-Partner Interaction crossed-lagged model. The goal will be to determine if changes in attachment create changes in relationship satisfaction and if these changes in satisfaction differ by gender. More specifically, this will examine if changes in male or female partner felt sense of security (attachment security) affects his/her partner’s level of relationship satisfaction (DAS score). Additionally, this study will examine the recursive relationship between attachment and relationship security in that it will test if changes in relationship satisfaction influences changes in attachment security. This study will test the following hypotheses:

Actor Effects

H1: A decrease in male partner scores on the ECR-R (indicating higher felt attachment security) will increase his scores on the DAS (relationship satisfaction).
H2: A decrease in female partner scores on the ECR-R (indicating higher felt attachment security) will increase her scores on the DAS (relationship satisfaction).

H3: An increase in male partner scores on the DAS (relationship satisfaction) will decrease his scores on the ECR-R (indicating higher felt attachment security).

H4: An increase in female partner scores on the DAS (relationship satisfaction) will decrease her scores on the ECR-R (indicating higher felt attachment security).

**Partner Effects**

H5: A decrease in male partner scores on the ECR-R (indicating higher felt attachment security) will increase female partner scores on the DAS (relationship satisfaction).

H6: A decrease in female partner scores on the ECR-R (indicating higher felt attachment security) will increase male partner scores on the DAS (relationship satisfaction).

H7: An increase in male partner scores on the DAS (relationship satisfaction) will decrease female partner scores on the ECR-R (indicating higher felt attachment security).

H8: An increase in female partner scores on the DAS (relationship satisfaction) will decrease male partner scores on the ECR-R (indicating higher felt attachment security).
Figure 1. Conceptual Dyadic Actor-Partner, Cross-Lagged Model.

Aim II

The second objective for this dissertation will be use the case study of Emotionally Focused Couple Therapy (EFT, Johnson 2004) to highlight the usefulness of dyadic research in couple therapy. EFT is widely accepted as an evidence-based practice for treating couple distress and has a tremendous amount of empirical support (e.g. Johnson, Hunsley, Greenberg, Schindler, 1999). However, the case can be made that EFT would further be strengthened by employing dyadic analysis and more specifically Actor-Partner Interdependence Modeling (APIM; Kenny, Kashy, & Cook, 2006) in future research endeavors. Studies conducted dyadically would contribute to mechanisms of change research within steps and stages of EFT allowing for a more sensitive and sophisticated view of the relational process that exists between intimate partners.

Aim two will produce a critical literature review of the existing EFT research focusing primarily on methodology and making the suggestion for EFT research to use
dyadic analysis. This work will make a meaningful contribution to the EFT literature in suggesting crucial next steps for research as well as contributing to the field of couple and family therapy more broadly by present a case study for how research can be conducted in ways that more closely align with systemic conceptualization and subsequently address the research-clinician gap that is often cited as a limitation in current research trends (Oka & Whiting, 2103).

**Rationale**

The purpose of the current study is to evaluate the link between felt sense of attachment security and relationship satisfaction. This study will consider the conceptual basis of the complementary relationship between these two constructs aiming to understand if an increase in attachment security actually leads to an increase in relationship satisfaction. By using a sophisticated design and analysis of the data at the dyad level, this study will allow for a closer examination of the nexus between attachment and couple satisfaction. For example, this study will address questions such as: Are both partners affected by attachment security to equal degrees or is attachment security more meaningful for one partner over the other? Does attachment security actually increase relationship satisfaction? If so, does one partner’s satisfaction improve more than the other? Questions such as these have yet to be answered in the existing literature by using dyadic methods of analysis and longitudinal data.

The knowledge that stands to be gained will help to highlight the role of attachment in couple satisfaction and subsequently address what treatment conceptualizations should be considered in treating couple distress. As previously discussed, couple distress
consistently emerges among the top of the list as reasons why people enter therapy (Lebow, Chambers, Christensen, & Johnson, 2012). Therefore, having sound, empirically validated, replaceable, and effective methods for treating couple distress cannot be overstated. Yet, in order to develop these empirically supported models of change, the models themselves need to be based in strong theoretical foundations and these foundations need to be tested scientifically.

Emotionally Focused Therapy presents a fitting example. EFT has tremendous research support (Johnson, Hunsley, Greenberg, Schindler, 1999; Weibe & Johnson, 2016) and has a deep theoretical foundation built upon attachment theory. However, no studies have been able to demonstrate a causal link between increased attachment security and an increase in relationship satisfaction using a longitudinal design. This study therefore holds potential for several benefits. First, it can serve to validate attachment as a crucial construct to understanding relationship satisfaction and is equipped to demonstrate cause and effect in attachment security and couple satisfaction. Second, the sophisticated linked-dyads design will provide insight into the distinct role attachment plays in the relationship satisfaction experienced by a particular partner. Lastly, findings of the study will help to advance the continued refinement of couple therapy modalities and make a significant contribution toward filling the gap in the literature with regard to the need for more dyadic analysis in couple and family therapy research.

The active-duty Military population makes for a good opportunity to address the aims of this study for a number of reasons. First, current research has found that young Marine enlistees tend to get married far younger and divorce more frequently than
civilians (Gomulka, 2010; Cohn, Passel, Wang, & Livingston, 2011). Lloyd et al. (2015) make note of this trend finding that in 2011, 30.6% of young Marines (ages 18-24) were married, while in comparison only 9.0% of civilian men and women in the U.S. were married of the same age range. According to the United States Marine Corps (2012) the divorce rate among junior enlistees is a staggering 69%. With staggeringly high rates of divorce, and typically having to face additional challenges than civilian couples, Military couples experience high rates of individual stressors. Military couples face long periods of physical separation due to deployment and training, frequent geographical relocation, and the persistent threat of injury or death to the active-duty partner (Burrell, Adams, Durand, & Castro, 2006; Lundquist, 2007). These factors combined with distress factors for non-Military couples suggest a heightened level of distress for active-duty Military relationships with an increase in relationship instability, suicidal ideation and behaviors, anti-social behaviors and aggression, and substance abuse (Amato, 2010; Hyman, Ireland, Frost, & Cottrell, 2012).

Second, the Military population presents an opportunity to collect longitudinal data of linked dyads using sophisticated metrics. Collecting longitudinal data in family therapy research is a well-defined obstacle wherein a majority of couple and family research is limited by cross-sectional data. The longitudinal data of this study will allow for a not only a more detailed analysis but the findings of the data will have more transferability to clinical practice.

Lastly, the number of participants in the sample is much higher using the active duty Military population than other populations. There is currently a large-scale study in progress with over a year and a half of data collection already underway (DoDI #
This larger study is testing the effectiveness of a relationship education program called Intimate Relationships Awareness, Training, and Enrichment Program (iRelate; Lloyd, Munoz, Tremblay, Foskett, Hallett, & Distelberg, 2015). The study for this dissertation is a nested study inside of the larger study and will use secondary data analysis. This data collected as part of the iRelate study presents an optimal opportunity for a large sample of linked couple dyads with data collected at multiple time points collectively leading to higher power (β error) in the study and stronger transferability and generalizability of results.
CHAPTER TWO

CONCEPTUAL FRAMEWORK

Introduction

The link between attachment theory and relationship satisfaction has piqued the interest of family science researchers for the last four decades. Likewise, clinicians have heavily leaned on attachment theory to inform case conceptualization and intervention. Attachment theory (Bowlby, 1969, 1973; 1980) has been used with tremendous success to understand parent child relationships, behavioral regulation in children, and the emotional experiences associated with separation and loss of primary attachment figures.

While attachment theory became widely accepted and utilized in developmental psychology, the field of family therapy and more narrowly, couple therapy, has been slower in its adoption and application of its principles. In what is now considered a landmark study, Hazan and Shaver (1987) applied principles of attachment to adult romantic relationships to demonstrate the effect of attachment over the lifespan of intimate partnerships rather than a construct strictly seen in child development. This study opened the door for a myriad of studies to follow examining the correlation between attachment and relationship satisfaction.

Attachment theory is positioned as one of the key guiding principles for treating couple distress (Johnson, 2015; Whiffen, 2003). Couple therapists globally look to attachment theory to help support their work. Moreover, evidence-based models such as Emotionally Focused Therapy (EFT; Johnson, 2004) have implemented large-scale systematic training for therapists interested in learning how to work from an attachment-informed perspective, which is foundational to the EFT model. EFT has been shown to
reduce couple distress and increase relationship satisfaction with relatively good success. EFT reports large effect size, Cohen’s d of 1.3 and a 70-73% recovery rate for distressed couples (Johnson, Hunsley, Greenberg, & Schindler, 1999). Johnson et al. (1999) found that 90% of couples reported higher degrees of satisfaction in their relationships after receiving EFT treatment and these results appear to be stable over time (Clothier, Manion, Walker, & Johnson, 2002). However, due to the linear analytic strategies used in these studies, the researchers were unable to capitalize on perhaps more nuanced and complex interactions occurring between partners. For example, one would conclude that this research can only suggest that an increase in attachment security is responsible for improved satisfaction on the basis of theoretical application rather than empirical support.

The current study will use the conceptual framework of attachment theory applied to adult romantic partner relationships to understand changes in relationship satisfaction. This chapter will discuss the historical progression of attachment theory from development toward application to romantic couple relationships, and attachment as a metaframework making the argument that attachment theory can be considered and applied as a metaframework to studies examining romantic partner relationships. Additionally, there are different models of attachment described in the literature which will be discussed here. For the purposes of this study, the ABC-D model of attachment (Ainsworth, 1970; Ainsworth, Blehar, Waters, & Wall, 1978, Main & Solomon, 1990) is used as metaframework and as a key contributing factor to relationship satisfaction.

**Brief Overview of Grand Theory**

Before discussing attachment theory as a grand conceptual framework, it is
necessary to first address evaluation criteria that qualifies theory as metaframeworks. Throughout this paper I will use the terms grand theory, conceptual framework, and metaframework interchangeably to reflect the same macro-level ideology of theory. These terms reflect the highest level of abstraction in theory development. This chapter deals only with grand theoretical frames and excludes middle range theories as well as microtheories in support of attachment theory being the conceptual underpinning of this dissertation.

In general, theory can be defined as a systematic collection of interrelated concepts (White, Klein, & Martin, 2015). Theories consist of particular structures that work in unison to explain observations, phenomena, and interactions. White et al. (2015) summarize the five parts of any good scientific theory: concepts, the relation between concepts, propositions, the relation between propositions, and finally the connections between propositions and empirically observed data (p. 2). In a classical work regarding theory typology, definition, and construction, Turner (1986) described theory as “A process of developing ideas that can allow us to explain how and why events occur” (p. 5). Burr, Hill, Nye, and Reiss (1979) further defined theory as “A set of logically interrelated propositional statements that identify how variables are covariationally related to each other” (p.17).

As stated before, grand theories provide the highest level of abstraction with less precision. They cover a much wider range of phenomena, providing a conceptual map creating an organizing perspective or orientation (Boss, Doherty, LaRossa, Schumm, Steinmetz, 1993; Turner 1986). Within the family science field, grand theory offers a vast umbrella that captures the large majority of developmental and interactional contexts of
the human experience. These frameworks capture the broadest scope of content and for the most part, consist of ideas that exist outside of family science.

For some time now, there has been great debate over the necessity and validity of grand theory (e.g. Rodman, 1980; Klein, 1980). Rodman (1980) argued emphasis on conceptual frameworks hindered growth of the field in other areas, particularly the development of narrowly focused microtheories that are argued as being theories with the most action-potential to help families. Klein (1980) argued the opposite point stating that theorizing at the highest level is crucial to field progression and strong links should be made between grand theories and middle-range theories. Other voices entered the debate that took a more developmental, collaborative approach to theory development. For example, Falicov (1988) recommended the boundaries between fields (e.g. sociology, psychology, biology) be more relaxed in order to promote the sharing of ideas, ultimately leading to the most comprehensive theories. This argument perhaps is the most helpful when considering attachment theory as a grand theoretical frame. Attachment theory has long been used in developmental psychology helping to explain childhood emotional development through parent-child relationships (e.g. Ainsworth, 1973; Ainsworth & Bowlby 1991; Bowlby, 1958; 1969; 1973; 1980) and has enjoyed considerable research interest (e.g. Ainsworth & Bell, 1970; Blehar, Lieberman, & Ainsworth, 1977; Fraley & Shaver 2000; Fraley, Roisman, Booth-LaForce, Owen, & Holland, 2013; Tronik, 2003; Sroufe, & Waters, 1977).

Yet despite its significant amount of research support, the categorical divide between the fields of family science and sociology, psychology and psychiatry have at least in some part lead to the underuse of attachment theory in family and couple therapy.
I will focus much of the discussion of attachment theory being not just a childhood developmental theory or personality formation theory, but rather as a theory of socialization and development throughout the lifetime that influences different relational contexts and impacts relationship satisfaction in intimate partner dyads.

**Overview of Attachment Theory**

John Bowlby (1958) first proposed his theory of attachment following his career as a child psychiatrist in London during the 1930’s and 1940’s. Bowlby began studying the relationship between mothers and infants and documenting how these relational interactions affected both child and mother. At its core, attachment is a deep, enduring emotional bond that connects one person to another across time and space (Ainsworth, 1973; Bowlby, 1969). Even these early attachment writings, while focused on parent-child relationships made hint of attachment being a process that continues over the lifespan and could be applied to other forms of relationships including couples. Bowlby (1969) argued these attachment bonds are necessary for a child’s survival and inherently adaptive by nature. From an evolutionary point of view, a child’s proximity to safety, e.g. the nurture, care, and protection provided by the mother is directly related to a child’s chance of survival.

Bowlby differed from his predecessors Dollard & Miller, (1950) in which they described attachment as a purely behavioral process where an infant could become attached to an individual for their ability to provided food. Bowlby drew from other areas of research to challenge this behavioral theory of attachment, suggesting that attachment between mother and child has more to do than with survival through seeking food. In an
ethically controversial yet pivotal study, Harlow & Zimmermann (1958) tested this behavioral theory of attachment in rhesus monkeys. Monkeys were studied in isolation and with surrogate cloth mothers. The study found that monkeys in isolation did very poorly and many died. Those that had a cloth surrogate mother were more interested in staying in contact with her than seeking food, even at the risk of starvation. What Harlow and Zimmermann (1958) began to uncover was that “contact comfort” was more influential than food on behavior.

It was this work and through his own research, that Bowlby theorized about attachment and revolutionized his theory of human development. Bowlby’s attachment theory then was about the creation of accessible, responsive, and dependable bonds from mother (or later described as a primary attachment figure) to child. This is what Bowlby (1969) termed “a secure base”. He found that the creation of a secure base promoted resiliency in children and was instrumental in building healthy internal working models. His research also demonstrated that separation from a primary attachment figure is predictive of anxiety and anger (Bowlby, 1973) and loss of a primary attachment figure is predictive of sadness and depression (Bowlby, 1980). Thus, depicting the relational and socially interdependent causality of psychological and psychosocial distress.

As a result of his work, the field of psychology began using attachment theory to understand human behavior, in particular child behavior. This brought an introduction to “attachment styles,” which are characterized as secure, insecure anxious/ambivalent, insecure avoidant, and disorganized (Ainsworth, 1970; Ainsworth, Blehar, Waters, & Wall, 1978, Main & Solomon, 1990). The ABC-D model of attachment became a descriptive, categorical way to explain human behavior. During times of distress, as
evidenced by the several “Strange Situation” research studies (e.g. Ainsworth, 1970; Ainsworth et al. 1978; Main & Solomon 1990) babies engage in various strategies such as crying in an attempt to regain the mother’s attention. Research progressed in this area with Still Face Experiments. Tronick (1978) demonstrated the connection between parental emotional attunement and child emotional regulation. In effect, when parents are unresponsive and unavailable children can become disregulated in their behavior and employ different strategies to get the mother to attune to the child’s needs. For example, children may cry, or point, scream, and ultimately shut down or avoid, each in an attempt to get their needs met and influence parental attunement. There is evidence that when children experience disregulated emotion in early childhood, they maintain these patterns of social interaction throughout the life course (Bartholomew & Perlman, 1994; Feeney & Noller, 1996; Fraley, 2002). Further development of attachment theory lead to the application of its principles in the conceptualization and understanding of relationship distress.

**Attachment in Adult Intimate Partner Relationships**

While Bowlby’s work and his successor, Mary Ainsworth (e.g. Ainsworth & Bell, 1970) helped to identify the role of attachment on parent-child bonds, interest mounted in the sphere of attachment and adult relationships. Despite Bowlby’s work having some predictability for adult interactive styles based on his or her early childhood attachments, questions remained about the role of attachment in adult love relationships.

The key contributors to the development of attachment theory including Jon Bowlby, Mary Ainsworth, Mary Main, and Patricia Crittenden, all wrote about key
effects of attachment security on adult relationships. However, early attachment theoretical writings only made suggestions of the link between early childhood attachment experiences and adult behavior. For example, if a child experienced his mother as unreliable this child would develop coping strategies to ensure his survival (Bowlby, 1969). These strategies may include avoidance or emotional withdrawal, essentially mimicking the early childhood response of avoidance when this child is reunited with his primary attachment figure (Ainsworth & Bell, 1970). This person’s behaviors are saying something to the effect of, “I cannot depend on you so therefore I cannot risk to invest in you emotionally.” While the founding figures of attachment theory were convinced early childhood experiences shaped adult behavior, they refrained from making the specific research link between childhood attachment and attachment in adult romantic relationships.

In a revolutionary study, Hazan & Shaver (1987) applied attachment theory to adult romantic relationships. Their research coupled with a surge of other studies (e.g. Feeny, 1998; Kobak & Hazan, 1991) demonstrated evidentiary support for the link between childhood attachment strategies and adult behavior in adult romantic relationships. Various domains of adult attachment have been identified and linked to retrospective reports by people reflecting on their early childhood attachment experiences. As such, secure attachment in partners has been linked to trust (Pistole, 1993), emotion regulation (Kobak & Hazan, 1991) and conflict resolution (Feeny, 1998), resulting in higher degrees of relationship satisfaction, overall relationship quality, and relationship stability (Kirkpatrick & Davis, 1994; Simpson, 1990).

Collins, Cooper, Albino & Allard (2002) examined two pathways linking
attachment style to relationship functioning. These two pathways are relationship skills and mate selection. In their longitudinal study of adult attachment, Collins et al. (2002) found that attachment variables could be differentiated across gender (e.g. attachment avoidance was more predictive of poor relationship quality in men than women); attachment avoidance, more so than attachment anxiety, resulted in partner negative attributions of relationship quality at the six-year follow-up; anxious-ambivalent attachment predictors were divided by gender.

These studies along with a growing body of literature in the area of attachment and relationship satisfaction continue to shape our understanding of adult romantic relationships and couple distress. This body of literature confirms what Bowlby (1958; 1969; 1979) originally hypothesized, that the attachment process is continual throughout the lifespan and is constantly being influenced by new relational experiences. Strategies developed in early childhood to cope with distress and reach for attachment figures may in fact be carried over by an individual into their adult relationships (Ammaniti, Van Ijzendoorn, Speranza, & Tambelli, 2000; Dinero et al., 2011; Mikulincer & Shaver, 2007; Sbarra & Hazan, 2008). However, changes in environmental contributions may cause changes in adaptive strategies. This was a consideration Bowlby was intimately aware of. As a person continues to move through the life span, their internal working model of self and others might be altered by the ongoing nature of new relationship interaction. In line with this understanding, many contemporary theorists of attachment and practitioners of attachment oriented models consider attachment as a “state” or position a person holds under duress versus a “trait,” or something inherent to the individual’s personality. This notion of attachment as a process through the lifespan which is influenced by different
relational contexts is applied to the current study. Attachment security measured by ECR-R scores for each individual partner reflect a person’s felt sense of security in their current relationship and the DAS scores for each partner are used to measure satisfaction. Aim 1 of this dissertation is supported by applying the described theory of attachment as affecting relationship satisfaction. As such, one would predict that an increase in attachment security would influence a rise in satisfaction.

**Attachment and Couple Bonding**

Attachment theory is also used to understand the formation, maintenance, and dissolution of intimate partner bonds. Feeney and Monin (2008) discuss the importance of using attachment theory to understand failed intimate partner bonds resulting in dissolution and divorce. They report the bond produced and maintained in couple relationships create persistent, deep emotional ties that partners try desperately to hold on to and prevent disruption of these ties. When couple bonding is secure and challenges to the bond are avoided, partners have a foundation to maintain emotional and physical well-being, develop positive working models of the self and others, engage in exploration with the security of a safe haven, and have access to a dependable other (Bowlby, 1980; Dinero, et al., 2011).

The central propositions of Adult Attachment Theory (Fraley & Shaver, 2000) are:

1. The emotional and behavioral dynamics of infant-caregiver relationships and adult romantic relationships are governed by the same biological systems.
2. The kinds of individual differences observed in infant-caregiver relationships
are similar to the ones observed in romantic relationships.

3. Individual differences in adult attachment behavior are reflections of the expectations and beliefs people have formed about themselves and their close relationships on the basis of their attachment histories; these “working models” are relatively stable and, as such, may be reflections of early caregiving experiences.

4. Romantic love, as commonly conceived, involves the interplay of attachment, caregiving, and sex.

Adult attachment differs from childhood attachment in two key domains: attachment history or the experiences with other attachment figures and with sexual intimacy. Adult attachment involves the integration between the caregiving system, the sexual mating system, and experiences attributed to attachment history (Hazan & Shaver, 1987; Sbarra & Hazan, 2008). This integration of systems and the notion of historical experiences of bonding or attachment processes with more than one figure over time is what commonly differentiates child-caregiver attachment and romantic attachment between partners (Feeney & Monin, 2008; Hazan & Shaver, 1987; Sbarra & Hazan, 2008).

Attachment is a theory of adaptation. It can be viewed as a process largely consisting of self-protective strategies rather than a concrete outcome. Therefore, the behavioral and emotional symptoms that emerge are viewed as in some way functional to the dynamic of the dyadic relationships (Crittenden, 2006). Practitioners of attachment-informed models suggest therapeutic work can first focus on reflecting on the conditions of previous attachment relationships and linking emotional and behavioral responses to
underlying fears (Crittenden, 2006, Johnson 2004). Next, a new secure and responsive relational environment is constructed to support a contradictory and reparative experience allowing for an individual to shift their emotional responses to one that is more consistent with the current context rather than relying too heavily of past negative experience to inform their thinking and behavior (Crittenden, 2006). Feeney (2002) found that a partner’s attachment dimension or style predicted levels of relationship satisfaction. Furthermore, findings suggest that a partner’s perception of their spouse’s behavior is largely attributed to attachment style impacting relationship satisfaction. Feeney (2002) also found that people who fell along the more insecure dimension of attachment tended to be more reactive to their partner’s behavior. These studies help to define the link between attachment and relationship satisfaction. There is some empirical support to suggest that working with couples to improve attachment security through the development of a safe, responsive, and dependable relational environment may increase satisfaction and prevent relationship dissolution and divorce.

Furthermore, working to shift individual working models of self and other may help partners create a more flexible view of their partner and relationship context. Internal working models of attachment are cognitive-affective structures that when activated they play an important part in shaping how individuals make sense of social experiences (Collins, Guichard, Ford, & Feeney, 2004). Securely attached individuals tend to have positive working models self and other and higher degrees of optimism often resulting in more positive views of their relationships (Collings & Read, 1994). While positive working models tend to create a more optimistic and positive view of the self and others, individuals with along the insecure dimensions tend to experience a more
pessimistic view leaning toward more negative perceptions of the self often leading to more compromised emotion regulation strategies and are more prone to emotional distress (Collings & Read, 1994; Hazan & Shaver, 1987). Murphy and Bates (1997) found that individuals with more insecure attachment experienced lower self-esteem and depression than their securely attached counterparts. This evidence continues to point to the link between attachment and relationship satisfaction.

**Attachment as a Metaframework**

The research on attachment theory is extensive, growing, and has significant contributions to the field of family science and family therapy. Despite its empirical support, it rarely, if ever is cited in academic papers as a grand theory. Typically, researchers in social sciences have drawn from theories like symbolic interactionism, social exchange theory, family developmental theory etc. to explain their findings. If the mark of a good metaframework is its ability to explain the majority of the findings, then one should consider attachment as a grand theory. No theory can explain every aspect of all phenomena, and in fact theoretical breakdown at some point in the empirical process is important for scientific rigor and progression. While attachment may not explain the totality of human interaction, when explored deeply, it may reach the level of abstraction and meet the criteria to be considered a grand theoretical frame. Below I will use the criteria outlined by Boss et al. (1991) to demonstrate attachment theory as a theory to be considered among those widely accepted as grand theories.
Attachment theory consists of 10 major concepts that can be applied to human behavioral and emotional development across the lifespan. Johnson (2004) provides a concise list of the basic tenets of attachment theory that can be used to summarize the vast theoretical literature written by John Bowlby and his predecessors. The 10 basic tenets of attachment theory from Johnson (2004) are listed below:

1. Attachment is an innate motivating force.
2. Secure dependence complements autonomy.
3. Attachment offers an essential safe haven.
4. Attachment offers a secure base.
5. Emotional accessibility and responsiveness builds bonds.
6. Fear and uncertainty activate attachment needs.
7. The process of separation distress is predictable.
8. A finite number of insecure forms of engagement can be identified.
9. Attachment involves working models of self and other.
10. Isolation and loss are inherently traumatizing.

Therefore, human development is based on these major concepts. That is, emotional and behavioral development is based on varying responses to feelings of threat. It is assumed that from birth, people experience periods of threat and distress linked to innate need for survival. Attachment then is the process of interactional sequences that occurs between child and caregiver. However, not to be overlooked, attachment is also a dynamic model with ecological significance. Crittenden (2006) added to the development of attachment theory with the introduction of the Dynamic Maturational Model (DMM) of attachment. Her model consists of all of the original attachment themes with two important additions. First, the addition of maturation and life
course development and the second, the dynamic processes by which attachment styles can change with new relational interactions. Crittenden (2006; 2008) posits that attachment theory integrates environmental input, or in other words, can also be influenced by environmental surroundings. This concept is important in understanding attachment as more than a child developmental theory. The attachment process needs to be considered in couple relationships. The second concept added with the DMM model is dynamic processing. It is hypothesized that attachment relationships and styles of interaction can change overtime and across different relationships. This argument differs from those proposed by Fraley (2002) and others who discuss attachment as traits rather than styles of coping with perceived threat.

Relations Between Concepts

In theory building, relations between concepts describe the interdependence of ideas. One concept is dependent on the preceding statement and relates to the concept that follows. In attachment theory, there is a clear interlocking of concepts. For example, if a child has secure attachment to parental caregivers, he/she will have a positive working model of self and other, build a healthy notion of trust, and experience emotional regulation. If a child has insecure attachment from birth (anxious-ambivalent or anxious avoidant) he or she will mature to have a more anxious or avoidant personality (Connors, 2011). There is an interactional dependence between parental caregiver and child. Furthermore, the theory states that these interaction styles are recreated in adult relationships and mimic the styles developed in early childhood (Connors, 2011).
Propositions

Propositions link one concept in a meaningful way to another concept (White et al., 2015). There are several that could be discussed with attachment theory so I will demonstrate this meaningful connection with a few examples. First, attachment theory proposes the relationship between caregiver and parent will determine child outcome. If a mother is responsive to a child’s emotional need, the child will develop a secure attachment style. On the other hand, if a mother is avoidant, the child will learn to shut off his/her attempts to get the mother to respond and therefore suppressing their emotional need. From an emotional adaptation perspective, the child cannot stay in a level of distress for a long period of time and must act in ways to ensure survival. By shutting down or avoiding contact with the mother, the child has guarded against the pain he/she feels when the mother is unresponsive to emotional needs. The same set of propositions are applied to couple relationships in Emotionally Focused Therapy (EFT; Johnson & Greenberg 1987, Johnson 2004). Partners interact in specific ways with one another that reflects attachment significance. That is, safe emotional security that is created through open, responsive, and accessible partner actions. A propositional example with couples is as follows. Couples who create safe emotional attunement have stronger relational bonds. Couples in which emotional safety is low experience more reactive emotional processing and more insecure couple attachment.

Relations between Propositions

The above example works to define the interrelatedness of propositions in attachment theory. Rudner (1966) describes theory as a “set of systematically related
propositions that are empirically testable” (p.10). In the case of attachment theory, systematically related propositions are child development depends on parent child attachment security, attachment styles are carried throughout the lifespan, styles can change with new or restorative interactions, and adult romantic relationships reflect attachment styles developed in childhood.

**Empirical Testability**

Propositions and interrelated concepts must be empirically testable to be considered as a theory. The concepts of attachment theory are testable and extensive empirical research has been conducted on various propositions posited by attachment theory. A large portion of this research has been discussed and examples were provided previously in this chapter. Some examples of empirical research on attachment theory, readers can be pointed to the following citations: (Bartholomew & Perlman, 1994; Feeney & Noller, 1996; George & Solomon, 1999; Hazan & Shaver, 1987, 1994; Main, Kaplan, & Cassidy, 1985; Pottharst, 1990; Simpson & Rholes, 1998; Sperling & Berman, 1994; van IJzendoorn, 1995).

In the case of the current study attachment theory will be empirically tested for its influence on relationship satisfaction. Attachment theory has enjoyed the development of several validated measures of attachment including the Experiences in Close Relationships Scale (ECR; Brennan, Clark, & Shaver, 1998), ECR-R (Fraley, Waller, & Brennan, 2000) which will be used in this study, and the Adult Attachment Interview (AAI; George, Kaplan, & Main, 1985; Main, 2000). The development and validation of sound measurements of attachment allow for empirical testability of the theory and its
concepts and assumptions.

## Conclusion

Couple therapy is one of the most sought after mental and emotional health services in the United States. A growing number of couples are seeking conjoint couple therapy to address relationship distress, improve communication, and increase intimacy through strengthening couple bonds (Lebow, Chambers, Christensen, & Johnson 2012). Furthermore, couple therapy and the subsequent decrease in relational distress has been associated with a decrease in individual symptomogy including depression and anxiety (Chuick, et. al., 2009; Whisman, 2001, 2007). Despite the encouraging statistics of distressed couples seeking supportive therapy, there remains a staggeringly high rate of divorce in the U.S. Therefore, family researchers and model developers have continued to theorize and study how to effectively treat couple distress. Through this body of literature, attachment theory has emerged as a promising theoretical framework from which to view and treat couple discord.

Attachment theory originated as an explanation of etiology for child distress due to misattunement, separation, or loss of the primary caregiver. Extensive research presented attachment as a viable theoretical framework to understand couple relationships, namely, couple satisfaction and conversely, couple distress (Feeney, 2002; Feeney & Monin, 2008). Attachment theory can be applied as a metaframework as an empirically testable set of interdependent concepts and propositions for studies interested in understanding relationship satisfaction.

The current study uses attachment theory to conceptualize relationship
satisfaction. Couples with secure attachment are predicted to have higher levels of satisfaction compared to couples with insecure attachment. This study uses a more sophisticated data analysis approach than prior studies in the same vein allowing for a more sensitive view of the interaction between attachment security and relationship satisfaction. This study aims to make a significant contribution to the growing literature in the field. Results of the study will test the extent to which attachment theory offers as an efficacious treatment lens for couple discord. Given the widely clinical accepted application of attachment theory to couple therapy, it would be extremely useful to have longitudinal empirical support with a large sample of participants to validate a causal link between attachment security and relationship satisfaction. This study will fill this gap in the literature.
CHAPTER THREE
REVIEW OF THE LITERATURE

Introduction

Relationship satisfaction and minimizing relationship dissolution and divorce continues to be a primary topic of interest for both practicing clinicians and scientific inquiry. The high rates of divorce reported by Cherlin (2010) combined with individual mental and emotional health concerns correlated with couple distress and relationship break up suggest that more research is needed to understand and treat couple discord. Research on couple distress and dyadic satisfaction has found several attributions of successful or unsuccessful relationships (Fincham, Reis, & Rusbult, 2004). Some of the factors that impact relationship satisfaction are emotion (Hawkins, Carrere, & Gottman, 2002; Johnson, 2009), love (Berscheid, 2010), sexuality (Bodenmann, Ledermann, & Bradbury, 2007), hostility (Rogge, et al., 2006), conflict (Bradbury, Rogge, Lawrence, 2001), forgiveness (Fincham & Beach, 2003), neuro-science (Cozolino, 2014; Fisbane, 2007; 2013), relational exchanges (Klein, Izquierdo, & Bradbury, 2007) gender and power (Jackson, Miller, Oka, & Henry, 2014; Knudson-Martin & Huenegardt, 2010, ), and attachment (Johnson, 2013; Whiffen, 2003).

The focus of this dissertation is on the link between attachment and relationship satisfaction. Furthermore, the current study looks to address the gap in the literature by determining the causal and recursive relationship between these two constructs. Current research on attachment security and relationship satisfaction fails to support a cause and effect dynamic between the two. This review of the literature will first present the current state of the research on attachment and relationship satisfaction, highlighting the need to
understand the causal and recursive relationship. Second, this review will address current ideas about measuring attachment and relationship satisfaction. Finally, there will be a brief review of the Military population with regard to relationship satisfaction and potential limitations in the generalizability of results to other populations.

**Attachment and Relationship Satisfaction**

Attachment theory has emerged as a leading framework from which to understand interactional dynamics in intimate partner relationships (Hazan & Shaver, 1994; Mikulincer & Shaver, 2003). Moreover, attachment theory itself has enjoyed considerable empirical inquiry since Bowlby’s initial propositions in 1958. Following decades of research on attachment in developmental psychology and personality construction, attachment began to be considered as a relevant underpinning to adult romantic relationships. Hazan and Shaver (1987) initiated what would become nearly three decades of research on attachment theory and intimate partner relationship functioning.

**Individual Differences in Attachment**

The quality of relational interactions with key attachment figures contributes to the development of individual differences in attachment styles as well as differences in internal working models. These differences are believed to be largely shaped during early childhood development and tend to hold steady over the lifespan (Feeney & Noller, 1996; Fraley, 2002; Sadikaj, Moskowitz, & Zuroff, 2015). Internal working models are the constructed beliefs people hold about the self and others incorporating key relational dynamics such as perceived availability of others, responsiveness of others,
trustworthiness, and individual beliefs of worthiness. Internal working models also
describe the behavioral strategies individuals employ to manage significant attachment
interactions. For example, an internal working model of avoidance would indicate an
individual being protective over the self and avoiding closeness in relationships as a way
to manage the distress experienced by real or perceived unavailability and lack of
responsiveness from a key attachment figure.

Considerable research has examined the differences in two dimensions of
attachment insecurity: anxiety and avoidance (e.g. Bartholomew & Horowitz, 1991;
Brennan, Clark, & Shaver, 1998; Fraley & Waller, 1998). Attachment anxiety is
characterized by a high degree of fear about rejection or being abandoned coupled with
an intense desire for closeness, connection, and support (Davis, Shaver, & Vernon, 2003;
Mikulincer, Dolev, & Shaver, 2004; Rowe & Carnelley, 2003). High attachment anxiety
has been correlated with several factors associated with low relationship satisfaction and
relationship stability such as “too controlling” and “hard to be sociable” as measured by
the Inventory of Interpersonal Problems (Bartholomew & Horowitz, 1991). Feeney
(1994) supports this finding suggesting that anxiously attached individuals tend to have
more difficult and reactive patterns of communication remaining more closed off to open
discussion than securely attached individuals. A bulk of research links attachment anxiety
in female partners with a decrease in relationship satisfaction in men while attachment
avoidance in men tends to be associated with a decrease in relationship satisfaction in
women (Collins & Read, 1990; Kirkpatrick & Davis, 1994; Simpson; 1990).

Attachment avoidance has also been associated with a decrease in relationship
satisfaction. Attachment avoidance can be described as persistent uneasiness with
closeness, intimacy, and interdependence. Furthermore, attachment avoidance is marked by an unwillingness to trust others (Cassidy, Shaver, Mikulincer, & Lavy, 2009; Fraley & Shaver, 1997, Mikulincer, Florian, Cowan, & Cowan, 2002). Individuals with high degrees of attachment avoidance tend to have more difficulty responding to others, particularly around responding to their partner’s needs (Feeney, 1996; Mikulincer & Selinger, 2001). This strategy for relationship management can lead to distress and couple discord. Looking at the findings from both attachment anxiety and attachment avoidance one may conclude there is a systemic interactional effect between two partners with these dimensions of attachment security. Said differently, people with higher attachment avoidance may in fact be more likely to select partners higher on attachment anxiety, yet the interaction of these two opposing attachment structures may lead to an increase in couple distress. A smaller body of literature on attachment significance in mate selection captures a glimpse into this dynamic. For example, Chappell and Davis (1998) found that individuals reported less negative emotions and more positive feelings when considering a relationship with a securely attached partner regardless of their own attachment style. Frazier, Byer, Fischer, Wright, and DeBored (1996) replicated similar findings suggesting that securely attached partners were preferred to insecurely attached ones.

While attachment insecurity (anxiety and avoidance) have been correlated with lower relationship satisfaction, attachment security has been correlated with an increase in satisfaction. Much of the research has compared attachment security to attachment insecurity and therefore encompasses a vast amount of literature. Bowlby (1973) posited attachment security is created by interactions with key attachment figures who are
available and responsive during times of stress. Furthermore, he characterized secure attachment as attuned support which is crucial in fostering a belief in dependability and reliability of others. These attributes of security in relationships hypothesized by Bowlby have been shown to be supported with empirical evidence.

People with higher levels attachment security tend to demonstrate emotional regulation, communication, and behavioral patterns that lead to higher relationship satisfaction and less relational distress (Mikulincer, Florian, Cowan, & Cowan, 2002). Individuals who have secure attachment styles tend to be less reactive to stressful events than people who fall more along the anxiety and avoidant dimensions (Feeney & Kirkpatrick, 1996; Mikulincer, et al., 2002). Fraley and Shaver (1998) found that securely attached partners were also more likely to engage in support-seeking behaviors than their insecurely attached counterparts. There is evidence to suggest that securely attached individuals are more prone to hold positive expectations and feelings of their relationships (Collins, 1996) and tend to hold more positive self-views or positive working models (Bartholomew & Horowitz, 1991; Mikulincer, 1998). Moreover, secure attachment in individuals leads to a safer sense of exploration and a tendency to be more open and responsive to their partner’s needs (Feeney, 1996; Mikulincer, 1997; Sroufe & Waters, 1977).

Attachment and Gender

Interestingly, research indicates that attachment insecurity, avoidance and anxiety, is evenly distributed across gender (Galinha, Oishi, Pereira, Wirtz & Esteves, 2013; Karantzas, Feeney, Goncalves, & McCabe, 2014; Bakermans-Kranenburg, & Van
Findings in these studies suggest that attachment is a universal process based on experience rather than a character of gender. However important trends have been uncovered. Among them, one of the most compelling trends suggest that differences in gender accounts for changes in relationship satisfaction such that attachment avoidance in men leads to a drop in female partner satisfaction and female attachment anxiety is associated with a decrease in male satisfaction (Collins & Read, 1990; Kirkpatrick & Davis, 1994; Simpson, 1990).

A small body of literature sits contrary to the findings of no difference in attachment across gender. In a longitudinal study, Collins, Cooper, Albino & Allard (2002) found that attachment variables could be differentiated across gender (e.g. attachment avoidance was more predictive of poor relationship quality in men than women); attachment avoidance, more so than attachment anxiety, resulted in a partner’s negative attributions of relationship quality at the six-year follow-up; anxious-ambivalent attachment predictors were also divided by gender resulting in more women than men holding this position. These results are suggestive of differences between gender across attachment styles, however, over-generalization of these differences and overemphasis of gender stereotypes with regard to attachment strategies may be unhelpful in understanding relationship satisfaction (Kirkpatrick & Davis, 1994).

Studies that have been conducted dyadically have supported this notion that attachment strategies are likely not explained entirely by behavior. For example, Karantz et al., (2014) found no differences in actor-effects based on gender challenging the idea that men and women are more different than similar in relationships. Kurdek (2005) revealed similar findings in which men and women tended to have no difference in their
appraisal and perception of couple interactions, social support, or marital satisfaction. However, empirical support does suggest significant cross-partner effects of gender. Both men and women tended to affect their partners in various ways. Karantzas et. al., (2014) found that women’s anxiety was reflected in men withholding support. Prior research has indicated that attachment anxiety tends to labor on relationships. Attachment anxiety manifesting as a constant need for approval (Karantzas, et al., 2014) for example, can lead to serious negative effects on romantic partnerships (Feeney, 2008). Collins and Read (1994) were in line with these findings reporting that attachment anxiety manifesting as a person being overly needy and dependent also negatively impacts relationships (Feeney, 2008). Finally, attachment avoidance in men and women affect relationship functioning. Attachment avoidance in men and women is linked to a decrease in a sense of overall trust. Karantzas, et al. (2014) found that avoidance in women impacted the way men experienced trust in the relationship and avoidance in men impacted trust and security in their female partners.

**Attachment Styles and Relationship Satisfaction**

Bowlby (1979) provided explicit language regarding his belief that individuals experiences with primary attachment figures during childhood will directly affect the individual’s strategy to create and maintain affectional bonds. Subsequent studies empirically tested Bowlby’s conceptual hypotheses. In order to parsimoniously discuss the findings of an array of research in this area I will first discuss common methods by which attachment is measured.
Adult Attachment Interview

The Adult Attachment Interview (AAI) emerged out of two overlapping and compounding areas of research conducted by John Bowlby and Mary Ainsworth. Bowlby (1969) created what most would consider the first formal measurement of attachment through direct observation of parent-child interactions. Building upon this research and raising the empirical status of attachment research, Ainsworth et. al (1978) developed the Strange Situation; an artificial and controllable scenario that allowed for direct observation of staged parent-child interactions. These interactions could be coded and subsequently attachment styles could be assigned to particular sets of child responses; e.g. anxious.

Building on this body of research, Main, Kaplan, and Cassidy (1985) sought to use Ainsworth’s findings and include Bowlby’s (1973) notion of working models. These models are views of self and other that develop working schemas of the individual’s internal sense of self and external views of their relational environment. The burgeoning body of literature ultimately gave rise to the Adult Attachment Interview (George, Kaplan, & Main, 1985; Main, 2000), which remains one of the most widely used and researched measurements of attachment.

The AAI is a twenty-item narrative interview in which a discourse is created between the interviewer and interviewee. Items focus on areas such as early childhood experiences, relationship with one’s parent, emotional state as a child, trauma, and so forth. The interviewer responds with different target zones for the discussion based on participant responses. For example, if the interviewer suspects of childhood trauma when participants are asked the question “were your parents ever threatening to you in any
“...maybe for discipline or even jokingly?” the interviewer would ask further questions about frequency, age of occurrence, who the perpetrator was etc. (George, Kaplan, & Main, 1985). Based on participant responses to the AAI, the interviewer would determine the participant’s stance (including thoughts, feelings, and behaviors) in relationships. Narrative assessment includes several limitations that need to be addressed.

Narrative analysis and discourse analysis (Burman & Parker, 1993) follow the narrative approach put forth by White & Epston (1990) in which people are encouraged to share their individual story, lessening the chance of social desirability in their responses. Main (1996) also noted that by using discourse analysis and researcher coding, the AAI would more accurately reflect attachment experiences without the same potential for social desirability responses common to self-report questionnaires. While narrative analysis of attachment through the AAI does allow the research to track the implicit nature of attachment through the stories people share about the past relational lives, there are key limitations to the AAI (Isaacson, 2015). First, the AAI requires extensive training. Due to the limitation of researcher bias in coding, coupled with the en vivo coding natural to the AAI, researchers and clinicians are required to be trained in the instrument before using it. Not only is the training time consuming it is also very expensive making it unlikely that clinicians outside of specific settings would be able to use it.

Additionally, the AAI may have a problem with inter-rater reliability. Discourse analysis is subject to the interviewer questions, responses, follow-up questions, directives, and choice points (Daly, 2007). Therefore, two different interviewers could get different responses or code participant responses differently, resulting in different
characterizations in the ABC-D model of Attachment. As a brief note as there is not space in this paper to discuss the full ABC-D model of attachment in depth, the ABC-D model is the basic idea about dimensions of personality and attachment style. “A” being securely attached, “B” being anxious, “C” being avoidant, and “D” being disorganized (Ainsworth & Bell, 1970; Ainsworth, Blehar, Waters, & Wall, 1978; Main & Solomon, 1990).

While the AAI is still considered to be one of the premiere measures of attachment, it has key limitations that prevent it from being a viable option for use in clinical practice. The level of training and cost make it unattractive for many clinicians. Secondly, it is taken only one time through a narrative analysis at which point a person is characterized along the ABC-D dimensions. This linear, static characterization is precisely what Oka and Whiting (2013) point to as the incongruence between systemic, relational, and contextual conceptualizations and linear measurement instruments. This deterministic view places individual outside of their relational context making the instrument far less useful to clinical practice in which the majority of MFTs would consider second order or systemic change a key principle.

The Experiences in Close Relationships Scale (ECR)

While the AAI attunes to the implicit nature of attachment, the Experiences in Close Relationships (ECR) scale is more attentive to the self-report nature of attachment. In response to the limitations of the AAI and its tendency to reflect typology of attachment rather than a dimensional approach, Brennan, Clark, & Shaver (1998) developed the Experiences in Close Relationships (ECR) scale. The ECR emerged out of
a prototype measure developed by Hazan and Shaver (1990), which was concerned with measuring attachment processes in partner relationships. Brennan, Clark, and Shaver (1998) conducted a large-scale factor analysis that included much of the self-report attachment items available across instruments being utilized at that time. After a cluster analysis, the original 323 items were reduced to two 18-item scales, which more accurately reflected the two dimensions of anxiety and avoidance; the two components that comprise insecure attachment (Brennan, Clark, & Shaver, 1998; Isaacson, 2015). These authors along with Fraley and Waller (1998) continued to argue the advantages of viewing attachment through a dimensional approach rather than applying the concept of typology. They argued that the dimensional measurement would allow for better understanding of the current relationship context and provide for better opportunities to deepen empirical study and engage in attachment-informed clinical practice.

Fraley, Waller, and Brennan (2000) further refined the ECR using item response theory to shave down the original 323 items to a 36-item scale, naming it the Experiences in Close Relationships—Revised scale. The ECR-R includes two categories of questions, 18-items for both the anxious and avoidant dimensions. The ECR-R has undergone rigorous testing and has been determined to have high psychometric properties with strong construct and predictive validity (Sibley, Fischer, & Liu, 2005). The measure has also been standardized in different languages and used worldwide (e.g. Selçuk, Günaydin, Sümer, & Uysal, 2005).

While the ECR-R is psychometrically sound, it does contain a few limitations. First, like all self-report measures, there is an inherent risk for biased responses based on principles of social desirability (Brennan, Clark, & Shaver, 1998). Secondly the ECR-R,
while attending to the current relationship more so than the AAI, still is taken by one individual and therefore risks discounting systemic process in the couple relationship dynamic. Sbarra and Hazan (2008) argue that in order to robustly assess attachment, measures need to address both the implicit nature and self-report factors of attachment. Neither the AAI nor ECR-R measures both of these domains adequately at the same time. The AAI privileges the implicit aspect of attachment while the ECR-R focus on the self-report aspect. With these limitations in mind, there is space for a new measure of attachment to be created that addresses both the implicit and self-report aspects of attachment and be conducted and scored systemically to remain consistent with dyadic conceptualizations.

*Empirical Support Using the Narrative Response Coding and Self-Report Measures*

A significant body of research has focused on the link between global attachment (attachment dimension formed in childhood interactions with primary attachment figure) and relationship satisfaction. For example, Davila, Bradbury, & Fincham (1998) used structural equation modeling (SEM) to examine the effects of negative affect on relationship satisfaction. Results partially support attachment as a key factor to relationship satisfaction. Of note, findings of their study supported a difference in attachment significance based on gender. For the wives in the study, comfort with closeness was indirectly associated with marital satisfaction while anxiety about abandonment was directly associated with marital satisfaction. Marital satisfaction for husbands were both directly and indirectly associated with anxiety about abandonment, however comfort with closeness had only a marginally significant direct pathway to
satisfaction (Davila, et al., 1998). Additionally, this study found that adult attachment and negative affect are independent constructs, however do overlap suggesting a key mediational relationship. Lastly, an important finding of Davila et al. (1998) suggests that cross-spouse associations between adult attachment and relationship satisfaction and should be included in future model building.

Also suggestive of cross-partner effects, Feeney (1994) found communication style during conflict impacts relationship satisfaction. Perhaps it is the meaning and perception between partners that is contributing to fluctuations in marital adjustment. Cobb, Davila, and Bradbury (2001) determined significant effects on relationship satisfaction as a result of perceived supportive behavior. Attachment style or global attachment accounted for differences in perception where insecurely attached partners tended to have more negative perceptions of partner supportive behavior. Feeney and Hohaus (2001) contributed similar findings pointing out that more anxious partners exhibited hostility and controlling behaviors when in a position of providing support and care to their partner during a time of need. Feeney (2008) goes on to suggest attachment anxiety rather than attachment avoidance has a more pervasive impact on intimate partner dynamics and may therefore have a stronger effect on relationship satisfaction. Global attachment has also been shown to affect relationship satisfaction through mediational effect including beliefs about trust and perceptions of interpersonal trust (Givertz, Woszidlo, Segrin, & Knutson, 2013).

**Empirical Support for Felt Security and Relationship Satisfaction**

Perhaps the most interesting thread of research with regard to clinical practice and
treatment couple distress comes from the literature surrounding the influence of felt security on relationship satisfaction. Drawing on the propositions that attachment strategies may change in new relational contexts or with different relational partners, this area of research may be the most applicable to clinical practice suggesting helping couples to increase a felt sense of security may soothe distress and promote relationship satisfaction. Felt security is defined as a person’s beliefs that their partner will be available and responsive to their needs (Hazan & Shaver, 1994; Mikulincer & Shaver, 2007). In a study of 64 undergraduates, Carnelley and Rowe (2007) used an experimental design to test the effect of attachment security priming on participant reports of felt security. Findings support the notion that continually to verbally prime partners for a felt sense of security increase reports of positive feelings toward the relationship and their partner despite a partner’s global attachment style. These results confirm prior findings by Rowe and Carnelley (2003) which also suggest semantic priming for individuals to experience and tune into a “secure base” helps create a more open and responsive environment for communicating. Combined, these studies provide insight into potentially key areas for intervention in couple therapy and suggest valuable supportive change mechanisms such verbal priming to promote felt security in intimate partner relationships.

Further research in this area suggests that situational cues including positive supportive behavior form one’s partner can active more positive relational interactions and foster a felt sense of security even in individuals with an insecure attachment style (Baldwin & Fehr, 1995; Holmes & Murray, 2007). Several studies have supported the notion that inducing a felt sense of security in people with more insecure forms of
attachment has significant relationship benefits which are more commonly seen in individuals with a secure style of attachment including decreases in anxiety over abandonment, instilling trust, and perceptions of availability and responsiveness (Murray, Rose, Bellavia, Holmes, & Kusche, 2002; Murray, Rose, Holmes, Derrick, Podchaski, Bellavia & Griffin, 2005). Findings in this branch of the literature suggest hope for clinicians working with couples to improve intimacy and increase relationship satisfaction. However, studies in this vein of literature acknowledge limitations in the findings, specifically with regard to the body of research positioning global attachment as an automatic force (e.g. Mikulincer & Shaver, 2003) which therefore may mean positive changes experienced in relationship dynamics as a result of relationship priming could be lessened or voided altogether in the absence of consistent priming.

**Gender and Relationship Satisfaction**

Relationship satisfaction is split when examined across gender (Jackson, Miller, Oka & Henry, 2014). This large scale meta-analysis found that women tend to report lower marital satisfaction and more likely to report relationship problems, initiate therapy, and file for divorce, (Jackson et al., 2014). It has been argued that marriage benefits men more than women given power discrepancies often seen between partners in heterosexual relationships (Bernard, 1972; DeMaris, 2007). In close relationships, women are more likely to tend to their relationships than men, placing relational responsibility on women (Knudson-Martin & Mahoney, 2009). An example of empirical findings in line with this argument can be seen in the literature surrounding sexuality and relationship satisfaction. In a longitudinal dyadic study of 113 heterosexual couples,
Fallis, Rehman, Woody, and Purdon (2016) found that sexual satisfaction for men directly affected his relationship satisfaction, while women’s relationship satisfaction was influenced by her male partner’s level of satisfaction but not related to her own sexual satisfaction. These findings are consistent with those previous uncovered by Byers (2005) and Sprecher (2002) indicating sexual satisfaction is more important to men and that women tend to desire sex more so when they feel close to their male partner.

The meta-analysis from Jackson et. al. (2014) found that overall the difference between men and women on marital satisfaction was small with an effect size of 0.04. In other words, women were only 7% less likely than men to be satisfied in their marriages (Jackson, et al., 2014). Moreover, the study concluded that over time, men and women tend to report the same level of relationship satisfaction. The studies which included dyadic data examined by Jackson et al., (2014) determined there was no significant difference in relationship satisfaction between men and women who were married to each other suggesting there may be other moderating variables that alter satisfaction by gender.

The split in findings therefore suggests the need to deeply consider methodology used to determine relationship satisfaction. Studies using non-linked data and aggregated scores more so tend to find no difference in relationship satisfaction for men and women. However, studies that use dyadic data and dyadic analysis such as Actor-Partner Interdependence Modeling (APIM) lean toward the finding that relationship satisfaction follows a different trend. In studies using dyadic analysis, direct effects (actor effects) for men influence his level of satisfaction (e.g. Fallis, et. al., 2016; Steenbergen, Kluwer, & Karney, 2014). Furthermore, dyadic studies tend to find cross-partner effects from men to
women’s satisfaction but women’s cross-partner effects do not seem to impact male satisfaction. For example, Steenbergen et. al., (2014) found that when men experienced gains from work (work-family enrichment) they felt an increase in relationship satisfaction. In turn, this elevation in men’s satisfaction resulted in an increase in their wives’ marital satisfaction. Conversely, when they experienced work-family conflict there was a decrease in their marital satisfaction. Results of the study found no indication that women’s work gains (work-family enrichment) affected their husband’s relationship satisfaction (Steenbergen et. al., 2014). In other words, women’s relationship satisfaction tends not to be due to their own input in resulting in direct effects (actor effects) but rather tends to covary with their male partner’s level of satisfaction.

**Research on Interdependent Models of Attachment and Relationship Satisfaction**

The research described in the preceding sections has helped build a platform for continued examination of the relationship between attachment and dyadic functioning. However, the body of literature previously covered in this chapter is largely comprised of either cross-sectional data or studies using individuals as the unit of analysis rather than the dyad. Therefore, these studies have had significant limitations which have recently began to be discussed (e.g. Karantzas, Feeney, Goncalves, & McCabe, 2014). Rosebult, Arriaga, and Agnew (2001) challenged the results largely found in couple literature due to the theoretical perspective that intimate partner bonds are interdependent. Stated differently, dyadic partner relationships covary and cannot conceptually be treated independently from one another.
A second limitation described in the literature is that research needs to take into account both actor and partner effects outlines by Kenny, Kashy, and Cook (2006). Karantzas et al., (2014) also point out that the tendency to focus on individual data rather than dyadic data overlooks or worse, adds to confusion regarding gender differences in couple satisfaction research. By using methodologies that account for interdependence in couple dyads, findings can be more sensitive to gender differences across a host of variables and subsequently provide much more adequate transferability of results for clinical application.

In line with the methodology used in this dissertation, a review of the literature revealed two studies of significant importance in which Actor-Partner Interdependent Modeling (APIM; Kenny et al., 2006) was used. These two studies began to address the gap in the literature defined above, however given the extremely small amount of studies completed in this fashion compared to the wider base of independent data and cross-sectional studies which currently makes up the body of literature on attachment and relationship satisfaction, much more research is needed to better define the interaction of the two constructs in question. Furthermore, studies may need to be replicated in order to confirm or challenge historical findings.

Karantzas, Feeney, Goncalves, and McCabe (2014) conducted a cross-sectional study of 95 heterosexual couples aimed to help build a working model of attachment and relationship functioning. Researchers administered a battery of questionnaires including the Attachment-Style Questionnaire—Short Form (ASQ—SF; Karantzas, Feeney, & Wilkinson, 2010), the Caregiving Questionnaire (Kunce & Shaver, 1994), the Trust Scale (Remple, Holmes, & Zanna, 1985), and the short form Dyadic Adjustment Scale (DAS-7;
Sharpley & Cross, 1982) among others. Researchers hypothesized a model in which gender differences in dependent data and both actor and partner effects were accounted for. The model conceptualized mediational effects of trust, provisions of support, conflict management, and intimacy. Their model drew from previously discussed literature demonstrating multiple variables operate as mediators of attachment style and relationship satisfaction.

An APIM found several noteworthy results. In order to demonstrate the effectiveness of this style of research, only examples of the results are discussed. First, a review of actor effects determined that attachment anxiety not avoidance was negatively associated with partner provisions of support and attachment anxiety and attachment avoidance was negatively associated with trust for both male and female partners. Male satisfaction was associated with provisions of partner support and intimacy was associated with relationship satisfaction in both men and women. Partner effects revealed male avoidance had direct effects on female provision of support to their partner, while women’s attachment anxiety and avoidance had direct negative effects on men’s experience of trust and provision of partner support (Karantzas, et al., 2014). From these results, it should be abundantly clear the systemic nature of intimate partner dyads and the need for couple research to thoughtfully include the interdependence of couple bonding. Karantzas et al., (2014) acknowledge limitations of generalizability due to the cross-sectional nature of their design and suggest future research needs to be longitudinal. Second, the authors report a majority of the couples in the study reported fairly high levels of relationship satisfaction so it may be necessary to replicate this study in populations with higher reported levels of couple distress.
In a more recent study, Sadikaj, Moskowitz, and Zuroff (2015) attempted to answer the call for longitudinal studies using APIM to determine the effects of attachment security on relationship satisfaction. Sadikaj et al., (2015) examined 93 couples at two time points which were approximately seven months apart from each other. In their conceptual model Sadikaj et al., (2015) used felt security (described above) as a mediating variable between male and female global attachment and relationship satisfaction (measured at T1 and T2). Results of the study showed significant effects within individual (Actor Effects) and between partners (Partner Effects).

Some of the relevant findings of the study are as follows. The authors found that within partner, persons with higher attachment avoidance reported lower relationship satisfaction at time point one which was partially explained by his/her experience of low felt security with their partner. Women higher on attachment avoidance tended to again have lower relationship satisfaction from T1 to T2 could be accounted for in part by their experience of felt security. Partner effects revealed that male avoidance negatively affected female relationship satisfaction at T1 which was in part due to the mediation of felt security in both the male and female partners. Moreover, female felt security accounted for female attachment avoidance associated with male decline in relationship satisfaction between T1 and T2 (Sadikaj et al., 2015). The authors report their results demonstrate a significant relationship between global attachment and relationship satisfaction which passes through a partner’s felt sense of security in the relationship. Clinically speaking, these results seem to suggest that if we can increase felt security between partners, there will be a positive change in relationship satisfaction for both partners.
While Sadikaj et al., (2015) show promising results for the link between attachment and relationship satisfaction, significant limitations remain. First, the study had only two time points leaving room for future studies to use multiple time points allowing for more sensitive analysis and thorough results. Second, this study had a problem with attrition. Of the 135 couples who originally agreed to participate in the study, 93 actually participated at T1 and only 81 couples continued to participate at T2 potentially causing issues with internal validity. Third, authors suggest future studies may benefit from using larger samples or various samples of couples who are from different populations (e.g. Military couples). Replicating results in different populations will add to this small but growing body of literature using interdependent samples and dyadic analysis.

**Brief Review of Military Couples**

Maine relationships face both the traditional stressors found in civilian relationships including socioeconomic status, divorce of their parents, religious difference, education difference, etc. as well as Military specific stressors such as frequent geographical relocation, extended separations from their partner, challenges to emotional bonding after long absences, and constant threat of occupational hazard including severe injury and death (Burrell, Adams, Briley, Durand, & Castro, 2006; Lundquist, 2007). The combination of these factors attributing to stress in relationships is associated with significant instability of intimate partner relationships. Current research has found that young Marine enlistees tend to get married far younger and divorce more frequently than civilians (Gomulka, 2010; Cohn, Passel, Wang, & Livingston, 2011).
Lloyd et al. (2015) make note of this trend finding that in 2011, 30.6% of young Marines (ages 18-24) were married, while in comparison only 9.0% of civilian men and women in the U.S. were married of the same age range.

According to the United States Marine Corps (2012) the divorce rate among junior enlistees is a staggering 69%. Relationship distress combined with Military-specific stressors are associated with individual psychological well-being, suicidal behavior, substance abuse and dependence in both Marine and non-Marine spouses (Amato, 2010; Hyman, Ireland, Frost, & Cottrell, 2012; Palmer, 2012). Taken together, there is strong evidence to suggest that Marine couples experience a higher degree of stressors and are at higher risk for relationship distress, dissolution, and divorce than their civilian counterparts (Amato, 2010; Bakhurst, Loew, McGuire, Halford, & Markman, 2016; Hyman, Ireland, Frost, & Cottrell, 2012; Karney & Crown, 2007).

A key point to make about Marine relationships compared to civilian couples in with regard to divorce. Looking at the Military as a whole, the divorce rate, 2.8% in 2014, is nearly the same as the divorce rate in the general population, 3.2% in the same year (Center for Disease Control and Prevention, 2016; Office of the Deputy Assistant Secretary of Defense, 2015). Therefore, while the Military population presents limitations for generalizing results to other populations, these statistics suggest there may be more room for generalizing results around relationship distress than previously thought. However, when looking at young Marines E-5 and below, the divorce rate jumps astoundingly high to 64% (United States Marine Corp, 2016) making young Marines E-5 and below a sample from a different population.
A second key point to consider with the Military population is suicide. It is often believed that suicide in the Military is too often associated with combat exposure (Bush et. al., 2013). However, findings from both Bush et al., (2013) and Schoenbaum, et al., (2014) found that there was no difference in predictors for suicide in Marines with and without combat service. Additionally, no predictive reason for suicide was found (Bush et. al., 2013).

As a result, other factors contributing to suicidality were addressed. The failure of intimate partner relationships and an increasingly high divorce rate among young Marines is associated with suicidal behavior and accounts for a substantial portion of completed suicides in the Marine Corps (Department of Defense, 2015). Hyman, Ireland, Frost, & Cottrell (2012) and Gradus, Shipherd, Suvak, Giasson, & Miller, 2013) have suggested that young Marines, within their first enlistment at 18 to 27 years of age, are increasing risk for suicide, because of partner relationship problems. In this case, they suggest that relationship instability place the Marine at greater risk for committing suicide (Gradus, et al., 2013). In 2014, there were 269 completed suicides among Active Duty Military Personnel. Marines accounted for 17.9% of the suicides and 42.0% of those were due to failed intimate relationships within the 90 days prior to the suicide (Department of Defense, 2015). These findings suggest how crucially important it is to better understand and treat relationship distress in the Military.

The current study uses a sample for the young Marine population ages 18-24 to address the issue of relationship distress. Answering the call from Karantzas, et al., (2014) and Sadikaj et al., (2015), this study examines attachment and relationship satisfaction dyadically in couples with potentially higher rates of distress than the general
population. Furthermore, this study is a longitudinal design with multiple time points of data collection. Lastly, due to the culture of the Military and incentive for participation, attrition has been addressed.

**Conclusion**

There is considerable evidence demonstrating the link between attachment and relationship satisfaction. Studies have shown a relationship between global attachment and various elements of satisfaction including trust, support, communication style, conflict management, and intimacy. Furthermore, insecure attachment (anxiety and avoidance) have negative impacts on relationship satisfaction. Conversely, secure attachment tends to have positive impacts on factors of relationship satisfaction including perceptions of trust, emotion regulation, providing support, and emotional attunement. Couples with secure attachment are more likely to report higher degrees of satisfaction compared to couples with insecure attachment.

The current research also points to the systemic interaction of partner relationships which appears to also have a significant impact on relationship satisfaction. Both Karantzas, et al., (2014) and Sadikaj et al., (2015) point to the interdependence of intimate relational partners. Using dyadic analysis, these studies have begun to uncover the more complex interplay between attachment and relationship satisfaction. More specifically, there appears to be significant mediation effects between felt security between partners and relationship satisfaction. Both direct and indirect effects were found suggesting possible differences in gender as it relates to attachment and satisfaction. Dyadic studies in this line of research are minimal in number and additional studies using
large samples and longitudinal designs will make meaningful contributions to this growing body of literature. Furthermore, these studies may help to address the research-clinician gap often reported in empirical findings and subsequently help to define the potential benefits from increasing attachment security between partners as a focal point for couple therapy.

Finally, the Marine Corps presents a good opportunity to address limitations of previous studies in this area. The young Marine population experiences combined Military and non-Military relationship stressors resulting in extremely high divorce rates. Moreover, young Marines ages 18-27 experience high rates of suicide believed to be associated with relationship distress and dissolution. Therefore, the current study fits nicely by integrating the concerns from the two described bodies of research. Results of this study will make meaningful contribution to the literature around attachment in adult romantic relationships as well as addressing the key issue of relationship distress in the Military.
CHAPTER FOUR

METHOD

Research Design

This dissertation will follow the publishable paper format resulting in the submission of two separate papers for publication. The two papers will take the place of the results and discussion sections common to the dissertation process. By using this format, the findings of this study will be disseminated through the peer review process, providing support to clinicians working with couples in therapy as well as providing a valuable next step for researches interested in literature on attachment security and relationship satisfaction.

This study will use a longitudinal design with multiple variables and multiple time points of data collection to test the causal link between attachment and relationship satisfaction in Marine couples E-5 and below. The research questions that guide this study and subsequent analysis focus on two distinct aims which will each independently result in a publishable paper.

Aim I will test the causal and reciprocal relationship between attachment and relationship satisfaction by examining participant responses to the ECR-R and DAS. Additionally, the interdependence of the couple relationship is considered both conceptually and empirically. Responses from each partner in each couple are linked throughout data collection and analysis thereby accounting for covariance between partner responses as well as the potentially reciprocal nature of relationship satisfaction and attachment security. Aim I will evaluate the following research questions:

a) Does attachment predict relationship satisfaction?
b) Does relationship satisfaction predict attachment security?

c) Do attachment and relationship satisfaction differ between men and women?

d) Is attachment more significant in men or women in its ability to predict relationship satisfaction.

Aim II will address the need for more research to use dyadic analysis to better capture the complexity of interdependent relationships such as romantic partnerships. The second aim will be addressed with a critical literature review of one of the most empirically tested couple therapy models to date—Emotionally Focused Couple Therapy (EFT, Johnson 2004). In this review, EFT is used as a “case example” by first outlining the depth and breadth of research germane to EFT. Next, the review will use results of the current study to support the notion that EFT would continue to be strengthened by studies using dyadic methods. Moreover, the results of this dissertation fit with the core principle of EFT that attachment security affects relationship satisfaction. Results of the study may help to further define the importance of addressing attachment in couple therapy thereby addressing the validity of mechanisms of change research in EFT. Finally, the review will address both the clinical and research importance of dyadic analysis.

**Procedures**

The study conducted for this dissertation is one that is embedded in a larger study aimed to test a relationship education program called iRelate. Details of the larger study will be discussed throughout this section, however the primary focus will on the embedded study which is the focus of this dissertation.
Prior to the start of the larger study, the United States Marine Corps regulations and guidelines for maintaining ethical standards regarding the use of human participants in research were followed. In addition, approval for the study was obtained from the United States Marine Corps Institutional Review Board (DoDI # 3216.02; SECNAVINST 3900.16D; MCO 3900.18). Loma Linda University researchers are approved to conduct the study under the DOD IRB approval (led by P.I. Chaplain Paul S. Tremblay). Loma Linda University has been provided approval for secondary data analysis. The United States Marine Corps Institutional Review Board will oversee the chaplains’ and Marines’ participation within the study, as well as monitoring data collection producers ensuring data remains confidential.

The current study which is nested in the above defined larger study is secondary analysis of the collected data. The procedures for the larger study including United States Marine Corps IRB and Department of Defense (DOD) approvals and ethical guidelines regarding human participants are also adhered to in the nested study as this secondary data analysis falls under the procedures of the iRelate study.

**Design**

This larger iRelate study is a longitudinal design which tracks the Marine and their significant other as their relationship progresses through the three stages of the iRelate relationship education program. In the larger study, Marines enter the study prior to coupling (Stage I of data collection). In Stage II of data collection, both enlisted Marines and their partner provide responses to various measurement instruments. Therefore, the data used in the nested smaller study will pull data beginning at Stage II
when linked dyadic data first becomes available. For this study, the iRelate couple-based relationship education program is not being evaluated. Rather, the participant responses on the ECR-R and DAS will be collected at various time points (beginning in Stage II) and used in the analysis for this study. In general, the Marine will participate for over 36 months. Table 1 provides an overview of the various time point measures that will be administered to the Marine and their spouses.

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<th>Pre-Course</th>
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<th>6 months</th>
<th>9 months</th>
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<td>Control III</td>
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**Sample Design**

The sample for this study will be obtained from the larger iRelate study. Therefore, the number of participants will be determined by the response rate of the individuals participating in iRelate. Of note, the sample will be drawn beginning at Stage II of data collection as this is when couple data is first available. Additionally, the aim of this study to determine causal effects between attachment and relationship satisfaction requires that data from least four time points be collected. Data will be sorted to include only the couples in the sample who have data from four time points. At present, data collection shows there will be between 100 and 160 couples available to use in this study.
When using dyadic analysis, the sample must be comprised of distinguishable dyads (Kenny, Kashy, and Cook, 2006). Therefore, this study will use heterosexual couples with gender used to distinguish partners within a couple. This is chosen due to the aim of this study being focused on attachment and relationship satisfaction paying close attention to gender differences. Second, results of this study are intended to be generalizable to other populations outside the Military. Third, literature on gender and relationship satisfaction suggest there are both variations in satisfaction and predictive pathways to satisfaction that differ based on gender.

Marines and their partners will be recruited into the larger iRelate study by the unit chaplain. These chaplains have been approved by the USMC IRB to recruit participants and collect their informed consent. All Marines new to the unit must report to their unit chaplain as part of their checking in process. As the Marine checks in, the chaplain assesses the Marine’s relationship/marital status. If the new Marine fits the criteria for the study, he/she is provided information about the study. The larger study of iRelate consists of both treatment groups and control groups. For the Marines in the treatment groups, this will include a referral to Stage I of the iRelate program. When the Marine and their fiancé decide to marry they will be referred to Stage II of the iRelate program. After the wedding, the couple is referred to Stage III of the iRelate program. The participants in the control groups will be tracked using the same protocol as couples in the treatment group, however, the couple will be able to choose whether they would like to attend any relationship, premarital, and marital enrichment programs that are offered on or off of their Marine Corps base as long as it is not an iRelate course.
The timeframe of the larger study is dictated by the timing and progression of the relationship from dating to marriage. Given that these timeframes vary from one couple to the next, the exact timeframe of a couple’s participation in the study cannot be stated. However, based on the current Marine Corps data (see Cadigan, 2000; Gomulka, 2010; Karney & Crown, 2007), it is estimated that the entire process will take, on average, less than 36 months. Couples who provide data on ECR-R and DAS at all four time points will be included in the analysis in the nested study.

**Inclusion/Exclusion Criteria**

The criteria used for the larger study consists of a Marine that is: a) currently in the E-5 and below pay grade, b) has no less than 3 years left on their current contract, c) is currently in a committed relationship at the time of entering the study, but not engaged or married, d) is able to understand, speak, and read English. In addition to the program criteria, the following inclusion criteria is required for participation in the study: willingness to participate for the entire duration of the study including Stages I, II and III as well as post program measurements.

For the nested study, inclusion criteria consists of: a) participants are in a heterosexual relationship due to the need for distinguishability during data analysis and interpretation of results, b) both partners completed assessment instruments at all four time points beginning in Stage II of data collection.

In the larger study, a Marine may be excluded from the study if: a) the Marine has a pending administrative separation, b) the Marine is on the body composition program, c) the Marine has a pending legal case, or d) the Marine has pending Physical
Examination Board. Although the Marine may be excluded from the study, he or she is still given the opportunity to participate in the iRelate program should they desire to. In the current study, partners that are in non-distinguishable dyads (e.g. same-sex couples) are excluded from the study. Due to the nature of analysis (Actor-Partner Interdependence Modeling) data analysis would be compromised and predictive pathway results would become meaningless if partners are indistinguishable from one another. For example, results would not be able to say “male attachment security predicts female relationship satisfaction” unless Partner A and Partner B (male/female in this case) are descriptively distinguishable from one another. Couples will also be excluded from the nested study if they do not provide responses on the ECR-R and DAS at all four time points. This is due to the limitation to examine true causal effects from a longitudinal design with less than four time points.

**Consent Process**

The chaplains will recruit the Marines and partners of the Marines via a recruitment script employed at initial contact. They will also administer, collect, and secure the consent forms, and baseline surveys until the research assistants collect them at a later time. The chaplains that have volunteered to be part of the study will have each completed the USMC CITI training and all additional IRB trainings. The chaplains will be included in the IRB application as additional personnel that are certified to conduct the ICD process.

In the larger study, Marine participants in the treatment group will be consented prior to stage I. The Marines will be instructed to arrive at the training site 45 minutes prior to the start of the stage I course. A research assistant or chaplain will review the
consent form with the Marines and provide them with the time needed to ask questions prior to signing the consent form. Once the Marine has signed the consent form he or she will be given 30-minutes to complete the demographic form and baseline surveys. After the Marine has completed the consent form, demographic form, and baseline surveys, the chaplain will instruct the Marine to place the forms into an envelope that has been provided, seal this envelop, and sign their name on the sealed flap of the envelope. The Marine will then return the signed and sealed envelope to the research assistant or chaplain.

Non-Military partners that volunteer to participate in the study and are in the treatment group will be consented into the study at Stage II. Each will be informed of the study first through the Marine, as the Marine will be encouraged to have their partner participate in Stage II and III of the iRelate program and data collection. Prior to entering Stage II the chaplain or research assistant will meet with the partner individually to provide them with the information about the study as well as review the informed consent process. In this case, the research assistant or the chaplain will request that the partner arrive to the training site 45 minutes prior to the course. At this time, the chaplain or research assistant will review the informed consent document and answer any question the partner participant may have prior to signing the consent form. Upon signing the consent form the participant will be given 30 minutes to complete the demographic form and baseline surveys. After they have completed the consent form, demographic information form, and baseline surveys, the chaplain or research assistant will instruct them to place the forms into the provided manila envelope, seal the envelop, and sign their name on the sealed flap of the envelope. The partner will then return the signed and
sealed envelope to the chaplain or research assistant. The partner will be advised that he or she will receive subsequent follow-up surveys every three months online via a Qualtrics email link to their personal email address.

In the larger study, the Marine participants in the control group will meet with the chaplain or research assistant at a predetermined location and time. The chaplain or research assistant will review the consent form with the Marine and answer any questions he or she may have regarding the consent form. Once the Marine has signed the consent form he or she will be given adequate time to complete the demographic information form and baseline surveys. After the Marine has completed the consent form, demographic information form, and baseline surveys, the research assistant will instruct the Marine to place the forms into an envelope, seal the envelop, and sign their name on the sealed flap of the envelope, indicating that the research assistant has not assessed the Marine’s survey answers.

The partners that agree to participate in the study will meet with the chaplain or research assistant individually to provide them with information about the study. Chaplains working in the control group will offer standard marital awareness, pre-marital training courses that are offered on the various Marine Corps bases and are most commonly offered every two weeks. The partner will be advised of these courses and will be provided with the date, time, and designated location if they chose to attend a course with the Marine partner. Although it would be preferable if the couple attends these courses, it is not required of them. Should the couple decide to attend a course, the chaplain and/or the research assistant will request that the partner arrive to the training site 45 minutes prior to the course. At this time, the chaplain or the research assistant will
review the informed consent document with them and answer any questions he or she might have prior to signing the document. The partner will be given 30 minutes to complete the demographic information form and baseline surveys. After the partner has completed the consent form, demographic form, and baseline surveys, the chaplain or research assistant will instruct them to place the forms into a manila envelope that was provided, seal the envelope, and sign their name on the sealed flap of the envelope. The partner will then return the signed and sealed envelope to the chaplain or research assistant. The partner will be advised that he or she will receive subsequent follow-up surveys every three months online via a Qualtrics email link to their personal email address. The nested study adheres to all the same consenting procedures as it is secondary analysis of a portion of the data collected from the larger iRelate study.

Data Collection

In the larger study, after the initial informed consent process and pen and paper baseline survey measurements, the study will include post treatment measures as well as 3-month follow-up measures. The 3-month follow-up measures will be administered and collected via the Loma Linda University Qualtrics electronic survey database server. Once the Marine and their partner completes the survey it will be stored in the Qualtrics database server. This server is located on the Loma Linda University Campus. The data will be exported from Qualtrics into an SPSS dataset every 6 months. This SPSS dataset will be maintained only on the PI’s office computer and a thumb drive. Both storage devices will be password protected, encrypted and only the PI and the research assistant
will have access them. Once the data is exported, raw data on the Qualtrics server will be deleted.

If the chaplains are conducting the consent process and administering the paper baseline surveys, they will collect the sealed envelopes and place them in a lockbox which will be secured and remain in their office until the research assistance comes to collect them. The research assistants will collect the data from the chaplains every two weeks. If the research assistants are conducting the consent process, they will transport the data to the PI’s office. For the treatment and control groups that are located at Marine Corps Base Hawaii and Marine Corps Air Station Yuma the process will be the same with the exceptions that the chaplains will be the only individuals consenting, handling the data, and will be directly mailing the collected data to the PI’s office every two weeks.

For the nested study, data will be collected from the larger dataset created from the procedures above. Data collected in this study will be accessed from the PI’s protected file with his permission. Of note, the researcher conducting this nested study for his dissertation is named as a researcher on the IRB (DoDI # 3216.02; SECNAVINST 3900.16D; MCO 3900.18) and is permitted to access the data for analysis. As stated above, the data collected for this study will be a subsection of the larger study and include heterosexual couples who completed the ECR-R and the DAS at all four time points begging in Stage II of data collection. All other participants will be excluded from the sample. A second dataset with specifications for the nested study will be created in SPSS using the inclusion criteria described.
Data Tracking

The Marine and partner data will be linked throughout the study by using their eleven-digit Benefit Identification Number (BIN). The last two digits of the BIN will designate whether the participant is the Marine (XXXXXXXXX-00) or the partner (XXXXXXXXXX-01). For the online collection, the individual will be asked to input this number when filling out the online survey. The participants will be asked to write their BIN on the consent forms and the baseline survey packet. This study is not anonymous due to the need to track participants by their BIN. Instead, strict confidential and appropriate safeguards will be employed to ensure that the information is kept confidential and all identifying information will be destroyed once it is no longer needed. For the nested study, the same process of tracking will be employed but beginning only with couples from Stage II of collection as prior to this, Marines respond to questionnaires with only individual data.

Study Measures

The larger iRelate study contains several measures which can be found in the appendix. These measures include How to Succeed at Intimate Relationships (Stage I) Pre and Post Course Evaluation, Before Saying I Do (Stage II) Pre and Post Course Evaluation, How to Succeed at Intimate Relationships (Stage III) Pre and Post Course Evaluation, The Quality of Life Survey (QOLS), the Revised Dyadic Adjustment Scale (RDAS), the Positive and Negative Suicide Scale (PANSI), the Individual, Family, Community Resilience Profile (IFCR), the Revised Experiences in Close Relationships Scale (ECR-R), and the Perceived Stress Scale (PSS). For the current nested study, the
ECR-R and DAS will be used. This section will briefly discuss only these two measures and their psychometric properties as these are the instruments used in this study. The collection of demographic information will also be discussed.

**Demographic Information**

Participants will first be given a demographic sheet to fill out containing questions regarding the following: sex, age, ethnicity, religion, current military operational specialty, completed level of education, prior marriages and divorces, prior suicide attempts and hospitalizations, alcohol intake, current or prior personal or couples’ therapy, if they have obtained prior relationship or marital training, and the participants benefit identification number. These demographic factors will provide information about participants which could be potential influences over key variables such as relationship satisfaction. Each participants BIN is requested to link couples in data collection and dyadic analysis.

**Revised Experiences in Close Relationships Scale (ECR-R)**

The Experiences in Close Relationships revised scale (Fraley, Waller, & Brennan, 2000) is a 36-item self-report measure designed to test attachment styles throughout different relationships including those with mother, father, best friend, and romantic partner. The openness of the questions allows for the ECR-R to be used across a variety of interpersonal relationships and across different age categories. Fraley, Waller, and Brennan (2000) refined the ECR using item response theory to shave down the original 323 items in the ECR the now widely used 36-item scale. The ECR-R includes two
categories of questions, 18-items for both the anxious and avoidant dimensions. The ECR-R has undergone rigorous testing and has been determined to have high psychometric properties with strong construct and predictive validity (Sibley, Fischer, & Liu, 2005). The test-rest reliability coefficient of the two individual scales is approximately $\alpha = .94$ for romantic anxiety and $\alpha = .93$ for romantic avoidance (Fraley, Waller, & Brennan, 2000). The ECR-R takes approximately 10 minutes to complete. It is widely used and as a measure of attachment in romantic relationships and has been standardized in different languages and used worldwide (e.g. Selçuk, Günaydin, Sümer, & Uysal, 2005).

The current study will use the ECR-R to reflect an individual’s level of attachment insecurity in their present romantic relationship. The ECR-R is a measure of attachment insecurity reflected in two 18-item subscales; one measuring attachment anxiety and the other measuring attachment avoidance (Fraley, Waller, & Brennan, 2000). Therefore, low scores on each of these two subscales would suggest higher levels of attachment security while high scores on one subscale and low scores on the other reflects either attachment anxiety or avoidance depending on which scale is scored higher.

Research suggests the ECR-R is best used as a partner-specific or relationship-specific measure rather than a global measurement of attachment (e.g. Coy, Green, & Davis, 2012). In other words, the ECR-R depicts the level of insecurity (avoidance and anxiety) each partner has in their current relationship which may be contextually different in other relationships (e.g. parent-child). Given the nature of the current study, conceptualizing the ECR-R in this way is the most fitting when understanding attachment
security in intimate partner dyads within the Military.

A further examination of the literature suggests the ECR-R subscales (anxiety and avoidance) are meaningfully different and should not be collapsed into one macro-level scale of attachment insecurity (Coy, Green, & Davis, 2012). More specifically, the two dimensions of insecurity effectively present differently and lead to different behavioral and emotional response sets. For example, partners who score higher on the avoidance subscale would have different relational patterns than partners who score higher on the anxiety subscale. The current study uses gender to distinguish intimate partner dyads and therefore it is important to understand how attachment structures may differ between genders. In consideration of best practice application and scoring of the ECR-R, the subscales of avoidance and anxiety will not be collapsed together to get an aggregate score but rather evaluated separately to capture the meaningful difference between anxious and avoidant patterns of interaction in romantic partnerships.

**Revised Dyadic Adjustment Scale (RDAS)**

The Revised Dyadic Adjustment Scale (RDAS; Spanier & Thompson, 1982) is a trimmed down version of the original Dyadic Adjustment Scale (Spanier, 1976). The RDAS has 14 items compared to the 36 of the DAS. The RDAS was chosen due to its strong psychometric properties and because of its brevity as Marines and their partners in the larger study are taking a battery of assessments over multiple time points so the researchers were careful to avoid exhausting participants. The RDAS measures an individual’s level of relationship satisfaction by using Likert scale questions such as “How often do you and your partner quarrel?”, and “How often do you discuss, or have
you considered, divorce, separation, or terminating your relationship?” Aggregate or combine scores of individual responses are added together to represent relationship satisfaction. The range of internal consistency of the RDAS is $\alpha = .90$ (Busby, Christensen, Carne, & Larson, 1995). It takes approximately 15 minutes to complete.

**Data Storage**

Completed consent forms, demographic information forms, and paper baseline surveys are collected and stored by the chaplains in lockbox that has been provided to them. This box will remain safely locked in his/her office. Documents contained in the lockbox are collected every two weeks by research assistants and brought to the PI’s office at Loma Linda University. The completed consent forms and surveys that are collected from Marine Corps Base Hawaii and Marine Corps Air Station Yuma will be mailed directly to the PI every two weeks via certified United States Postal Services. The PI will maintain the consent forms, demographic forms, and paper baseline surveys in a locked file cabinet in his office. A member of the research team will then input the paper survey responses into the SPSS data set. Directly following this procedure, the paper survey will be destroyed.

This dataset for the entire study will be maintained only on the PI’s office computer and a thumb drive. Both storage devices will be password protected, encrypted and only the PI, IRB named individuals, and the research assistants will have access to the dataset. This dataset will contain the demographic and survey data for each participant (Marine and civilian partner). Finally, this dataset will also contain the individual and couple’s BIN but will not contain first or last names of participants or any
other identifying information. This dataset will be aggregated with the paper survey data at this time and this new aggregated dataset will be analyzed quarterly. At the end of the longitudinal study, all waves of data will be aggregated and analyzed. At this point the BIN will be removed and a random ID number will be inserted; there will be no identifying information within the dataset and there will be no way to link the participants to the study, other than the signed ICD.

For the nested study, the larger dataset will be used and a cleaned second dataset will be constructed and maintained in SPSS. This dataset will have linked couple data from responses on the ECR-R and DAS as well as demographic information which will be used to distinguish partners in the dyad. This secondary dataset will also be stored on the PI’s computer and thumb drive using the same procedures described above.

**Analytic Strategy**

**Aim I: Outcome Paper**

**Dyadic Analysis: Actor Partner Interdependence Model**

It could be argued that some of the most significant meaning in life is derived by our relationships. People spend their lifetime in various relational contexts ranging in proximity and importance. Examples of these relationships include family (both nuclear and distal), friends, coworkers, bosses, and perhaps most importantly, romantic partners. As research into these relationships continues to prevail in the field of marital and family therapy, research methodologies and analytic strategies have too evolved alongside. The evolution of analytic strategy has come to include dyadic analysis, and specific to this study Actor-Partner Interdependence Modeling (APIM; Kenny, Kashy, & Cook, 2006).
APIM and dyadic analysis more broadly, are sophisticated both in conceptualizing data and in analytic application by accounting for the interdependence or covariance between partners in dyadic relationships. Traditional family therapy research has been forced to violate multiple-collinearity due to the nature of influence in relationships. Said differently, prior to the introduction of dyadic analysis, researchers could not directly account for the influence between partners in a relational context and therefore results often required assumptions about findings and the interactional influence between partners.

The introduction of Dyadic Analysis and APIM addressed important concerns outlined in the literature. First, Oka and Whiting (2013) and Wittenborn, Dolbin-MacNab, and Keiley (2013) raised the concern that liner methods of analysis common to research in the Marital and Family Therapy (MFT) field were not congruent with systemic conceptualizations and treatment interventions with clinical cases. Second, it is commonly argued that linear or independent individual research when generalized to interdependent relationships creates a gap between researchers and clinicians and therefore often goes underutilized or misused in the clinical setting (Oka & Whiting, 2013; Wittenborn et al., 2013). Third, MFT researchers and practitioners are trained in systems theory and often demonstrate appreciation for the complexity of human relationships. As such, MFT researchers and clinicians often look at cases from multiple viewpoints which is a need APIM and dyadic analysis satisfies. Fourth, dyadic methods of research and APIM specifically, can provide a more in-depth examination of relationships and key of specific mechanisms of the relational process (Kenny, Kashy, & Cook, 2013; Oka & Whiting, 2013; Wittenborn et al., 2013).
Dyadic analysis can be used to obtain and analyze data both about the individual and about the relationship to carefully examine the functional process between interrelated partners. Wittenborn et al. (2013) suggest dyadic analysis is well-suited for concepts of interrelatedness including similarity, difference, as well as the complimentary and reciprocal nature of relationship interaction. Furthermore, dyadic analysis allows for an examination of within partner effects and between partner effect or cross-partner effects. In APIM these are referred to actor effects and partner effects respectively (Kenny, Kashy, & Cook, 2013). The current study, APIM will be used to address the non-independence of couple dyads in the sample.

APIM is a form of multilevel modeling which individuals are analyzed within the dyad. Non-independence is estimated by allowing error terms of both partner’s dependent variables to correlate or covary and secondarily by examining causal effects of one partner’s independent variable on their partner’s dependent variables (Sadikaj, Moskowitz, & Zuroff, 2015). APIM can also be used to examine variables as mediators or moderators from one partner’s variable to the other partner’s outcome variable (Sadikaj, Moskowitz, & Zuroff, 2015). For the current study, APIM will allow for the examination of changes in relationship satisfaction as a result of changes in attachment security. Moreover, APIM will detect the effect one partner’s independent variable (Attachment) on their partner’s outcome variable (level of relationship satisfaction). Additionally, due to the longitudinal design with four time points, both the causal nature of the relationship between attachment and satisfaction as well as the potentially reciprocal relationship between the two will be studied. The effects stratified across gender are also considered.
Despite the many advantages of APIM, the model does have limitations. One limitation cited by Kenny, Kashy, and Cook (2006) is that ignoring the non-independence results in a loss of degrees of freedom further resulting in biased standard errors, and increase in Type I and Type II errors, and biased variances. Second, if there are significant conceptual pathways that are left out of the model therapy ignoring the non-independence of the data, valuable interaction information is lost.

For this current study, after controlling for auto-regression within the actor effects and dyadic covariance, the hypothesis in is aim will be tested by using a cross-lagged Actor-Partner Interdependence Model (Kenny, Kashy, & Cook, 2006). This method is appropriate when theory dictates specific explanatory relationships (Raykov & Marcoulides, 2006) which is the case described in the literature review linking attachment to couple satisfaction stratified by gender. This method also permits the examination of multiple pathway effects of attachment and relationship satisfaction both within individual and between partners over time. EQS (Bentler, 2006) will be used to build the model and run analysis. First the full model with all pathways will be constructed. In the full model, specific attention will be paid to modeling of the ECR-R. The ECR-R subscales of avoidance and anxiety will each be separately regressed on to both genders, male and female. In addition, a third scale measuring the interaction of anxiety and attachment (anxiety x avoidance) will be regressed on to both genders. In modeling the ECR-R this way we can first examine both the effects of attachment avoidance and attachment anxiety separately on relationship satisfaction. Second, we can examine the effects of the interaction between attachment anxiety and attachment avoidance on relationship satisfaction. Third, the interaction effect (anxiety x avoidance)
when score on both scales are low, allows for the examination of secure attachment on relationship satisfaction. In the model, these three scales for attachment will be covaried to account for their interdependence.

Subsequent model structure will be determined by areas of misspecification of pathways by examining the absolute correlation residuals (which should be $r < .10$). Model fit will be determined using the tau equivalency test (e.g. chi-square change) and each model will be nested in the previous model beginning with the most freed model (all pathways), then a model with actor and partner effect, finally moving to the most constrained model (actor effects only). Goodness of fit will be determined by the RMSEA and CFI for each nested model. The models will be paired down removing misspecified pathways resulting in the most parsimonious model which includes significant effect pathways as well as pathways that must be included for accurate theoretical and conceptual representation.

As mentioned above, the process to clean the data will involve the following. First, the dataset from the larger iRelate study will be examined and participants who meet inclusion criteria and variables to be used in the nested study will be extracted to create a secondary dataset which will be used in this study. This dataset will be comprised of heterosexual couples (linked by their BIN) who responded to both the ECR-R and DAS beginning in Stage II and completed both questionnaires at all four time points. The data will be sorted by gender using dummy coding (Men = 0, Female = 1). Couples will remain linked in the dataset and throughout analysis using their BIN.

Prior to analysis, we will check univariate and multivariate assumptions to address normality of measurements, homoscedasticity, multiple collinearity of variables,
etc. Any violations of assumptions will be addressed prior to analysis. Missing data will be handled using FIMLE process in EQS to replace the missing data. We expect 10% of data to be missing, however missing data that reaches 20% will be deemed problematic and an alternative process will need to be considered.

The larger iRelate study from which this study’s sample is drawn consists of four different treatment conditions. The macro-level iRelate study consists of four treatment groups aimed at testing the effectiveness of the iRelate program in reducing marital distress and improving relational satisfaction. The four treatment conditions in the iRelate study are: 1) iRelate only 2) iRelate with Prepare and Enrich 3) iRelate with PREP 4) Control or treatment as usual (TAU) which in this case is any on-base or off-base relationship education and/or enrichment program that is not iRelate. A repeated measures ANOVA will be used to determine differences in effectiveness between treatment conditions. The current study is not measuring effectiveness of iRelate or any other treatment condition and is only concerned with the relationship between the variables of attachment and relationship satisfaction. However, it is useful to understand if the sample is indeed from a single population (no difference in treatment condition) or if there is a difference in treatment condition making the sample of different populations. If differences in treatment groups are found then the effect of treatment condition will be controlled for in the planned models. In the SEM models I will use 3 dummy coded variables (iRelate, iRelate+Prepare/Enrich and iRelate+PREP) to control for difference within all variables at all time points. This will effectively account for any invariance between treatment groups among the study variables.
Modeling Steps

Analytic strategy for the current study will adhere to the APIM cross-lagged process. First, the most freed model will be tested before regressing nested constrained models. During each phase constraints will be tested and determined to be tenable. If this is accomplished and the constrained model is determined to be fit, the next constrained model will be nested within the previous model and determined to be fit. If the constraint fails, it will be removed in favor of the preceding better fit model. The following sections will depict the model building process moving first from the most freed model which includes all pathways to the most constrained model (auto-regressed model).

Within-Actor and Cross-Partner Effects

The final model present in Figure 2 is the complete or most freed model with all pathways added to the model. This model will control for auto-regression and within-actor cross effects. The within-partner cross effects, cross-partner effects, and actor effects are estimated. Specifically, pathways are tested to see if male or female attachment (ECR-R) directly affects his or her partner’s relationship satisfaction (DAS) overtime. Additionally, pathways are tested to see if male or female relationship satisfaction (DAS) directly affects his or her partner’s attachment security (ECR-R) over time. A two-step process will be employed to test this model. First, the full model (least constrained) with all pathways is estimated. Next, the model will be constrained to cross partner effects to test the reciprocal nature between attachment and relationship satisfaction between male and female partners. After fitting this model, we will test within-actor cross effects and finally the auto-regressed model.
**Figure 2.** Full model: Within-Actor and Partner-Cross Effects.

**Within-Partner Cross Effects**

The second model is a nested model of within-partner cross effects and actor effects. This allows for a more detailed examination of true causal effects. The model depicted in Figure 3 will estimate the actor cross effects (within partner) between attachment and relationship satisfaction overtime. This model will determine if an individual’s attachment (ECR-R) predicts his or her own relationship satisfaction (DAS) over time. Additionally, the model will determine if an individual’s relationship satisfaction (DAS) predicts his or her own feelings toward attachment security (ECR-R) over time.
**Auto-Regression Model**

The most constrained model shows only direct pathways which represent within person or direct effects. Figure 4 accounts for the measurement error within an individual over time.
**Aim 2: Methodological Review Paper**

The second aim of this dissertation will produce a publishable paper. This paper will draw from the expressed need in the literature for Marital and Family Therapy to include more dyadic research (Oka & Whiting, 2013; Wittenborn, Dolbin-MacNab, & Keiley, 2013). Dyadic research is more congruent with systemic conceptualizations preferred by MFTs and better accounts for the inherent non-independence of relational dyads. Moreover, Oka and Whiting (2013) point out the well-defined research-clinician gap which contributes to the underutilization or misuse or research in clinical practice. Dyadic research methodologies address these concerns by allowing for more complex relational interactions to be tested empirically fitting better with practitioner experience in clinical practice.

This paper will draw from the Actor Partner Interdependence Modeling (APIM; Kenny, Kashy, & Cook, 2006) methodology used in this study making the case for APIM and Dyadic Analysis more broadly to be used in MFT theory research, model development, treatment effectiveness, and mechanisms of change research. While other, similar critiques exist in the literature regarding the lack of systemic quantitative methods, this paper will be unique in that it applies the critique to the vast body of EFT effectiveness research. This paper uses Emotionally Couple Therapy (EFT; Johnson 2004) as a case example to discuss the need for dyadic analysis to strengthen model efficacy and address mechanisms of change within the model.

Emotionally Focused Therapy (EFT) is an evidence based model with strong empirical support. Johnson, Hunsley, Greenberg, and Schindler (1999) conducted a meta-analysis of the four most rigorously tested studies of EFT finding that the model has a
large effect size, Cohen’s d of 1.3, and a 70-73% recovery rate for distressed couples. Johnson et al. (1999) found that 90% of couples reported higher degrees of satisfaction in their relationships after receiving EFT treatment and these results appear to be stable over time (Cloutier, Manion, Walker, & Johnson, 2002). EFT has been rigorously tested with diverse populations, a host of different presenting problems, and continues to be effective across these various treatment scenarios.

EFT is rooted in attachment theory (Bowlby, 1958; 1969) based on the underpinning assumption that attachment insecurity leads to relationship distress and conversely, improvements in attachment security results in higher relationship satisfaction. While EFT has, by comparison, more empirical support than any other systemic model of therapy, it lacks studies using dyadic analysis and more specifically APIM. This publishable paper will provide a critical literature review of the existing EFT literature making the case that EFT would be well served to continue its strong traditions of rigorous empirical testing by conducting studies using dyadic analysis. The case is made that dyadic analysis is more in line with systemic conceptualizations and research conducted in this way will provide more insight into the actual process of romantic partner interaction. For example, EFT would be able to conduct studies examining the true causal link between its model protocol of steps and stages and increasing attachment security resulting in an increase in relationship satisfaction. Additionally, research in this vein could determine if attachment security is more important to one partner versus another based on gender and determine how relational partners affect each other on various constructs over time.
This paper will be innovative in applying concepts of dyadic analysis to a specific case example offering the opportunity for future research to consider methods that accurately reflect non-independence of relational dyads. Second, this paper builds on the reviews by Oka and Whiting (2013) and Wittenborn, Dolbin-MacNab, and Keiley (2013) by applying concepts to the specific case example of EFT thus continuing to progress this area of research forward. In conclusion, this paper will provide important future steps and guideposts for the EFT and other attachment based research from a systemic lens.

**Conclusion**

This chapter presents the method of the current study and the two publishable papers that will be produced out of the dissertation aims. The current study is a smaller study embedded within a larger iRelate program efficacy study taking place in the Marine Corps. The study for this dissertation is a longitudinal design with four time points examining the link between attachment and relationship satisfaction in heterosexual couples. The study uses a cross-lagged actor partner interdependence model (APIM) to test the causal relationship between attachment and relationship satisfaction.

The two distinct aims of this dissertation will produce two separate publishable papers. The first paper is produced from Aim I which will be an outcome paper of the APIM study described. The second paper will be derived from Aim 2 which will use the case study example of EFT to apply concepts of dyadic research to an already empirically supported model to deepen the strength and depth of its research underpinnings. Future studies can use APIM to address key relationship interaction processes and develop key
interventions that can support the more nuanced and powerful interactions between partners in relational dyads.
CHAPTER FIVE

DYADIC RESEARCH IN COUPLE THERAPY:
EXAMINING THE LINK BETWEEN ATTACHMENT SECURITY AND
RELATIONSHIP SATISFACTION.

By

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Abstract

The effects of attachment on relationship satisfaction have historically been of significant interest for couple and family researchers. With the emergence of APIM (Kenny, Kashy, & Cook, 2006), studies have been able to look more closely at the relationship between these two constructs and gain deeper insights into important relationship dynamics within romantic partnerships. The current study adds to this body of literature by examining the effects of attachment and relationship satisfaction in the Military. In the first study of its kind, we examined the interaction between attachment and satisfaction in 78 heterosexual Marine couples in a cross-lagged auto-regression longitudinal design. Results of an APIM showed strong within-individual actor effects yet limited cross-partner effects. Trends in the data revealed women tended to affect their partner’s level of satisfaction but men did not affect female satisfaction or attachment until nine months. Results offer interesting insights into the role of attachment in relationship satisfaction as well as important considerations for young Military couples.
Introduction

Relationship distress is among the most common presenting issues for people seeking therapy services. More and more relational partners are seeking conjoint couple therapy to address relationship conflict, repair emotional injury, and increase intimacy (Lebow, Chambers, Christensen, & Johnson 2012). Although couples are presenting to therapy at increasing rates to heal relationship distress, the divorce rate in the United States continues to hover around fifty percent (Cherlin, 2010), suggesting more research is needed to better understand and treat relationship discord.

In an effort to address a multitude of individual and relational problems associated with relationship distress, researchers have conducted a vast array of outcome and process studies to better understand factors contributing to relationship distress as well as develop valid therapeutic interventions that improve couple satisfaction (see; Weibe & Johnson, 2016; Lebow, et al, 2012). As such, couple therapy ranks among the most frequently and diligently researched topics in Marriage and Family therapy (MFT). Intimate partner relationships are a key focal point for clinical intervention with substantial literature support and a continued interest for researchers and clinicians alike as we move into the latter part of this decade.

Empirical inquiry has begun to suggest that attachment theory is a crucial foundation to understanding relationship distress and increasing relationship satisfaction (Burgess Moser et al. 2015; Dalgleish 2015a, 2015b; Wiebe & Johnson, 2016). Secure attachment between intimate partners has been linked to an increase in trust (Pistole, 1993), healthy emotion regulation (Kobak & Hazan, 1991), and positive conflict resolution strategies (Feeny, 1998), resulting in higher overall relationship satisfaction,
quality, and stability (Kirkpatrick & Davis, 1994; Simpson, 1990). However, research on attachment as a foundational pillar to relationship satisfaction has been largely correlational and conceptual or measured at the univariate level. While studies in this vein have built a platform for couple therapy and have produced empirically supported interventions, there remains a significant need to understand the causal link between attachment and relationship satisfaction. The current study will address this gap in the literature by using a sophisticated Actor-Partner Interdependence Model (APIM; Kenny, Kashy, & Cook, 2006) cross-lagged design to examine the link between attachment and relationship satisfaction using data from linked dyads in the Marine Corps.

**Background**

The negative effects of divorce and relationship distress are well documented. The Center for Disease Control and Prevention (2011) site relationship distress as a leading cause of individual mental and emotional health concerns in the U.S. Moreover, major health concerns such as depression and anxiety are highly correlated with relationship distress, dissolution, and divorce (Chuick, et. al., 2009; Kessler et al., 1993; Pollack, 1998; Potts, Burnam, & Wells, 1991; Whisman, 2001, 2007). By the start of the twenty-first century research on intimate partner relationships moved into center focus with researchers becoming interested in factors that contribute to couple distress and conversely, factors that foster and maintain couple connection. Attachment Theory (Bowlby, 1958; 1969) has emerged as theoretical construct from which to examine and understand couple relationships (e.g. Mikulincer & Shaver, 2003).
Attachment and Relationship Satisfaction

Attachment Theory (Bowlby, 1958; 1969) has emerged as a leading framework from which to understand interactional dynamics in intimate partner relationships (Hazan & Shaver, 1994; Mikulincer & Shaver, 2003). It has been correlated with relationship satisfaction and is a preferred theoretical orientation of many clinicians working with couple dyads in therapy (see; Whiffen, 2003; Weibe, & Johnson, 2016). In a landmark study, Hazan & Shaver (1987) applied attachment theory to adult romantic relationships initiating what would become nearly three decades of research on attachment theory and intimate partner relationship functioning.

Research initially focused on the link between global attachment (attachment dimension formed in childhood interactions with primary attachment figure) and relationship satisfaction. For example, Davila, Bradbury, & Fincham (1998) used structural equation modeling (SEM) to examine the effects of negative affect on relationship satisfaction. Results partially support attachment as a key factor to relationship satisfaction. Preliminary findings supported a difference in attachment significance based on gender in which wives’ comfort with closeness was indirectly associated with marital satisfaction while anxiety about abandonment was directly associated with marital satisfaction. Marital satisfaction for husbands were both directly and indirectly associated with anxiety about abandonment, however, comfort with closeness had only a marginally significant direct pathway to satisfaction (Davila, et al., 1998). Results suggest that cross-spouse associations between adult attachment and relationship satisfaction and should be considered when examining the link between relationship satisfaction and attachment.
Cross-partner effects, are also suggested by Feeney (1994) who found communication style during conflict impacts relationship satisfaction. Cobb, Davila, and Bradbury (2001) determined significant effects on relationship satisfaction as a result of perceived supportive behavior. Attachment style or global attachment accounted for differences in perception where insecurely attached partners tended to have more negative perceptions of partner supportive behavior. Feeney and Hohaus (2001) contributed similar findings pointing out that more anxious partners exhibited hostility and controlling behaviors when in a position of providing support and care to their partner during a time of need. Feeney (2008) went on to suggest attachment anxiety rather than attachment avoidance has a more pervasive impact on intimate partner dynamics and may therefore have a stronger effect on relationship satisfaction. Global attachment has also been shown to affect relationship satisfaction through mediational effect including beliefs about trust and perceptions of interpersonal trust (Givertz, Woszidlo, Segrin, & Knutson, 2013).

Perhaps the most interesting thread of research with regard to clinical practice and treating couple distress comes from the literature surrounding the influence of felt security on relationship satisfaction. Drawing on the propositions that attachment strategies may change in new relational contexts or with different relational partners (relationship-specific attachment), this area of research may be the most applicable to clinical practice suggesting helping couples to increase a felt sense of security may soothe distress and promote relationship satisfaction. Felt security is defined as a person’s beliefs that their partner will be available and responsive to their needs (Hazan & Shaver, 1994; Mikulincer & Shaver, 2007). In a study of 64 undergraduates, Carnelley and Rowe
(2007) used an experimental design to test the effect of attachment security priming on participant reports of felt security. Findings support the notion that verbally priming partners for a felt sense of security increase reports of positive feelings toward the relationship and their partner despite a partner’s global attachment style. These results support prior findings by Rowe and Carnelley (2003) which also suggest semantic priming for individuals to experience and tune into a “secure base” helps create a more open and responsive environment for communicating. Combined, these studies provide insight into potentially key areas for intervention in couple therapy and suggest valuable supportive change mechanisms such verbal priming to promote felt security in intimate partner relationships.

Further research in this area suggests that situational cues including positive supportive behavior form one’s partner can activate more positive relational interactions and foster a felt sense of security even in individuals with an insecure attachment style (Baldwin & Fehr, 1995; Holmes & Murray, 2007). Several studies have supported the notion that inducing a felt sense of security in people with more insecure forms of attachment has significant relationship benefits which are more commonly seen in individuals with a secure style of attachment including decreases in anxiety over abandonment, instilling trust, and perceptions of availability and responsiveness (Murray, Rose, Bellavia, Holmes, & Kusche, 2002; Murray et al., 2005). Findings in this branch of the literature suggest hope for clinicians working with couples to improve intimacy and increase relationship satisfaction.

Recent research has continued the investigation into attachment and relationship satisfaction. Weibe, Johnson, Burgess Moser, Dalgleish, and Tasca (2016) investigated
relationship-specific attachment security as a predictor for long-term change in relationship satisfaction. Researchers collected data from 32 couples receiving an average of 21 sessions of Emotionally Focused Therapy (EFT; Johnson 2004; Johnson & Greenberg, 1987) over twenty-four months. Results indicated an association between lower attachment anxiety and avoidance pre-therapy and higher relationship satisfaction scores post-therapy. The strongest predictor of relationship satisfaction over the long-term was a decrease in attachment avoidance (Weibe, et al. 2016a). Weibe, et al. (2016b) examined change in attachment and relationship satisfaction pre-therapy through a twenty-four month follow up. Results concluded a significant growth trajectory demonstrating an increase in relationship satisfaction and relationship-specific attachment security and significant decreases in relationship-specific attachment anxiety (Weibe, et al. 2016b). Taken together, this body of literature suggests attachment plays a role in relationship satisfaction.

**Individual Differences in Attachment**

The quality of relational interactions with key attachment figures contributes to the development of individual differences in attachment styles as well as differences in internal working models. These differences are believed to be largely shaped during early childhood development and tend to hold steady over the lifespan (Feeney & Noller, 1996; Fraley, 2002; Sadikaj, Moskowitz, & Zuroff, 2015). Internal working models are the constructed beliefs people hold about the self and others incorporating key relational dynamics such as perceived availability of others, responsiveness of others, trustworthiness, and individual beliefs of worthiness. Internal working models also
describe the behavioral strategies individuals employ to manage significant attachment interactions. For example, an internal working model of avoidance would indicate an individual being protective over the self and avoiding closeness in relationships as a way to manage the distress experienced by real or perceived unavailability and lack of responsiveness from a key attachment figure.

Considerable research has examined the differences in two dimensions of attachment insecurity: anxiety and avoidance (e.g. Bartholomew & Horowitz, 1991; Brennan, Clark, & Shaver, 1998; Fraley & Waller, 1998). Attachment anxiety is characterized by a high degree of fear about rejection or being abandoned coupled with an intense desire for closeness, connection, and support (Davis, Shaver, & Vernon, 2003; Mikulincer, Dolev, & Shaver, 2004; Rowe & Carnelley, 2003). High attachment anxiety has been correlated with several factors associated with low relationship satisfaction and relationship stability such as “too controlling” and “hard to be sociable” as measured by the Inventory of Interpersonal Problems (Bartholomew & Horowitz, 1991). Feeney (1994) supports this finding suggesting that anxiously attached individuals tend to have more difficult and reactive patterns of communication remaining more closed off to open discussion than securely attached individuals. A bulk of research links attachment anxiety in female partners with a decrease in relationship satisfaction in men while attachment avoidance in men tends to be associated with a decrease in relationship satisfaction in women (Collins & Read, 1990; Kirkpatrick & Davis, 1994; Simpson; 1990).

Attachment avoidance has also been associated with a decrease in relationship satisfaction. Attachment avoidance can be described as persistent uneasiness with closeness, intimacy, and interdependence. Furthermore, attachment avoidance is marked
by an unwillingness to trust others (Cassidy, Shaver, Mikulincer, & Lavy, 2009; Fraley & Shaver, 1997, Mikulincer, Florian, Cowan, & Cowan, 2002). Individuals with high degrees of attachment avoidance tend to have more difficulty responding to others, particularly around responding to their partner’s needs (Feeney & Kirkpatrick, 1996; Mikulincer & Selinger, 2001). This strategy for relationship management can lead to distress and couple discord. Looking at the findings from both attachment anxiety and attachment avoidance one may conclude there is a systemic interactional effect between two partners with these dimensions of attachment insecurity. Said differently, people with higher attachment avoidance may in fact be more likely to select partners higher on attachment anxiety, yet the interaction of these two opposing attachment structures may lead to an increase in couple distress. A smaller body of literature on attachment significance in mate selection captures a glimpse into this dynamic. For example, Chappell and Davis (1998) found that individuals reported less negative emotions and more positive feelings when considering a relationship with a securely attached partner regardless of their own attachment style. Frazier, Byer, Fischer, Wright, and DeBored (1996) replicated similar findings suggesting that securely attached partners were preferred to insecurely attached ones.

While attachment insecurity (anxiety and avoidance) have been correlated with lower relationship satisfaction, attachment security has been correlated with an increase in satisfaction. Much of the research has compared attachment security to attachment insecurity and therefore encompasses a vast amount of literature. Bowlby (1973) posited attachment security is created by interactions with key attachment figures who are available and responsive during times of stress. Furthermore, he characterized secure
attachment as attuned support which is crucial in fostering a belief in dependability and reliability of others. These attributes of security in relationships hypothesized by Bowlby have been shown to be supported with empirical evidence.

People with higher levels attachment security tend to demonstrate emotional regulation, communication, and behavioral patterns that lead to higher relationship satisfaction and less relational distress (Mikulincer et al, 2002). Individuals who have secure attachment styles tend to be less reactive to stressful events than people who fall more along the anxiety and avoidant dimensions (Feeney & Kirkpatrick, 1996; Mikulincer & Florian, 2001). Fraley and Shaver (1998) found that securely attached partners were also more likely to engage in support-seeking behaviors than their insecurely attached counterparts. There is evidence to suggest that securely attached individuals are more prone to hold positive expectations and feelings of their relationships (Collins, 1996) and tend to hold more positive self-views or positive working models (Bartholomew & Horowitz, 1991; Mikulincer, 1998). Moreover, secure attachment in individuals leads to a safer sense of exploration and a tendency to be more open and responsive to their partner’s needs (Feeney, 1996; Mikulincer, 1997; Sroufe & Waters, 1977).

**Attachment and Gender**

Interestingly, research indicates that attachment insecurity, avoidance and anxiety, is evenly distributed across gender (Galinha, Oishi, Pereira, Wirtz & Esteves, 2013; Karantzas, Feeney, Goncalves, & McCabe, 2014). Findings in these studies suggest that attachment is a universal process based on experience rather than a character of gender.
However important trends have been uncovered. Among them, one of the most compelling trends suggest that differences in gender accounts for changes in relationship satisfaction such that attachment avoidance in men leads to a drop in female partner satisfaction and female attachment anxiety is associated with a decrease in male satisfaction (Collins & Read, 1990; Kirkpatrick & Davis, 1994; Simpson; 1990).

A small body of literature sits contrary to the findings of no difference in attachment across gender. In a longitudinal study, Collins, Cooper, Albino & Allard (2002) found that attachment variables could be differentiated across gender (e.g. attachment avoidance was more predictive of poor relationship quality in men than women); attachment avoidance, more so than attachment anxiety, resulted in a partner’s negative attributions of relationship quality at the six-year follow-up; anxious-ambivalent attachment predictors were also divided by gender resulting in more women than men holding this position. These results are suggestive of differences between gender across attachment styles, however, over-generalization of these differences and overemphasis of gender stereotypes with regard to attachment strategies may be unhelpful in understanding relationship satisfaction (Kirkpatrick & Davis, 1994).

Studies that have been conducted dyadically have supported this notion that attachment strategies are likely not explained entirely by behavior. For example, Karantz et al., (2014) found no differences in actor-effects based on gender challenging the notion that men and women are more different than similar in relationships (Gray 1992, 2008). Kurdek (2005) revealed similar findings in which men and women tended to have no difference in their appraisal and perception of couple interactions, social support, or marital satisfaction. However, empirical support does suggest significant cross-partner
effects of gender. Both men and women tended to affect their partners in various ways. Karantzas et. al., (2014) found that women’s anxiety was reflected in men withholding support. Prior research has indicated that attachment anxiety tends to labor on relationships. Attachment anxiety manifesting as a constant need for approval (Karantzas, et al., 2010) for example, can lead to serious negative effects on romantic partnerships (Feeney, 2008). Collins and Read (1994) were in line with these findings reporting that attachment anxiety manifesting as a person being overly needy and dependent also negatively impacts relationships (Feeney, 2008). Finally, attachment avoidance in men and women affect relationship functioning. Attachment avoidance in men and women is linked to a decrease in a sense of overall trust. Karantzas, et al. (2014) found that avoidance in women impacted the way men experienced trust in the relationship and avoidance in men impacted trust and security in their female partners.

**Interdependent Models of Attachment and Relationship Satisfaction**

Karantzas, Feeney, Goncalves, and McCabe (2014) conducted a cross-sectional study of 95 heterosexual couples aimed to help build a working model of attachment and relationship functioning. Researchers hypothesized a model in which gender differences in dependent data and both actor and partner effects were accounted for. The model conceptualized mediational effects of trust, provisions of support, conflict management, and intimacy.

An APIM found several noteworthy results. Actor effects determined that attachment anxiety not avoidance was negatively associated with partner provisions of support and attachment anxiety and attachment avoidance was negatively associated with
trust for both male and female partners. Male satisfaction was associated with provisions of partner support and intimacy was associated with relationship satisfaction in both men and women. Partner effects revealed male avoidance had direct effects on female provision of support to their partner, while women’s attachment anxiety and avoidance had direct negative effects on men’s experience of trust and provision of partner support (Karantzas, et al., 2014).

Sadikaj, Moskowitz, and Zuroff (2015) attempted to answer the call for longitudinal studies using APIM to determine the effects of attachment security on relationship satisfaction. Sadikaj et al., (2015) examined 93 couples over seven months. Within individual effects showed that persons with higher attachment avoidance reported lower relationship satisfaction at time point one which was partially explained by his/her experience of low felt security with their partner. Women higher on attachment avoidance tended to again have lower relationship satisfaction from T1 to T2 could be accounted for in part by their experience of felt security. Partner effects revealed that male avoidance negatively affected female relationship satisfaction at T1 which was in part due to the mediation of felt security in both the male and female partners. Moreover, female felt security accounted for female attachment avoidance associated with male decline in relationship satisfaction between T1 and T2 (Sadikaj et al., 2015). The authors report their results demonstrate a significant relationship between global attachment and relationship satisfaction which is mediated by a partner’s felt sense of security in the relationship.
Military Couples

Maine relationships face both the traditional stressors found in civilian relationships including socioeconomic status, divorce of their parents, religious difference, education difference, etc. as well as Military specific stressors such as frequent geographical relocation, extended separations from their partner, challenges to emotional bonding after long absences, and constant threat of occupational hazard including severe injury and death (Burrell, Adams, Briley, Durand, & Castro, 2006; Lundquist, 2007). The combination of these factors attributing to stress in relationships is associated with significant instability of intimate partner relationships. Current research has found that young Marine enlistees tend to get married far younger and divorce more frequently than civilians (Gomulka, 2010; Cohen, Passel, Wang, & Livingston, 2011). Lloyd et al. (2015) make note of this trend finding that in 2011, 30.6% of young Marines (ages 18-24) were married, while in comparison only 9.0% of civilian men and women in the U.S. were married of the same age range.

According to the United States Marine Corps (2012) the divorce rate among junior enlistees is a staggering 69%. Relationship distress combined with Military-specific stressors are associated with individual psychological well-being, suicidal behavior, substance abuse and dependence in both Marine and non-Marine spouses (Amato, 2010; Hyman, Ireland, Frost, & Cottrell, 2012; Palmer, 2012). Taken together, there is strong evidence to suggest that Marine couples experience a higher degree of stressors and are at higher risk for relationship distress, dissolution, and divorce than their civilian counterparts (Amato, 2010; Bakhurst, Loew, McGuire, Halford, & Markman, 2016; Hyman, Ireland, Frost, & Cottrell, 2012; Karney & Crown, 2007).
A key point when comparing Marine relationships to civilian couples is with regard to divorce. Looking at the Military as a whole, the divorce rate, 2.8% in 2014, is nearly the same as the divorce rate in the general population, 3.2% in the same year (Center for Disease Control and Prevention, 2016; Office of the Deputy Assistant Secretary of Defense, 2015). Therefore, while the Military population presents limitations for generalizing results to other populations, these statistics suggest there may be more room for generalizing results around relationship distress than previously thought. However, when looking at young Marines E-5 and below, the divorce rate jumps astoundingly high to 64% (United States Marine Corp, 2016) making young Marines E-5 and below a sample from a different population.

A second key point to consider with the Military population is suicide. It is often believed that suicide in the Military is too often associated with combat exposure (Bush et. al., 2013). However, findings from both Bush et al., (2013) and Schoenbaum, et al., (2014) found that there was no difference in predictors for suicide in Marines with and without combat service. Additionally, no predictive reason for suicide was found (Bush et. al., 2013).

As a result, other factors contributing to suicidality were addressed. The failure of intimate partner relationships and an increasingly high divorce rate among young Marines is associated with suicidal behavior and accounts for a substantial portion of completed suicides in the Marine Corps (Department of Defense, 2015). Hyman, Ireland, Frost, & Cottrell (2012) and Gradus, Grumes, Oeljen-Gerdes (2013) have suggested that young Marines, within their first enlistment at 18 to 27 years of age, are increasing risk for suicide, because of “partner relationship problems.” In this case, they suggest that
relationship instability place the Marine at greater risk for committing suicide (Gradus, Grumes, Oeljen-Gerdes, 2013). In 2014, there were 269 completed suicides among Active Duty Military Personnel. Marines accounted for 17.9% of the suicides and 42.0% of those had experienced failed intimate relationships within the 90 days prior to the suicide (Department of Defense, 2015). These findings suggest how crucially important it is to better understand and treat relationship distress in the Military.

The current study examines a sample of 78 young Marines and their partner to address the issue of relationship distress. Answering the call from Karantzas, et al., (2014) and Sadikaj et al., (2015), this study examines attachment and relationship satisfaction dyadically in couples with potentially higher rates of distress than the general population. Furthermore, this study is a cross-lagged design with four time points of data collection over a period of 12 months. Hypotheses for the current study are:

Actor Effects:

H1: A decrease in male partner scores on the ECR-R (indicating higher felt attachment security) will increase his scores on the R-DAS (relationship satisfaction).

H2: A decrease in female partner scores on the ECR-R (indicating higher felt attachment security) will increase her scores on the R-DAS (relationship satisfaction).

H3: An increase in male partner scores on the R-DAS (relationship satisfaction) will decrease his scores on the ECR-R (indicating higher felt attachment security).
H4: An increase in female partner scores on the R-DAS (relationship satisfaction) will decrease her scores on the ECR-R (indicating higher felt attachment security).

**Partner effects:**

H5: A decrease in male partner scores on the ECR-R (indicating higher felt attachment security) will increase female partner scores on the R-DAS (relationship satisfaction).

H6: A decrease in female partner scores on the ECR-R (indicating higher felt attachment security) will increase male partner scores on the R-DAS (relationship satisfaction).

H7: An increase in male partner scores on the R-DAS (relationship satisfaction) will decrease female partner scores on the ECR-R (indicating higher felt attachment security).

H8: An increase in female partner scores on the R-DAS (relationship satisfaction) will decrease male partner scores on the ECR-R (indicating higher felt attachment security).

**Methods**

**Participants**

The current study included 78 heterosexual couples distinguished by gender extracted from the iRelate study (Lloyd, et al., 2017). Couples were assigned to one of the three treatment groups (each a minor variation of iRelate) or the control group. The mean age of males in the iRelate group (couple n = 15) was 21.47 (SD = 1.59). In the iRelate + PRREPAIR/ENRICH group (couple n = 19) the mean age of males was 23.21
(SD = 1.51) and in the iRelate with PREP group (couple n = 12) mean age was 22.58 (SD = 1.67). The mean age of males in the control group (couple n = 32) was 23.69 (SD = 2.23).

The mean age for female partners in the iRelate condition (couple n = 15) was 21.13 (SD = 1.76). Mean age in iRelate + PRPREPARE/ENRICH (couple n = 19) was 23.16 (SD = 2.31) and 22.75 (1.91) in iRelate with PREP (couple n = 12). The mean age of females in the control group (couple n = 32) was 23.03 (SD = 2.02). Demographic data are presented in Table 2.
Table 2. Sample Demographics.

<table>
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<tr>
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<th>iRelate Only</th>
<th>iRelte + PREPARE/ENRICH</th>
<th>iRealte with PREP</th>
<th>Control</th>
</tr>
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<td></td>
<td></td>
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<td>19 (24.4%)</td>
<td>12(15.4%)</td>
<td>32 (41%)</td>
</tr>
<tr>
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<td>19 (24.4%)</td>
<td>12 (15.4%)</td>
<td>32 (41%)</td>
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<td>Couples</td>
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<td>M(SD)</td>
<td>M(SD)</td>
<td>M(SD)</td>
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<td>21.47 (1.59)</td>
<td>23.21 (1.51)</td>
<td>22.58 (1.67)</td>
<td>23.69 (2.23)</td>
</tr>
<tr>
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<td>23.16 (2.31)</td>
<td>22.75 (1.91)</td>
<td>23.03 (2.02)</td>
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<td></td>
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<tr>
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<td>4 (33.3%)</td>
<td>11 (34.4%)</td>
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<tr>
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<td>4 (33.3%)</td>
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<td>1 (5.3%)</td>
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<td>1 (3.1%)</td>
</tr>
<tr>
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<tr>
<td>High School</td>
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<td>1 (3.1%)</td>
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<tr>
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<td>4 (33.3%)</td>
<td>1 (3.1%)</td>
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<tr>
<td>Postgraduate Degree</td>
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<td>0</td>
<td>3 (9.4%)</td>
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<tr>
<td>Condition Total</td>
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<td>38</td>
<td>24</td>
<td>64</td>
</tr>
</tbody>
</table>

Measures

Demographic Information. Participants were given a demographic questionnaire with regards to sex, age, ethnicity, religion, current military operational specialty (MOS), level of education, prior marriages and divorces, prior suicide attempts and
hospitalizations, alcohol intake, current or prior personal or couples’ therapy, if they have obtained prior relationship or marital training, and the participants benefit identification number (BIN). Each Marine’s BIN was requested at initial intake and later during Stage II of data collection when couples entered the study as a linked dyad. This was done in order to link couples in data collection and throughout dyadic analysis.

**Revised Experiences in Close Relationships Scale (ECR-R)**

The Experiences in Close Relationships revised scale (Fraley, Waller, & Brennan, 2000) is a 36-item self-report measure designed to test relationship-specific attachment styles. The ECR-R includes two categories of questions, 18-items for both the anxious and avoidant dimensions of attachment. The test-rest reliability coefficient of the two individual scales is approximately $\alpha = .94$ for romantic anxiety and $\alpha = .93$ for romantic avoidance (Fraley, Waller, & Brennan, 2000). The ECR-R takes approximately 10 minutes to complete. It is widely used and as a measure of attachment in romantic relationships and has been standardized in different languages and used worldwide (e.g. Selçuk, Günaydin, Sümer, & Uysal, 2005).

Research suggests the ECR-R is best used as a partner-specific or relationship-specific measure rather than a global measurement of attachment (e.g. Coy, Green, & Davis, 2011). In other words, the ECR-R depicts the level of insecurity (avoidance and anxiety) each partner has in their current relationship which may be contextually different in other relationships (e.g. parent-child). Given the nature of the current study, conceptualizing the ECR-R in this way is the most fitting when understanding attachment security in intimate partner dyads within the Military.
Revised Dyadic Adjustment Scale (RDAS)

The Revised Dyadic Adjustment Scale (RDAS; Spanier & Thompson, 1982; Busby, Christensen, Carne, & Larson, 1995) is a trimmed down version of the original Dyadic Adjustment Scale (Spanier, 1976). The RDAS has 14 items compared to the 36 of the DAS. The RDAS was chosen due to its strong psychometric properties and because of its brevity as Marines and their partners in the iRelate study are taking a battery of assessments over multiple time points so the researchers were careful to avoid exhausting participants. The RDAS measures an individual’s level of relationship satisfaction by using Likert scale questions such as “How often do you and your partner quarrel?”, and “How often do you discuss, or have you considered, divorce, separation, or terminating your relationship?” Scores range from 0-69 with scores below 48 signifying the distress. The range of internal consistency of the RDAS is $\alpha = .90$ (Busby et al., 1995). It takes approximately 15 minutes to complete.

Procedure

The current study uses data collected by researchers commissioned by the Marine Force Pacific Chaplain’s office to examine the effectiveness and fidelity of a marital education and enrichment program offered to young marines and their partner (see; Lloyd et al. 2015). Approval for all procedures was obtained from United States Marine Corps Institutional Review Board (DoDI # 3216.02; SECNAVINST 3900.16D; MCO 3900.18). The current study was approved for the use of secondary data analysis.

This study used collected data from Marines and their significant other over twelve months. Marine couples were enrolled in the Intimate Relationships Awareness,
Training, and Enrichment Program (iRelate; Lloyd, Munoz, Tremblay, Foskett, Hallett, & Distelberg, 2015) fidelity study (Lloyd, et al., 2017, in preparation). Couple data was collected as their relationship progressed through the three stages of the iRelate program and a comparable timeframe of treatment as usual (e.g. control group). The study consisted of three conditions of iRelate; iRelate alone, iRelate + PREPARE/ENRICH, and iRelate stages I and II + PREP in place of stage III. The treatment as usual group (control group), which consisted of Marines and their spouse but did not receive iRelate services. Marine’s and their partners assigned to the control group were able to attend any relationship education courses that did not contain iRelate. Six United States Marine Corps Bases participated in the study: Marine Corps Base Camp Pendleton California, Marine Corps Air Station Yuma, Marine Corps Recruit Depot San Diego, and Marine Corps Base Hawaii, and Marine Corps Air Station Miramar.

Participants were recruited by Marine Corps Chaplains as well as by flyers that were distributed within the Marine Corps units participating in the study. Marines were informed of the study as they checked into their units and while they attended other educational services provided by chaplains at the various Marine Corps Bases. Chaplains assessed the Marine’s relationship/marital status. If the new Marine fit criteria for the study, the chaplain provided the Marine with information about participation. For the Marines in the treatment groups, this included a referral to Stage I (individuals) of the iRelate program. When the Marine entered a relationship, couples were referred to Stage II of the iRelate program and continued through to Stage III of the iRelate program. The participants in the treatment as usual group were tracked in the same manner as the couples in the treatment group. Data collection time points are presented in Table 3.
Table 3. Schedule of survey time points.

<table>
<thead>
<tr>
<th></th>
<th>Pre-Course</th>
<th>3 months</th>
<th>6 months</th>
<th>9 months</th>
<th>12 months</th>
<th>15 months</th>
<th>18 months</th>
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<tr>
<td>Stage I</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Stage II</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td></td>
</tr>
<tr>
<td>Stage III</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
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<tr>
<td>Control I</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control II</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
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<tr>
<td>Control III</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
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</tbody>
</table>

The current study is not intended to evaluate iRelate and therefore inclusion criteria of the macro-level study is not included. For iRelate criteria see Lloyd et al., (2015, 2017). The current study is a nested study of relationship satisfaction within the iRelate evaluation study. Inclusion criteria for this study are: a) participants are in a heterosexual relationship due to the need for distinguishability during data analysis and interpretation of results, b) both partners completed assessment instruments at all four time points beginning in Stage II (coupled partners) of data collection.

Data Analysis

Data Preparation

Prior to analysis, data was evaluated in SPSS for fidelity to the inclusion criteria for the study. Data from Stage 2 and 3 (couple data) were first extracted from the larger data set of individual Marines and coupled Marines. Next, heterosexual couples were extracted from the full bank of couples due to their distinguishability by gender. Couples were then analyzed to exclude any couple in which one or both partners did not completed measures at one or more of the four survey time points. Missing data ranged from 3-9% across all measures. Full maximum likelihood estimation (FMLE) was used in
(EQS (Bentler, 2006) to replace missing data. Partners within couples were linked using their benefit identification numbers (BIN).

**Analytic Strategy**

We began the analysis by evaluating the potential treatment effect within the data prior to the primary APIM analysis of this study. This was done to determine whether the APIM required additional controls on the study variable to account for treatment effects. To this end, repeated-measures ANOVA were used to determine if there was a significant difference between treatment groups on the ECR-R and R-DAS. Results are presented in Table 4 (Females) and 5 (Males). As can be seen below, there were no significant factor or group effects on the ECR-R or R-DAS during the 12 months of the data. Therefore, there was no need to add controls into the APIM analysis.
Table 4. Results of Female Repeated-Measures ANOVA.

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>T1 M (SD)</th>
<th>T2 M (SD)</th>
<th>T3 M (SD)</th>
<th>T4 M (SD)</th>
<th>df</th>
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<tr>
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<td>(2.3, 169.6)</td>
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<td>iRelate/PREP</td>
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<td>2.91(0.6)</td>
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Table 4. Results of Female Repeated-Measures ANOVA

<table>
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<tr>
<th></th>
<th>n</th>
<th>T1 M (SD)</th>
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<td>Enrich</td>
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<td>(13.7, 188.5)</td>
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<td>10.63(3.4)</td>
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<td>11.26(3.5)</td>
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<tr>
<td>Control</td>
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<td>11.38(3.5)</td>
<td>11.55(4.1)</td>
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*p < 0.05.
Table 5. Results of Male Repeated-Measures ANOVA.

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116
Table 5. Results of Male Repeated-Measures ANOVA.

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After determining there were no significant differences between treatment groups, an Actor-Partner Interdependence Model (APIM; Kenny, Kashy, & Cook, 2006) was used to examine the effects of attachment security and relationship satisfaction between young Marines and their partner. APIM was chosen for several reasons. First, couples are the unit of analysis in this study in which examination of within person (actor) and between partner (partner) effects are of interest. APIM unlike univariate analyses, accounts for the interdependence of relational partners. Second, APIM is a robust strategy that provides meaningful insights into couple dynamics which align more consistently with MFT theory and conceptualization (Greaves, et al. 2017; Oka & Whiting, 2013; Wittenborn, Dolbin-MacNab, & Keiley, 2013). Third, this strategy can provide more insights into how a change in one partner’s relationship-specific attachment effects their partners level of satisfaction or how a change in one partner’s satisfaction alters their partner’s sense of attachment security. Results of this kind would have significant implications for clinicians and could be applied to increase the effectiveness of couple therapy interventions. To this end, APIM could effectively narrow the researcher-clinician gap (Oka & Whiting, 2013; Wittenborn, Dolbin-MacNab, & Keiley, 2013). Finally, these data presented a rich opportunity to address several gaps in the literature including the need to use APIM in longitudinal studies with multiple time points to better understand the relationship between attachment and satisfaction (Karantzas, et al., 2014; Sadikaj, Moskowitz, and Zuroff, 2015). Furthermore, research on Military couples and couple satisfaction in the Military is of pressing need given the high divorce rates in young marines, the tendency to get married within a short time of knowing their partner (Gomulka, 2010; Cohen, 2011), and the individual stress and impairment to mission
readiness often linked to relationship distress (Hyman et al., 2012; Gradus, Grumes, & Oeljen-Gerdes, 2013).

APIM should be used as confirmatory analysis. Therefore, this study used specific modeling steps outlined prior to analysis in order to address our hypotheses. We modeled male and female relational dyads and variables ECRR-Anxiety, ECRR-Avoidance, and R-DAS Total Score using EQS (Bentler, 2006). First, the most freed model (conceptual model) was estimated. Next, the within-actor effects model + covariances was estimated and chi-square change was calculated. Finally, the auto-regression model (direct effects + covariances only) was estimated with chi-square change comparisons made. In order to present the most parsimonious model visually, Figure 1 includes only significant pathways and covariances from our base model. Considerations were also made for pathways that should be included for accurate theoretical and conceptual representation.

**Results**

We began by estimating our base model which is the most freed model with complete actor and partner effects and covariances. This model also includes actor and partner (gender) effects of attachment anxiety, attachment avoidance, and relationship satisfaction over twelve months. Fit indices revealed this model to be a good fit, $\chi^2_{(120)} = 131.6, p > 0.05$, CFI= 0.97, GFI= 0.89, RMESA= 0.04. Next, the within-actor cross-lagged effect model was estimated ($\chi^2_{(174)} = 193.2, p > 0.05$, $\chi^2_{\Delta(54)} = 1.14, p > 0.05$, CFI= 0.95, GFI= 0.85, RMESA= 0.04). Fit indices show this is a tenable model. Next, the auto-regression with covariances model was estimated ($\chi^2_{(198)} = 223.3, p > 0.05$, $\chi^2_{\Delta(78)} = 1.18, p > 0.05$, CFI= 0.93, GFI= 0.83, RMESA= 0.04) indicating this model is also tenable.
After nesting these models, we reviewed fit indices of each and conducted chi-square change tests to determine whether each nested constraint was tenable. A purely statistical view of these models suggests the auto-regression model is tenable and the most parsimonious model, however this model conceivably violates the theoretical orientation that intimate partners do have effects on one another. To our knowledge, the most recent APIM of attachment and relationship satisfaction conducted by Conradi, Noordhof, Dingemanse, Barelds, and Kamphuis (2017) found significant cross partner effects of attachment anxiety and attachment avoidance on relationship satisfaction in a large sample of 133 couples. Since each of the nested models fit and because a systemic lens would suggest intimate partners impact one another across time on variables such as relationship satisfaction, as well as relevant research findings, it was decided to report results based on the full model. Significant pathways are modeled in Figure 5.
Full APIM Model

Within-Actor Effects

The full APIM produced interesting findings and uncovered important trends in the data surrounding gender, attachment, and relationship satisfaction. Regarding gender and within actor effects, male attachment anxiety at each time point predicted by anxiety from the preceding time point (T1→T2: B= 0.54, β= 0.55, SE= 0.10, t= 5.30, p < 0.05; T2→T3: B= 0.23, β= 0.23, SE= 0.12, t= 1.97, p < 0.05; T3→T4: B= 0.56, β= 0.57, SE= 0.09, t= 6.08, p < 0.05). Male avoidance at T1 predicted his avoidance at T2 (B= 0.42, β= 0.40, SE= 0.11, t= 3.73, p < 0.05) and again between T3 and T4 (B= 0.28, β= 0.28, SE= 0.10, t= 2.73, p < 0.05). The within-individual pathway of male satisfaction between T1
and T2 was significant (B= 0.38, β= 0.39, SE= 0.11, t= 3.50, p < 0.05) and again between T3 and T4 (B= 0.49, β= 0.44, SE= 0.12, t= 4.07, p < 0.05).

Female within actor effects were significant on attachment anxiety over the four time points ((T1→T2: B= 0.36, β= 0.29, SE= 0.14, t= 2.64, p < 0.05; T2→T3: B= 0.29, β= 0.30, SE= 0.14, t= 2.69, p < 0.05; T3→T4: B= 0.52, β= 0.58, SE= 0.08, t= 6.55, p < 0.05). Attachment avoidance was also significant between T1 and T2 (B= 0.26, β= 0.26, SE= 0.11, t= 2.36, p < 0.05) and again between T3 and T4 (B= 0.56, β= 0.57, SE= 0.91, t= 6.14, p < 0.05). Total relationship satisfaction was only significant for females between T3 and T4 (B= 0.58, β= 0.58, SE= 0.10, t= 5.77, p < 0.05). Within-actor cross effects were limited. Low male satisfaction at T1 lead to an increase in avoidance at T2 (B= -0.10, β= -0.17, SE= 0.01, t= -1.64, p < 0.05).

**Cross-Partner Effects**

Examining the model for cross-partner effects offer some of the most interesting findings. The overall trend in the data is that female partners tend to have an effect on their male partners over the course of twelve months, however male partner effects on their female partner are not present until the nine-month measurement point. For example, female avoidance at T1 positively impacted male satisfaction at T2 (B= 4.14, β= 0.30, SE= 1.48, t= 2.80, p < 0.05). Female satisfaction at T2 lead to an increase in male satisfaction at T3 (B= 0.28, β= 0.30, SE= 0.11, t= 2.48, p < 0.05). Female avoidance at T3 lead to a decrease male partner avoidance at T4.
Conversely for males there was only one significant pathway between T3 and T4. Male attachment anxiety at T3 lead to a decrease of female anxiety at T4 (B = -0.18, β = -0.15, SE = 0.10, t = -1.84, p < 0.05).

**Covariance Effects**

Results suggested interesting covariance effects between variables within males and females as well as effects between partners. At each of the four time points, there is a significant covariance between anxiety and relationship satisfaction for males (T1: B = 3.73, β = 0.45, SE = 1.03, t = 3.63, p < 0.05; T2: B = 1.27, β = 0.24, SE = 0.62, t = 2.04, p < 0.05; T3: B = 2.72, β = 0.38, SE = 0.87, t = 3.12, p < 0.05; T4: B = 1.78, β = 0.32, SE = 0.65, t = 2.64, p < 0.05.). Female relationships between variables were also evident. There is a negative relationship between female avoidance and relationship satisfaction at T1 (B = -0.99, β = -0.24, SE = 0.49, t = -2.02, p < 0.05) and T4 (B = -0.65, β = -0.29, SE = 0.27, t = -2.40, p < 0.05). There is also a relationship between anxiety and avoidance at T1 for females (B = 0.17, β = 0.29, SE = 0.69, t = 2.40, p < 0.05). Anxiety and total satisfaction covary for females at T3 (B = 5.70, β = 0.48, SE = 1.50, t = 3.80, p < 0.05) and T4 (B = 1.36, β = 0.24, SE = 0.68, t = 2.01, p < 0.05). Model estimation revealed only one significant cross-partner covariance which occurred between male avoidance and female anxiety at T1 (B = -0.11, β = -2.42, SE = 0.51, t = -2.063, p < 0.05).

**Discussion**

This study examined young military couples and gender differences in associations between actor and partner attachment and relationship satisfaction in a
longitudinal cross-lagged design. Measurements were taken at four time points (3-month intervals) over one year. In general, the study supports the hypothesis that attachment and marital satisfaction are directly related. Moreover, results indicate specific trends in how attachment functions within the Marine Corps.

**Attachment and Relationship Satisfaction**

When interpreting results of the APIM it is useful to first address covariance effects within the model. Covariance pathways in the model account for the interdependence of relational partners and therefore produce interesting images of couple interactions. In our APIM there are significant covariance effects between anxiety and satisfaction. A positive association was noted between attachment anxiety and relationship satisfaction. This effect was more prominent for male partners than female partners. The effect, while contrary to what the proposed model might assume, might account for one of the following explanations. Marines on deployment are limited in their ability to meet the needs of their partner in terms of physical proximity increasing his anxiety about the relationship. Satisfaction can be understood in this way, as his relationship is meaningful to him and therefore the barriers to physical contact may increase his anxiety. The interaction between these two constructs could be further understood when a Marine returns home from deployment. Upon his return, it is possible that his anxiety could increase as a result of him now being in close contact with his partner and therefore he feels a sense of intensity to engage in the relationship.

Female anxiety may be partially explained by her preoccupation with the relationship and her partner’s physical safety. She too may feel a limited sense of agency
to remain connected to her partner during deployment resulting in an increase in anxiety. However, she reports a sense of satisfaction indicating the relationship is of significant meaning and therefore she may be scared to lose it. The covariance effect between avoidance and satisfaction at twelve months is of particular interest. Results indicate a negative relationship between female avoidance and satisfaction. This covariance effect may speak to the “burn out” a female partner may feel if she cannot access her partner over that period of time.

Results of our APIM show noteworthy cross-partner effects. Males early in their relationship appeared to have higher relationship satisfaction when their avoidance was higher and when their female partners were more anxious. One way to understand this finding would be that her anxiety is greater interest and investment of the relationship which he experiences as a signal of greater importance and priority she is giving to the relationship resulting in an increase in his satisfaction. Similarity, at a later time point his increased attention and concern for the relationship may signal to increased value and investment resulting in a related increase in her satisfaction. On the other hand, female avoidance decreases male avoidance between nine months which in turn increased male partner anxiety perhaps signaling to him that she is unsatisfied in the relationship. Her avoidance or possible withdrawal may be a trigger for his greater attention to the relationship resulting in higher anxiety and lower avoidance. However, should he remain more avoidant at latter stages of the relationship formation period she becomes more avoidant with a decrease to her satisfaction possibly resulting in dissolution or divorce. Taken together, findings do not seem to depict a distinct trend between relationship-specific attachment and relationship satisfaction. Several studies have indicated that
relationship-specific attachment strategies cannot be assigned to a particular gender (Karantzaz et al., 2014; Kurdek, 2005; Van Ijzendoorn & Bakermans-Kranenburg, 2010).

Findings from attachment partner effects on relationship satisfaction are best understood in this model as attachment strategies that are assessed in a continuous manner. So, moderate increases in anxious attachment may signal positive responding in terms of relationship value and importance. Similar to what Simpson and Overall (2014) suggest about stress buffering in relationships. Simpson and Overall (2014) explain the potential positive stress buffering effects of anxious and avoidant coping responses. Results of our APIM show moderate levels of change at lower levels of anxious and avoidant dimensions may signal positive indications of relationship intent resulting in a more positive experience of the relationship by one’s partner.

At first glance, the results are somewhat surprising that couples had little impact on one another on either relationship satisfaction or attachment. These findings differ from previous APIM studies of these variables (Karantzaz et al., 2014; Conradi et al., 2017) in which cross-partner effects were more prevalent. There are a few meaningful explanations for these results. First, the couples in this sample were young with an average age of 22 years old. Moreover, a large majority were newly coupled and progressed toward marriage in under six months of meeting one another. The phenomenon of expedited coupling and fast progression to engagement and marriage in the Military is well documented (e.g. Lloyd et al., 2015; Karney & Crown, 2007). Therefore, it is conceivable that cross-partner effects of attachment and relationship satisfaction were limited because these relationships are young in the coupling process and have yet to create a deep enough bond to affect one another on recorded measures.
These results can be further explained from an attachment lens. Research from Hazan and Zeifman (1994) demonstrated it takes an average of two years from relationship partners to create a secure attachment bond that is more meaningful to the partners than those bonds shared with their parents or peers. Similar findings suggesting consolidation of romantic partnerships takes about two years (Fagundes & Schindler, 2011; Hazan & Zeifman, 1999; Mikulincer, 2006) provide perspective for the findings in the current study. Although couples were tracked for one year, couples were only newly dating when data collection began and therefore may not have a deep or enduring emotional bond that would be captured within the first two years. This in part, helps to explain the lack of cross-partner effects of attachment and relationship satisfaction in our sample.

Military Couples

A second helpful explanation comes from the literature surrounding Military couples and relationship functioning. Military couples have a tendency to begin cohabiting, get engaged, and marry, much faster that the civilian population (Karney & Crown, 2007), meaning these couples may be in a committed partnership without intimate knowledge of one another. There are preliminary findings to suggest “contract marriages” affect Military data samples (Karney & Crown, 2007; Kelty, Kleykamp, & Segal, 2010). Contract marriages are typically defined as marriages that occur prior to Marine deployment or to benefit the spouse financially or so the spouse can be moved closer to Marine’s stationed duty. Benefits include of being married in the Military including housing stipends and the ability to live off-base and not in the barracks, and higher pay. Spousal benefits including health insurance, prenatal and perinatal care
(Karney & Crown, 2007). These contract marriages have monetary benefits that incentivize marriage within the Military population and therefore may create scenarios in which variable in couple data that would typically correlate have little to no relationship. We were unable to account for the percentage of contract marriages in the current sample. However, the issue of contract marriages may partially explain why cross-partner effects were less significant than in other studies of this kind. Rather than sharing a strong attachment bond, a portion of the couples in this study may be married for some other benefit. If this is the case, our results are consistent with attachment theory that would suggest relational partners who do not share a deep bond will have little to no impact on each other.

The issue of deployment could also be a factor in our results. While the Military provides a large sample with an opportunity to produce truly meaningful findings in support of our service men and women, there are some difficulties in running longitudinal studies. A possible example of this in the current study is the issue of deployment. The lack of cross-partner effects of attachment and relationship satisfaction could be in part due to deployments that occurred mid-study. Karney and Crown (2007) discuss the strain on relationships due to deployment and further discuss couples deciding to marry prior to a Marine’s deployment for secondary gains. From an attachment perspective, results could suggest that physical proximity may influence attachment bonding. Hazan & Zeifman (1994) determined that people use their romantic partner for proximity 50% of the time in the first two years of the relationship and for proximity 80% of the time after two years of being together. If a Marine does deploy early in a relationship, the developmental trajectory of the couple bond may be altered thus explaining why couples
in our study did not tend to affect each other on measures of secure bonding and satisfaction.

**Trends in the Data**

There are a few important trends in the data worth mentioning. First, our findings are somewhat different from other studies of attachment and relationship satisfaction among heterosexual couples. APIM studies such as the one from Karantzas et al., (2014) and later Conradi et al., (2017) found that female avoidance and attachment anxiety decreased their relationship satisfaction and when their male partner exhibited higher anxiety and avoidance it too negatively impacted female relationship satisfaction. Our results differ in that there are no direct effects on female satisfaction over the course of one full year. Over the first nine months, female attachment and relationship satisfaction tend to affect her male partner, however males have only one cross-partner effect on females between nine and twelve months. In sum, these findings may be support Mikulincer & Shaver (2016) who suggest women emphasize a need for closeness in romantic partnerships while men are more likely to exhibited a need for autonomy. A feminist perspective of these findings might argue that this is evidence that women are more attuned to their male partners often under expectation to care take the relationship while men may be less attuned due to socialization factors (Knudson-Martin & Mahoney, 2009).

We can also view these findings from the context of proximity and Military culture. As discussed above, many couples had the Marine partner deploy or was assigned to training in a different location to their partner’s. Therefore, it is
understandable that women may be more likely to affect their male counterpart rather than the reverse. For example, if a male Marine is deployed after dating his female partner for only a few weeks, the couple is separated for three to six months and in many cases, up to a year. Therefore, the high-stress and demands of deployment combined with the physical distance and limited ability to contact his partner back home, may cause him to be more sensitive to the changes in his partner’s attachment strategy and satisfaction.

An interesting trend that appears to be emerging in the data is the cross-partner effect between nine and twelve months. Male anxiety at nine months decreases female anxiety at twelve months which positively covaries with her satisfaction and a decrease in avoidance at twelve months. This may shed some light onto the dynamics of intimate partner attachment functioning and speak directly to the fluidity of the constructs rather than assigning them to a particular gender. Applying an attachment lens, the ability to affect our partner gives us a sense of security and an inability to affect our partner can create a sense of panic (Johnson, 2009). To this end, our results may support findings from others that avoidance rather than anxiety may be more damaging to relationships (Conradi et al, 2017; Mikulincer & Shaver, 2016). Avoidance of romantic intimacy is a protective strategy often employed when a partner is perceived as unresponsive or lacks validation (Mikulincer & Shaver, 2016).

**Limitations**

While results offer both preliminary insights and interesting results, there are several limitations to consider. First, it is worth noting that our sample is of young couples who have been together between three months and one year. The sample is also
from the Military population which faces stressors that often differ from civilian populations. Therefore, results of our study may not be generalizable to other populations. Second, although a strength of our study is the longitudinal cross-lagged design, we may have been limited by having only a one-year term for data collection. Interesting findings emerged at the nine and twelve-month mark and therefore had we collected data for two years or more the data may have produced other results. Third, again on the note of time, effects of attachment and relationship satisfaction could have been constrained due to the fact that these couples have been together for well under two years. Results may differ in populations with couples that have been in romantic partnerships for two years or more. In addition, our sample size may have constrained our findings with moderate potential for Type II error. Lastly, the effects of deployment were not controlled for and we cannot account for how deployment mid-study affected results.

**Clinical Implications and Future Research**

The current study has several clinical and research implications. Broadly, our research indicates that actor effects are most dominant which has been found in other studies of this kind (e.g. Conradi et al., 2017). This may suggest that in clinical situations, working on individual perceptions of their partner and relationship may hold a substantial degree of importance. In other words, couple therapy that is emphasizes both the within person and between partner dynamics may produce the largest effect on improving relationship satisfaction.

This study also provides support for (Lloyd et al., 2015, 2017) which calls for Marines to attend relationship education and enrichment training in order to make
informed decisions about marriage and decrease the divorce rate within the Military. The limited cross-partner effects in our study would seem to suggest that these partners are relatively unfamiliar with one another and have not created a romantic bond. Therefore, relationship education and enrichment may be a crucial intervention to help young Marine couples get to know each other and outline helpful strategies for navigating romantic partnerships in Military culture.

At a more broadly defined policy level, results of our study could indicate that the incentive to be married in the Military is high and leads to contract marriages that are less defined by love and intimacy and more heavily rooted in financial benefit. This should however be interpreted with caution as there was no way for us to be sure contract partnerships were in fact in our sample.

Drawing from our results, future research can be improved in a few distinct ways: 1) Future longitudinal studies of attachment and relationship satisfaction should consider including couples who have been dating or married for a minimum of two years in order to better capture causation effects of relationship-specific attachment on relationship satisfaction. 2) Studies should attempt to use samples that have a wider range of ages. 3) Future longitudinal studies would do well to include a larger sample size to increase depth and strength of results. 4) We would recommend the design include at least 24 months of data collection to enhance results.
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CHAPTER SIX

SEEING THE FOREST AND THE TREES. DYADIC ANALYSIS IN COUPLE AND FAMILY THERAPY RESEARCH:
A CASE STUDY WITH EMOTIONALLY FOCUSED THERAPY

By

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Abstract

Emotionally Focused Therapy (EFT; Johnson, 2004; Johnson & Greenberg, 1987) is considered an empirically validated model of couple therapy and is widely used to treat relationship distress, increase satisfaction, and strengthen relationship bonds. EFT has undergone arguably the most extensive research of any couple therapy model, however many of the outcome studies are limited by the analytic strategies used to examine data. Like all models, early EFT outcome studies employed univariate analyses leading to constrained results. In an effort to address non-independence of data, researchers have more recently used multivariate analytic strategies, however studies have suffered from small sample sizes and potentially underpowered studies. Dyadic data analysis (Kenny, Kashy, and Cook, 2006) presents an opportunity for couple and family researchers to capture true systemic interaction by accounting for interdependence of data. This review examines the outcome literature on EFT, using it at as case example of how future research can use dyadic analysis and specifically actor-partner interdependence modeling (APIM) capable of capturing rich systemic dynamics.
Dyadic Analysis in Couple and Family Therapy Research:

A Case Study with Emotionally Focused Therapy

Marriage and Family Therapy (MFT) has long prided itself on systemic conceptualizations of clinical problems. MFT research and practice has shifted the thinking of families, communities, healthcare systems, and policy makers to consider relational interactions and systemic processes in the treatment of individual, family, community, and societal issues. However, research in marital and family therapy has largely adhered to linear analytic strategies rather than methods that are systemic in nature (Oka & Whiting, 2013). Linear and univariate statistics have been widely used to capture results of complex dynamics yet the employed analytic strategies often fail to capture the MFT systemic conceptualizations assumed within the conceptual frameworks. Without the application of systemic analytic strategies, the field misses and opportunity to capture deeper understandings of the interdependent mechanisms of change involved with MFT and systemic interventions.

Historically, trends in evaluating change in couple research have failed to account for the nonindependence of relational partners or used analytic strategies that violate nonindependence principles when handling couple data (Cook & Snyder, 2005). Cook and Snyder (2005) define the term nonindependence occurring in two scenarios: 1) there is a natural link between two dependent variable scores and 2) the scores of the dependent variables are related in such a way that knowing the value for one variable provides some set of information about the other variable (p. 133). Therefore, couple data accumulated from romantic partner dyads would tend to be both naturally and conceptual linked across various constructs than two randomly paired individuals. Two
significant problems arise as a result. First, there is an elevated risk for Type I and Type II errors resulting from nonindependent dyads being treated as independent from one another. Second, overlooking the nonindependence in relational dyads limits the ability to examine the more complex and in-depth aspects of couple dynamics and more specifically, how a change in one partner influences the change in the other partner (Cook & Snyder, 2005).

The emergence of dyadic data analysis (e.g., Kenny, Kashy, & Cook, 2006), is a useful, yet under-utilized approach to address this issue of nonindependence. Dyadic analysis is a form of multivariate statistics that accounts for the interdependence of data both in data handling and equation modeling (Kenny, Kashy, & Cook, 2006). Computational methods capable of rich systemic dynamics are becoming increasingly accessible and user-friendly, however, the uptake of such methods has been adequate at best. In order for MFT research to continue to grow and congruently represent systemic theoretical underpinnings, MFT research must continue this shift toward dyadic analysis and truly systemic research methodologies (Oka & Whiting, 2013; Wittenborn, Dolbin-MacNab, & Keiley, 2013).

To illustrate this limitation we can review the history of Emotionally Focused Couple Therapy (EFT; Johnson, 2004; Johnson & Greenberg, 1987). EFT is a premier couple therapy modality with extensive theoretical and empirical literatures supporting its principles and procedures. Although EFT has been shown to be effective in treating couple distress (Johnson, Hunsley, Greenberg, Schindler, 1999; Lebow, Chambers, Christensen, & Johnson, 2012), the outcome studies used to support these conclusions measure change using univariate analyses which overlooks the complexity of multiple
dynamics within the couple dyad. Therefore, the body of evidence associated with EFT is constrained — by the current reliance on univariate and individual outcome levels of analysis. This does not erode the evidence for EFT, but does miss an opportunity to better understand the robust interdependence within the couples and how, through a mechanistic lens, change occurs within these couples through the intervention.

This review first examines the empirical studies of the effectiveness of EFT, as EFT provides a solid base of evidence and therefore is a significant example of how multivariate approaches can bolster clinical research. Following our summation of EFT and its research, we will examine the current limitations in the EFT empirical evidence and offer suggestions for how future multivariate approaches can deepen the field’s understanding of EFT change processes. These limitations and suggestions can then be inferred to any systemic clinical intervention program of research.

**Emotionally Focused Therapy**

*Theory and Practice*

EFT is a brief, experiential approach to couple therapy that helps couples develop secure attachments with one another through expression of vulnerable affect, accompanying needs, and emotional responsiveness. Johnson (2004) outlines EFT in three different stages comprised of nine different steps. The three stages of EFT are assessment and cycle de-escalation, restructuring the relational bond, and consolidation and integration. The EFT therapist first works to map the couple’s negative interaction pattern or cycle. Next, the therapist moves alongside each partner to better understand individual behavior and uncover the underlying emotions that are at play during times of
conflict. EFT then helps the couple reach for each other from a position of primary affect or genuine need (Johnson, 2004). The EFT therapist carefully constructs enactments in which the couple interacts around sensitive topics, sharing deeper levels of vulnerability. These interventions help each partner to have a felt sense of security and newly formed trust with their partner through a repeated experiential process (Johnson, 2004).

EFT is rooted in attachment theory. Attachment theory (Bowlby, 1969; 1988), particularly as applied to adult love (e.g., Hazan & Shaver, 1987; Johnson et. al. 2013) provides a road map for clinical practice when addressing intimacy in couple relationships. Attachment in adult love relationships is based on principles of safety and security. Essentially it is the response to the question “When I need you, are you there?” Couples who experience secure attachment (Bowlby, 1969; 1988; Johnson, 2004) have a felt sense that their partner is dependable and reliable. Additionally, theorists across the field of couple therapy believe mutual expressions of vulnerability are paramount in the creation of secure attachment bonds (Fishbane, 2007; 2013; Johnson, 2004, 2008a, 2008b, Siegel, 2012). EFT uses an attachment lens to understand conflictual patterns of couple interaction and to guide interventions aimed at enhancing closeness and security in adult love relationships.

**EFT Research History**

EFT has a longstanding tradition of quantitative and process research (see; Wiebe & Johnson, 2016 ). It ranks among the most deeply researched theories of couple therapy showing valid and reliable clinical utilization to reduce couple distress and increase couple bonding. Furthermore, EFT researchers and clinicians have worked hard to
disseminate findings to support clinicians administering care worldwide. Therefore, EFT is generally recognized as evidence-based model of couples therapy based on its rigorous randomized trials and in-depth process research (Lebow, Chambers, Christensen, & Johnson, 2012). EFT (Johnson, 2004; Johnson & Greenberg, 1987) tends to produce a large effect size when compared to waitlist controls. For example, in meta-analysis incorporating findings from four randomized clinical trials of EFT, Johnson, Hunsley, Greenberg, and Schindler (1999) found that EFT yielded a Cohen’s $d$ of 1.3 and a 70-73% recovery rate for distressed couples. In addition, Johnson et al. (1999) found that 90% of couples reported higher degrees of satisfaction in their relationships after receiving EFT treatment and that these results appear to be stable over time (Clothier, Manion, Walker, & Johnson, 2002). Moreover, EFT has been rigorously tested with diverse populations, a host of different presenting problems, and has generally been found to be effective across these various treatment scenarios (Wiebe & Johnson, 2016a).

**Brief Overview of EFT Outcome Research Pre-2006**

In this section, we will review the core outcome studies of EFT. Beginning with a brief summary of studies up until 2006. The majority of our focus in this review is on studies from 2006 to present day. We chose this dichotomy to clearly define studies pre- and post the introduction of Dyadic Analysis (Kenny, Kashy, & Cook, 2006). Therefore, the focus for our review of these articles is largely to examine the analytic strategies employed and how univariate strategies restrict exploring systemic outcomes. Inclusion criteria for this section of the review are: 1) EFT outcome studies published after 2006. 2)
Studies which used a relationship satisfaction measure (e.g. DAS). 3) Studies that collected linked couple data.

The meta-analysis conducted by Johnson et al. (1999) examined the four most rigorous EFT outcome studies and demonstrated EFT effectiveness in treating couple distress. Results of Johnson et al. (1999) showed that 70%-73% of couples improved into a non-distressed range over a course of 10-12 sessions of EFT, with an 86% improvement rate over controls. But EFT research has stretched far beyond broadly defined effectiveness studies. After demonstrating the efficacy of EFT, researchers began examining the effectiveness of EFT across a range of populations and presenting issues. As a result of this work, moderate evidence supports EFT as an effective treatment for intimate relationships in distress and when one or both partner suffers with varying forms of stressors. For example, EFT has been found to reduce symptoms in which one partner suffers from posttraumatic stress disorder (PTSD; Johnson, 2002).

Early studies examined EFT in the treatment of couple distress for those couples who have a child with chronic illness. In a randomized trial of 32 couples with chronically ill children, Walker, Manion, Cloutier, and Johnson (1992) found that couples who received EFT treatment improved significantly in measures of relationship satisfaction and communication over couples who waitlist controls. In reference to EFT’s outcomes being sustained over time, Clothier, Manion, Gordon-Walker, and Johnson (2002) conducted a two-year follow up study of these couples finding no significant decline in relationship satisfaction. Denton, Burleson, Clark, Rodriguez, and Hobbs (2000) treated couples randomly assigned to 8 weeks of EFT. Results indicated that after
eight weeks of EFT therapy, couples improved significantly over waitlist controls on measures of dyadic adjustment and satisfaction and intimacy.

Strong links have been observed between individual symptomology, such as depression, and couple distress (Barbato, & D’Avanzo, 2008; Beach, Katz, Kim, & Brody, 2003; Chuick, Greenfeld, Greenberg, Shepard, Cochran, & Haley, 2009; Davila, Karney, Hall, & Bradbury, 2003; Lebow et al., 2012; Whisman, 2001; 2007; Whisman & Uebelacker, 2009; Whitton, Stanley, Markman, & Baucom, 2008). Empirical studies of EFT have also contributed to this large body of literature with smaller scale couple therapy studies examining change effects in depression symptoms. Dessaulles, Johnson, Denton (2003) examined couples in which the female partner suffered with depression. Couples receiving EFT were compared to couples with no EFT but with the female partner treated pharmacologically. Results showed that EFT was as effective as pharmacology in the reduction of female partner depressive symptoms yet women in the EFT group continued to show a lessening in symptoms at the 6-month follow up.

EFT research has included studies of adult attachment, attachment injuries, and attachment security. Process research indicates that an increase in emotional attunement between partners leads to significant change events and moves toward the healing of attachment injuries (Bradley & Furrow, 2004). Makinen and Johnson (2006) used EFT to treat couples in which the relationship had experienced at least one attachment injury, defined as a breach in trust that damaged an individual’s belief in their relationship (e.g., an affair). Twenty-four couples were treated with 13 sessions of EFT. Self-report measures such as the Attachment Injury Measure (AIM; Millikin, 2000), the Relationship Trust Scale (RTS; Hargrave & Sells, 1997), Experiences in Close Relationships (ECR;
Brennan, Clark, & Shaver, 1998) and DAS (Spanier, 1976) were used to track couple progress over the course of treatment. Both repeated measures MANOVA and chi-square were used to analyze these data. Results of paired sample t-tests showed resolved attachment injuries in 15 of the 24 couples. Within the 15 resolved couples, improved scores on the DAS were present. Results of Makinen & Johnson (2006) and a 3-year follow-up study conducted by (Halchuk, Makinen, & Johnson, 2010) suggest that EFT is effective in repairing attachment injuries through the facilitation of forgiveness and rebuilding trust processes and these improvements are stable over time.

**EFT Research Post-2006**

In this section, we will present a review of empirical literature published after the introduction of dyadic analysis. We briefly discuss the outcomes from these studies and provide a synopsis of the analytic strategies used to highlight future opportunities for systemic analysis in couple therapy. EFT outcome studies post 2006 are presented in Table 6.
<table>
<thead>
<tr>
<th>Study Author, date</th>
<th>Outcome Measure</th>
<th>Study Design</th>
<th>Participants (N = Couples)</th>
<th>Analytic Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wiebe et al. (2016a)*</td>
<td>DAS; ECR; Relationship Trust Scale</td>
<td>Single Group Design</td>
<td>N = 32</td>
<td>HLM</td>
</tr>
<tr>
<td>Wiebe et al. (2016b)*</td>
<td>DAS</td>
<td>Single Group Design</td>
<td>N = 32</td>
<td>HLM</td>
</tr>
<tr>
<td>Burgess Moser et al. (2016)*</td>
<td>DAS</td>
<td>Single Group Design</td>
<td>N = 30</td>
<td>HLM</td>
</tr>
<tr>
<td>Dalgleish et al. (2015a)*</td>
<td>DAS, ECR-RS, RTS</td>
<td>Single Group Design</td>
<td>N = 32</td>
<td>HLM</td>
</tr>
<tr>
<td>Dalgleish et al. (2015b)*</td>
<td>DAS; ECR</td>
<td>Single Group Design</td>
<td>N = 32</td>
<td>HLM</td>
</tr>
<tr>
<td>Najafi et al. (2015)**</td>
<td>DAS; WHOQOL</td>
<td>&quot;Semi-Experimental,&quot; with Randomization</td>
<td>N = 30</td>
<td>ANCOVA</td>
</tr>
<tr>
<td>Soleimani et al. (2015)**</td>
<td>DAS; Index of Sexual Satisfaction</td>
<td>&quot;Semi-Experimental,&quot; with Randomization</td>
<td>N = 30</td>
<td>ANCOVA</td>
</tr>
<tr>
<td>McRae et al. (2014)*</td>
<td>DAS</td>
<td>Single Group Design</td>
<td>N = 32</td>
<td>HLM</td>
</tr>
<tr>
<td>Dalton et al. (2013)</td>
<td>DAS</td>
<td>RCT</td>
<td>N = 32</td>
<td></td>
</tr>
<tr>
<td>McLean et al. (2013)</td>
<td>RDAS</td>
<td>RCT</td>
<td>N = 42</td>
<td>ANCOVA &amp; MLM</td>
</tr>
<tr>
<td>Denton et al. (2012)</td>
<td>IDS-C; QMI</td>
<td>RCT</td>
<td>N = 24</td>
<td>Growth Analysis</td>
</tr>
<tr>
<td>MacIntosh &amp; Johnson (2008)</td>
<td>DAS, TSI, CAPS</td>
<td>Single Group Design</td>
<td>N = 10</td>
<td>T-tests/Thematic Analysis</td>
</tr>
</tbody>
</table>
MacIntosh and Johnson (2008) continued research on the efficacy of EFT in treating couples in which one partner was a survivor of childhood sexual abuse. Ten couples received 11-26 sessions of EFT. Univariate analyses revealed a significant increase in relationship satisfaction and reduction in trauma symptoms. Dalton, Greenman, Classen, and Johnshon (2013) further examined the effectives of EFT in treating couples with a history of childhood sexual abuse. Research used a randomized control design to demonstrate effectiveness of EFT with couples in which the female partner was a survivor of childhood abuse. Thirty-two couples were randomly assigned to EFT treatment or control group. Trauma scales such as the Childhood Trauma Questionnaire-Short Form (CTQ; Bernstein & Fink, 1998) and the Trauma Symptom Inventory (TSI; Briere, 1995) as well as the DAS were used to track changes in individual symptoms of female childhood abuse survivors and in relationship satisfaction over the course of treatment. ANCOVA and hierarchal regression models were used to measure differences between the EFT treatment group and the control group. Significant improvements were seen in couples who received EFT treatment in relationship satisfaction with a medium effect size, while women in the EFT group reported improvements in overall trauma symptology and experienced a large effect from EFT treatment.

Denton, Wittenborn, and Golden (2012) examined 24 couples in which the female partner met criteria for Major Depressive Disorder (MDD). The purpose of the study was to compare medication for MDD to EFT combine with medication for MDD. Growth Analysis was used to examine change trajectories in relationship quality and depression severity. Results showed that both the medication and medication + EFT groups lead to a
decrease in depression however the medication + EFT group also saw a significant improvement in relationship quality. An important note from Denton, Wittenborn, and Golden (2012) was that growth analysis was chosen over dyadic analysis due to sample size. “Examining responses of both partners would have required the practice of dyadic data analytic procedures, or fitted models using linked data, because independence of data could not be assumed (Kenny, Kashy, & Cook, 2006). Unfortunately, models of this level of sophistication could not be fit with the current sample size” (p. 29). Therefore, despite the collection of dyadic data, only female individual scores were modeled using growth analysis.

EFT researchers have also been interested in continuing on threads of examining mode effectiveness for illness in couples and families. In a randomized control trial, Mclean, Walton, Rodin, Esplen, and Jones (2013) examined 42 couples in which the female partner was diagnosed with terminal breast cancer. Couples were assigned to either a standard care group or standard care group plus EFT. Results of various ANCOVAS with main effects set as treatment, patient status, and sex showed no significant effect of sex and no significant interaction effects. Multilevel modeling results showed the same. There were however significant improvements on the Revised Dyadic Adjustment Scale (RDAS; Busby, Crane, & Christensen, 1995) for couples receiving EFT.

McRae, Dalgleish, Johnson, Burgess Moser, and Killian (2014) continued the analytic strategy of using HLM to model effects of EFT. McRae et al. (2014) used HLM to predict if emotion regulation taken at baseline, emotional self-awareness, and emotion control would lead to a softening event—a pivotal change event in EFT (Bradley &
Furrow, 2004, 2007). Results did not support the hypothesized predictive relationship between emotion regulation at baseline and a softening event in couple therapy.

Soleimani et al. (2015) employed a pre and post design to examine the efficacy of EFT treatment for couples with low sexual satisfaction and low overall relationship satisfaction. Results of covariance analyses revealed a significant difference in relationship and sexual satisfaction scores in pre and post tests for couples receiving 10, 120-minute sessions of EFT in the sample group. Using the same sample of 30 couples experiencing infertility as Soleimani et al. (2015), Najafi, Soleimani, Ahmadi, Javidi, and Kamkar (2015) evaluated if EFT is effective in improving marital adjustment and quality of life. With the same study design as Soleimani et al. (2015), results of ANCOVAs determined a significant relationship between marital adjustment and quality of life. Results indicated that EFT significantly improves dimensions of relationship satisfaction including dyadic consensus, cohesion, satisfaction, and affectional expression. Quality of life was also improved for couples in the EFT treatment group (Najafi et al. 2015).

A series of recent studies conducted by EFT researchers attempt to account for covariance of dependent variables using HLM. Dalgleish, Johnson, Burgess Moser, Lafontaine, Wiebe, and Tasca, (2015) sought to uncover specific predictors of change in marital satisfaction throughout a 21-session EFT treatment protocol. Thirty-two moderately distressed couples participated in the study. In this single group design, participating couples completed self-report measures of relationship satisfaction and attachment security. Hierarchal linear modeling was used to analyze data. Results indicated that individuals who experienced higher attachment anxiety tended to experience the most improvement after EFT. A second study using the same dataset
from Dalgleish, Johnson, Burgess Moser, Wiebe, and Tasca, (2015) pulled from past research from Bradley & Johnson (2005) identifying key change moments in EFT. Research from Bradley & Furrow (2004, 2007), and later research by Furrow, Edwards, Choi, & Bradley (2012) identify the *blamer softening event* in EFT as a key process that often takes place for couples who experience the largest shifts in relationship satisfaction. Dalgleish et al. (2015) used HLM to nest individual level data at level 1 within couple data at level 2 and used the couple as the unit of analysis. Levels of attachment security were also added to the model at level 1. Results showed that neither attachment anxiety or attachment avoidance was predictive of a blamer softening event. Second, Dalgleish et al. (2015) used HLM to examine the relationship between attachment, a softening event, and a change in relationship satisfaction. When controlling for DAS scores pre-EFT, results showed that a softening event did predict higher levels of relationship satisfaction, accounting for 17.7% of couples post-treatment DAS scores.

Weibe, Johnson, Burges Moser, Dalgleish, and Tasca (2016) investigated relationship-specific attachment security as a predictor for long-term change in relationship satisfaction. Researchers collected data from 32 couples receiving an average of 21 sessions of EFT over twenty-four months. Using HLM, results indicated an association between lower attachment anxiety and avoidance pre-therapy and higher relationship satisfaction scores post-therapy. The strongest predictor of relationship satisfaction over the long-term was a decrease in attachment avoidance (Weibe, et al. 2016a). Weibe, et al. (2016b) examined change in attachment and relationship satisfaction pre-therapy through a twenty-four month follow up. The same 32 couples were examined as the previous study. HLM results concluded a significant growth trajectory

Finally, Burgess Moser, et al. (2016) sought to investigate the session-by-session changes in attachment security between intimate partners receiving EFT. Researchers used the same 32 couples from Weibe, et al (2016a; 2016b). Although repeated measures of dependent variables were modeled at level 1 and nested within individual partners at level 2 and individuals were nested within couples at level 3, dependence in the data was high so only level 3 was used to model effects. Results revealed that couples were able to significantly decrease relationship-specific attachment avoidance and if completed a blamer softening event, significantly decreased relationship-specific attachment anxiety. Additionally, session-by-session effects showed that significant decreases in attachment anxiety and avoidance were associated with increases in relationship satisfaction.

**Limitations of Current Trends in Couple Research**

*Limitations of Univariate Analyses*

In the early years of couple therapy research, most studies relied on the univariate analyses available at the time. Studies of this kind intended to make meaningful contributions to the growth and application of couple therapy research and indeed did make such contributions however there were significant limitations. Perhaps the most significant limitation of univariate analysis is the violation of independence within dependent variables (Tabachnick & Fidell, 2013). Dependent variable scores that would theoretically be linked and/or have a significant effect on one another, such as husband
and wife satisfaction scores, are not truly independent and therefore violate univariate assumptions.

A second issue is how data is treated when applying univariate analyses. For example, in many cases (e.g. Clothier, et al. 2002; Denton, et al. 2000) dependent variable scores from both partners on dyadic measures of attachment such as the DAS are aggregated. When this occurs meaningful data is lost. For example, the scale for the RDAS (Busby, Crane, & Christensen, 1995; Spanier & Thompson 1982) ranger from 0-69 with the cutoff score of 48 classifying individuals and couples below 48 as having relationship distress. If scores are recorded individually and aggregated with partner scores, various interpretations errors could occur. First, both partners are moderately satisfied with scores just above cutoff of 49 yet when the couple total score is taken by adding husband and wife scores together and comparing them to the added total scale for the measure, the couple could numerically appear distressed. Second, aggregating partner scores could be problematic in that one partner could be extremely satisfied while the other is moderately to severely distressed. Therefore, by averaging the scores or by adding them together, the couple could appear to be slightly above the distressed threshold. Both of these scenarios are unavoidable at the univariate level and meaningful within-couple data is lost. Moreover, results from studies in this vein may help identify group difference or overall treatment effectiveness compared to controls, but it fails to capture the systemic landscape between intimate partner dyads. Results then become less applicable to couple therapy and thus contributing to the research-clinician gap discussed by (Oka & Whiting, 2103; Sprenkle, 2003).
Univariate analysis limitations are more in the awareness of family scientists evidenced by the increased used in multivariate statistics, however researchers should continue to be mindful of systemic theory and dependency within data at multiple levels of research protocol including study planning, data collection, and analysis.

**Limitations of Multivariate Analyses**

In an effort to recognize interdependence of data in couple therapy research, and in the case of this review, EFT research, investigators have shifted toward multivariate statistics to deepen analysis and gain a more complex understanding of couple interaction (e.g. Dalgleish et al., 2015; Soleimani et al., 2015; Weibe, et al., 2016a; 2016b). This is a step toward multivariate analysis which lands closer to systemic conceptualizations embedded MFT, however, considerable limitations remain.

One method often employed is an analysis of covariance (ANCOVA) which Tabachnick and Fidell (2013) remind us is not actually a multivariate technique because it involves using only one dependent variable. Nevertheless, researchers such as Soleimani et al., (2015) have used ANCOVA to examine couple interaction. There are both theoretical and application limitations of ANCOVA for couple research. Perhaps the biggest limitation is a theoretical limitation in which one cannot infer causality as the test does not assure changes in the DV were caused by the IV (Tabachnick & Fidell, 2013). This requires a logical interpretation by researchers. Second, choosing covarites is problematic in couple therapy research. In theory, covarates should be correlated with the DV and not with each other. If not, data will have a problem with multicollinearity. In the case of intimate partner dyads, one would reasonably assume that scores on a
dependent measure are indeed correlated with partner scores on the same measure and not independent from one another violating this assumption.

Practical application issues beyond multicollinearity also arise when using ANCOVA with dyadic data. Tabachnick and Fidell (2013) state that ANCOVA assumes reliability of the covariates and linearity between pairs of covariates and between covariates and the dependent variable as well as homogeneity of regression. Moreover, ANCOVA is often favored in experimental studies however unequal sample sizes across treatment groups can result in decreased statistical power.

Recent trends in EFT research has relied on hierarchal linear modeling (HLM, Raudenbush & Bryk, 2002). Several of the most recent studies of EFT have opted to use HLM to treat nested data (e.g. Weibe, et al. 2016a; 2016b). For example, Weibe et al. (2016b) used a three-level model which examined repeated measure across time at level 1, nested within individuals at level 2, and individuals nested within couples at level 3. One advantage researchers using HLM look to capture is the opportunity to include predictors at each level and track differences between groups in mean scores, slopes, and cross-level interactions (Tabachnick & Fidell, 2013). Such is it the case with Weibe et al. (2016b) who used HLM to determine if changes in attachment security predict relationship satisfaction. Tabachnick and Fidell (2013) point out the tendency for HLM studies to have issues with collinearity among predictors across levels and therefore resulting in non-significant main effects or a model that does not converge based on singularity or multicollinearity. Burgess Moser, et al. (2016) had this limitation and therefore results were constrained to only the third level thus losing predictive significance through level 1 and 2.
Lastly, a common problem many couple therapy studies face is sample size. It should be noted that collecting couple data from a large sample in a longitudinal design is difficult to achieve. Moreover, collecting these type of dyadic data in a randomized control design could be especially difficult due to recruitment and attrition. Power of a given study is often attributed to sample size which restricts many empirical studies that would otherwise prefer to use dyadic analysis to the use of multivariate methods such as HLM. Denton, Wittenborn, and Golden (2012) is an example of a study that collected dyadic data with a potential opportunity for dyadic analysis however the sample size was too small (N = 24) and HLM was chosen instead.

**Next Steps in Dyadic Analysis for EFT Research**

EFT has a strong program of research and in turn makes for a quintessential case example of how systemic models with strong empirical foundations can begin to shift focus to dyadic analytic strategies in order create a deeper understanding of relational dynamics. New forms of systemic practice in MFT research are available and if used, will help strengthen the EFT body of research. For example, the Actor-Partner Interdependence Model (APIM; Kenny, Kashy, & Cook, 2006) is a form of dyadic analysis usually executed using Structural Equation Modeling (SEM). This confirmatory method of analysis accounts for covariance that is undoubtedly present in couple relationships; something that traditional methods of analysis cannot do when applied to interactional processes (e.g. Cook & Snyder, 2005). Using APIM in EFT research would allow for more systemically relevant research questions to be answered. Some examples are: How does couple attachment change over time and does a change in one partner’s
level of attachment predict their partner’s change in attachment security? Does one partner’s increase in attachment security lead to his/her increase in marital satisfaction and does this affect their partner’s level of satisfaction? The current EFT research prevents us from comprehensively answering these questions.

The use of APIM is more appropriate to capture systemic effects and relationships between independent and dependent variables that may be crucial to understanding the efficacy and process function of couple therapy. To illustrate this point we can examine the variable of gender in couple therapy studies. EFT is keenly attuned to principals of attachment as a way to build secure bonds in intimate partner dyads and holds the theoretical hypothesis that relationship satisfaction is increased by increasing relationship-specific attachment security. For example, studies by Weibe et al. (2016a) and Dalgleish (2015a) examined effects of attachment on relationship satisfaction using hierarchal linear modeling. Taken together there is some preliminary evidence to support relationship specific attachment security influences relationship satisfaction. Issues of sample size aside, studies like these would be perhaps better served using APIM to capture significant directional effects and cross-partner effects. For example, APIM of attachment security and relationship satisfaction may reveal that female level of attachment anxiety directly affects male partner satisfaction or that male avoidance directly effects female partner satisfaction. Results may also offer insights as to whether or not attachment security in an intimate partner relationship is equally meaningful to both men and women. Findings of this nature currently can only be inferred theoretically. An APIM examination would give richer insights into couple interaction and account for
possible gender differences translating to useful information for practicing couple therapists.

EFT process research, and mechanisms of change research in couple therapy more broadly, will continue to be strengthened with the application of APIM. Beyond looking at overall change, APIM allows for in-depth analysis of step by step processes in couple therapy that significantly affect change. Dalgleish et al. (2015b) examined how relationship satisfaction was altered in couples who experienced a blamer softening event during the course of EFT treatment. APIM could first lead to a quantitative understanding of softening events evaluating the effects of each therapeutic step in the intervention. Second, results would offer insights into how each partner is or is not affected by the softening event. Using cross-lagged models will also further an understanding of how specific interactions lead to changes over time and which interventions at a particular time point are most significant.

While EFT continues to be a leader in the field of couple therapy and serves an example of a strong program of research that other therapy models can follow, future EFT research should focus attention toward systemic data analysis to narrow the gap between research and clinical practice. Oka and Whiting (2013) point out that MFT research has often been constrained by linear methods inferring causality rather than accurately representing systemic MFT theory and conceptualization. The authors make the argument that this misrepresentation is one major component contributing to the researcher-practitioner gap in our field. This issue can be addressed by first focusing attention to study design and developing programs of research that are mindful of dyadic analysis and collects dyadic data. Second, methods such as APIM if used more frequently
may help illuminate specific change events in the therapy process that predict change on specific outcomes. Results from studies conducted in this vein may better support clinicians in clinical practice and instill confidence that interventions being implemented are empirically supported.

Summary

Emotionally Focused Couple Therapy has deep traditions of soundly conducted research. EFT is founded upon evidence-based principles and has been demonstrated to be among the most effective forms of couple therapy. Not only is EFT supported by a wealth of outcome research, it has also engaged in several qualitative and process studies to better understand specific changing events in couple therapy (e.g. Bradley & Furrow 2004; Furrow et. al. 2012). Although EFT is effective and as clinicians we know how it works, this review of the literature points to specific areas of growth in the coming years for EFT research. Namely, EFT research needs to conduct studies using dyadic methods of data analysis to reflect the systemic nature of clinical practice and to best support clinicians implementing the model.

With the emergence and refinement of dyadic analysis methods comes an opportunity for EFT to advance throughout research, theory, and practice. By using dyadic methods such as APIM, EFT can continue to be a frontrunner in couple therapy treatment. Dyadic research will also be more helpful to clinicians, and ultimately clients, than previous linear methods of data analysis. Research done in a dyadic fashion will help us as a field to understand not just how an individual changes, but how family systems change throughout treatment.
EFT theory is nested within attachment theory. It uses a developmental view of attachment and adaptation and applies it to adult love relationships. One area dyadic research can help EFT theory specifically is being able to demonstrate secure attachment actually leads to an increase in relationship satisfaction. For example, future studies using APIM could look at how attachment changes in one partner affect attachment security in the other partner. Additionally, similar studies would determine if an increase in attachment security corresponds with an increase in relationship satisfaction. Using APIM would also be sensitive enough to see if one partner had an increase in relationship satisfaction over the other with respect to an increase in secure attachment.

Future studies such as the ones suggested in this review have potential crucial practice implications. For instance, if we learn from APIM studies that relationship satisfaction for one gender is dependent on secure attachment more so than another gender then clinicians can tailor interventions to meet the needs of gender differences in couple therapy. Secondly, APIM studies will help add to mechanisms of change research. For instance, EFT works to reengage a withdrawn partner before working with the escalated partner to down-regulate affect. Dyadic research is capable of more closely examining the relationship between a withdrawer reengaging event and changes in satisfaction in the other partner. The more commonly used linear methods of data analysis have a crucial rule not to violate independence of variables. That is, we cannot measure variables that are dependent on each other with many of the linear methods. However, in clinical practice, the interdependence or covariance between variables is precisely what we are interested in. Clinicians working from a systemic perspective are constantly working to understand and help couple partners interact in ways that are
responsive, attuned, and equitable. These interventions presuppose interdependence of couple partners, e.g. a husband’s ability to attune to his wife’s needs leads to higher couple satisfaction and higher individual satisfaction for her. Dyadic research in EFT is needed to support clinicians and their work with clients as well as narrow the clinician-researcher gap.
References


CHAPTER SEVEN

SUMMARY

Aim 1: Attachment and Relationship Satisfaction APIM

This dissertation examined two specific aims resulting in two separate publishable manuscripts. Aim one examined the causal and reciprocal link between attachment security and relationship satisfaction in a sample of United States Marines and their partner. Empirical inquiry has begun to show a significant relationship between the constructs of attachment and relationship satisfaction (e.g. Burgess Moser et al. 2015; Dalgleish 2015a, 2015b; Wiebe & Johnson, 2016) however the results have been unable to determine a causal relationship. Most recently, Actor-Partner Interdependence Modeling (Kenny, Kashy, & Cook, 2006) has been used to examine the effects of attachment on relationship satisfaction. This method of analysis allows for a more in-depth of analysis of results which fit more consistently with the foundational systemic conceptualizations of Marriage and Family Therapy (MFT). Studies from Karantzas, Feeney, Goncalves, and McCabe (2014) and Sadikaj, Moskowitz, and Zuroff (2015) used APIM to examine the relationship between attachment and couple satisfaction finding that indeed the two variables are related. While these conclusions provided promising insights, limitations of sample size and study design left gaps in the literature for further studies to explore.

Aim one of this dissertation used APIM to continue to build on previous findings while addressing limitations of past research. Aim one examines 78 Marine couples of 12 months, administering the Experiences in Close Relationships revised scale (ECR-R; Fraley, Waller, & Brennan, 2000) and the Revised Dyadic Adjustment Scale (RDAS;
Spanier & Thompson, 1982; Busby, Christensen, Carne, & Larson, 1995) to both Marine and romantic partner every three months for a total of four time points of measurement.

Results support previous research suggesting there is a significant relationship between relationship satisfaction and attachment. Trends in the data suggest the Military population may experience differences in how these two constructs relate to one another than in the general population. For example, the length of time of the relationship, deployment or prolonged partnership separation, and the phenomenon of expedited coupling and incentivized marriage in the Military appears to have impacted results.

Results of the study help to outline the need for early relationship education and enrichment in order to prevent premature marriage and subsequently decrease the high divorce rate among young Marine couples.

**Limitations**

The current study had several limitations that should be considered. Results of the study could not fully address the causal relationship between attachment and relationship satisfaction. First, it is worth noting that our sample is of young couples who have been together between three months and one year. The sample is also from the Military population which faces stressors that often differ from civilian populations. Therefore, results of our study may not be generalizable to other populations. Second, although a strength of our study is the longitudinal cross-lagged design, we may have been limited by having only a one-year term for data collection. Interesting findings emerged at the nine and twelve-month mark and therefore had we collected data for two years or more the data may have produced other results. Third, again on the note of time, effects of
attachment and relationship satisfaction could have been constrained due to the fact that these couples have been together for well under two years. Results may differ in populations with couples that have been in romantic partnerships for two years or more. Research from Hazan and Zeifman (1994) demonstrated it takes an average of two years from relationship partners to create a secure attachment bond that is more meaningful to the partners than those bonds shared with their parents or peers. Similar findings suggesting consolidation of romantic partnerships takes about two years (Fagundes & Schindler, 2011; Hazan & Zeifman, 1999; Mikulincer, 2006) provide perspective for the findings in the current study. Therefore, the duration of time in the study may not have been long enough to capture the full-scope of interaction between attachment and relationship satisfaction. In addition, our sample size may have constrained our findings with moderate potential for Type II error. Lastly, the effects of deployment were not controlled for and we cannot account for how deployment mid-study affected results.

**Implications**

Broadly, this research indicates that actor and partner effects are present in the interaction of attachment and relationship satisfaction (e.g. Conradi et al., 2017). This may suggest that in clinical situations, working on individual perceptions of their partner and relationship may hold a substantial degree of importance. In other words, couple therapy that is emphasizes both the within person and between partner dynamics may produce the largest effect on improving relationship satisfaction.

This study also provides support for (Lloyd et al., 2015, 2017) which calls for Marines to attend relationship education and enrichment training in order to make
informed decisions about marriage and decrease the divorce rate within the Military. The limited cross-partner effects in our study would seem to suggest that these partners are relatively unfamiliar with one another and have not created a romantic bond. Therefore, relationship education and enrichment may be a crucial intervention to help young Marine couples get to know each other and outline helpful strategies for navigating romantic partnerships in Military culture.

At a more broadly defined policy level, results of our study could indicate that the incentive to be married in the Military is high and leads to contract marriages that are less defined by love and intimacy and more heavily rooted in financial benefit. This should however be interpreted with caution as there was no way for us to be sure contract partnerships were in fact in our sample.

Drawing from our results, future research can be improved in a few distinct ways: 1) Future longitudinal studies of attachment and relationship satisfaction should consider including couples who have been dating or married for a minimum of two years in order to better capture causation effects of relationship-specific attachment on relationship satisfaction. 2) Studies should attempt to use samples that have a wider range of ages. 3) Future longitudinal studies would do well to include a larger sample size to increase depth and strength of results. 4) We would recommend the design include at least 24 moths of data collection to enhance results.

**Relevant Changes**

There were only minimal changes to this study following the proposal. First, as is often the case with secondary data, my sample limited more than I had anticipated. My
proposal included a minimum of 80 couples however I was only able to include 78 couples in this study. This was due to various factors including only being able to include heterosexual couples for purposes of distinguishability and due to my inclusion criteria that couples would only be included if they completed four time points of data collection. Second, per committee suggestion, variance of treatment conditions in the macro-level iRelate study was examined prior to dyadic analysis. Repeated-measures ANOVA were used, determining there were no significant effects of treatment condition and therefore did not need to be controlled for in the analysis. Lastly, the total score of relationship satisfaction was used rather than the subscales of the RDAS. There were two reasons for this decision: One, for parsimony and to ensure the model could convert during analysis. Two, clinically, the total score of the RDAS is more commonly used than the subscales of the RDAS.

**Aim 2: EFT Research Mechanisms Review**

Aim two of this dissertation examined the existing outcome research on Emotionally Focused Therapy (EFT, Johnson 2004; Johnson & Greenberg, 1987). EFT has strong traditions of research and could be considered one of the most diligently researched systemic models of couple therapy to date. While the research on EFT is strong, the use of univariate analyses prior to 2006 and the limited use of multivariate analyses post 2006 has constrained the results. The review in Aim 2 examined the EFT outcome literature focusing on studies after 2006 which was the year Dyadic Analysis (Kenny, Kashy, & Cook, 2006) was published and put into practice. This review credits the strong foundational research of EFT and encourages EFT to consider using APIM to
deepen findings and remain the leader of quantitative inquiry among systemic therapy models.

**Implications**

Dyadic Analysis better fit with systemic conceptualization germane to MFT by accounting for interdependence of independent and dependent variables. Oka and Whiting (2013) and Wittenborn, Dolbin-MacNab, & Keiley (2013) have suggested that dyadic research is needed to account for interdependence of related partners offering more in-depth results as well as closing the researcher-clinician gap often cited in the field. This review follows in a similar vein to Cook & Snyder (2005) which shows how principles of accounting for nonidependence of data can bolster interactional findings. This review can help to illuminate directions for future EFT research and can be applied to any program of research interested in systemic interaction. Studies which use APIM can help to outline specific mechanisms of change in the therapy process that will help clinicians treat couple and family systems effectively.

**Relevant Changes**

There was only one change made to the Aim two after the proposal. The organization of the manuscript was changed for clarity. This change resulted in the manuscript to divide the EFT literature by the date 2006, which was dyadic analysis was published (Kenny, Kashy, & Cook, 2006). Studies after 2006 were analyzed more in depth for analytic strategies used.
Next Steps

The conclusion of this dissertation presents opportunities for next steps in my research, clinical work, and career moving forward. Aim one opens the door to future research endeavors including continued research with Military data. Results of my study indicate that early relationship education and enrichment are necessary for the Marine Corps. As a result, continued evaluation and effectiveness research of iRelate is indicated. Additional data collection from the program of research used in this study may lend itself to future examination. Should more couple data be collected over the next 1-3 years, reexamining the findings of this study with more participants and a longer cycle of data collection could yield meaningful results. My goal is to continue this program of research to continue to investigate the causal and reciprocal nature of attachment and relationship satisfaction.

Aim two is a call to action for EFT and systemic therapy as a whole to consider dyadic analysis as an analytic strategy that better fits systemic conceptualization and could produce significant results for Marriage and Family Therapists and clients seeking their services. My future research interests are to remain engaged and work with the EFT community to design a study and/or analyze existing data using APIM to continue to build on EFT efficacy research.

These research steps are followed closely by my clinical next steps and together highlight my career goals. Clinically, this dissertation helps sharpen my focus on evidence-based practice and uncovers viable options for how to increase empirical support for clinical practice. As a couple therapist, these findings are a beginning to an understanding of the role of attachment on relationship satisfaction from a quantitative
perspective. These results provide confidence in my work as a couple therapist to include attachment in conceptualizing and treating relationship distress. Currently in my practice I see a good number of Marine couples given my location close to the Camp Pendleton Marine Base. The results of my research will help my work with these couples in several ways. First, assessing for how long couples have been together, how they met, and their process of courtship may be in fact far more crucial to assess than the general population and may positively affect therapy. Second, providing relationship education and working on both partners discussing their expectations of marriage/relationship could prove vital. Third, continuing to practice from an attachment-informed EFT perspective could offer an effective approach to helping Marine couples.

Finally, my career goals include teaching beyond my research and clinical practice. The work in this dissertation will help achieve these goals. First, dyadic analysis is an underused strategy in family science. MFT research can continue to be supported by methodologies like APIM. As an instructor, I feel I can make an impact on the field by educating and encouraging the use of APIM and dyadic analysis at the master’s and doctoral level. Second, this study is one of many in a program of research at the Military of which I plan to be a part of. Funded research at the Military is gaining interest in examining various problems such as suicide, divorce, mission readiness, etc. from a systems perspective. My colleagues and I plan to be a part of these endeavors moving forward to support the US Military with sound research considering the impacts of family systems on individual and relational health.
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