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The Relationship Between Married Partners' Individual and Relationship Distress: An Actor-Partner Analysis of Low-income, Racially and Ethnically Diverse Couples in Relationship Education

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THE RELATIONSHIP BETWEEN MARRIED PARTNERS' INDIVIDUAL AND
RELATIONSHIP DISTRESS: AN ACTOR-PARTNER ANALYSIS OF LOW-INCOME,
RACIALLY AND ETHNICALLY DIVERSE COUPLES IN RELATIONSHIP EDUCATION

by

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ABSTRACT

Couples experiencing relationship distress often require professional help, such as counseling and couple and relationship education (CRE). Research recently discovered that among couples in counseling, a circular relationship exists between individual and relationship distress—stress begets stress. Until this study, a similar examination had not been conducted among couples selecting CRE. This study examined the relationship between individual and relationship distress among married couples that had children, were from predominantly low-income and racially and ethnically diverse backgrounds, and selected CRE. A correlational research design was employed and framed in the social interdependence theory. The actor-partner interdependence model was conducted within a three-level hierarchical model. The results confirmed that a circular relationship exists between individual and relationship distress—distress begets distress. Within the *circular model of individual and relational functioning,* personal individual distress predicted partner individual distress as well as personal and partner relationship distress, and personal relationship distress predicted personal individual distress and partner relationship distress. The extent to which distress begot distress was stronger among women, those with low income, and those who were unemployed. The results also revealed a *continuum of individual and relational functioning*. Dyad members interact along a continuum from intrapersonal individual functioning to interpersonal relational functioning. The continua meet at the *nexus of negotiation* or the heart of interpersonal interaction, where dyad members communicate and make decisions, among other actions. Implications related to the findings of this study as well as inspirations for future research are discussed.

Dedication

For Teresa, Magdalena, Monica, and Peter

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The journey toward achieving this goal began nearly 25 years ago as a freshman in college. Along the way, many people inspired, mentored, redirected, and supported me. Without them, I could not have succeeded. David and Beverly (my parents), you were my first inspiration to help others. You have believed in me all this time; you continue to inspire through words and model. Teresa, my wife, you were with me more than 20 years ago when I first dreamt of earning a Ph.D., and have been at my side during every step that has led me here. Your patience through the process has been remarkable. Thank you for believing in me and supporting me, for reading drafts, and being an amazing mother to our children. You are the cornerstone of my wishes, hopes, and dreams. My children, Magdalena, Monica, and Peter, you have been a great source of support for me and have sacrificed much during this process. Thank you for your patience, your ability to keep life simple, and our impromptu talks about relationships and life—you inspire me to be better. Dr. Mark Young, my long-time mentor in the art of helping and in life, you gave me my first chance as a Master's student. You are the catalyst that helped start the process of me becoming a professional helper. I have enjoyed working together for the past 20 years. I am humbled and overjoyed to have continued this journey with you to this point of becoming a scholar and statistician. I look forward to more ventures together. Charlie Peters, my mentor in business and politics, thank you for the helping me acknowledge that perfection was the enemy of my good enough—I'm still working on it. Dr. Andrew Daire, my mentor in research and methodology, you have the rare ability to conceptualize the big picture and capture the concrete details at the same time. Thank you for reminding me to have fun in addition to working hard.

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CHAPTER ONE: INTRODUCTION

Since 1974, the number of married couples that have experienced relationship-threatening distress has gradually increased (Hawkins & Fackrell, 2011). Most of the public as well as professional helpers agree that most couples marry wishing, hoping, and dreaming of long-lasting and mutually pleasurable relationships (Munyon, 2012). Although the majority of couples that marry do not envision mounting discord and divorce in their future, a new statistic has emerged; 50 percent of married couples divorce (Center for Disease Control and Prevention [CDC], 2010). There are limitations to this CDC reported divorce rate. For example, only 44 states and the District of Columbia reported divorce-related data. California, Georgia, Hawaii, Indiana, Louisiana, and Minnesota did not report divorce data. Additionally, although the number of households headed by cohabiting couples has risen to its highest level in United States history, the CDC-reported divorce data does not account for the number of these couples that have chosen to end their relationships. Nevertheless, the fact persists that a large percentage of couples that choose to marry decide subsequently to divorce.

Despite limitations in the data reported by states, longitudinal studies of marriage have confirmed that for most couples starting out, marriage proves to be satisfying and fulfilling. On the other hand, relationship satisfaction begins to wane within the first 10 years (Fincham & Bradbury, 1987). Members of couples commonly experience negative interactions with each other periodically throughout their relationships, such as disagreements and disappointment. However, frequent or prolonged negative interactions can be a source of intense emotional pain

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(Markman, 1978; Gordon, 1990; Karney & Bradbury, 1995), and eventually lead to feelings of disillusionment and dissatisfaction with the relationship (Gottman & Notarius, 2000). The cumulative effect of these negative interactions and feelings of dissatisfaction are referred to as *relationship distress*, which affects about two-thirds of married couples (Karney & Bradbury, 1995; Markman, 1978). Relationship distress is among the chief reasons that most of these couples reach the crossroads of divorce where they find themselves deciding whether to work on saving their relationship or ending it (Hawkins & Fackrell, 2011).

In addition to experiencing periodic or persistent negative interactions with each other, partners in the relationship may also periodically experience reductions in psychological health (e.g., stress); this is a typical and expected part of the human experience. However, when individual psychological health decreases to the point of impairing function in social relationships, occupations, and other areas of importance, individuals have become distressed (4th ed., text rev; *DSM-IV-TR;* American Psychiatric Association, 2000). This state of functioning is generally referred to as *individual distress*.

Research of intimate partners from multiple fields, such as social psychology and sociology, have discovered a circular relationship between individual distress and the distress individuals experience in their relationships (Whisman & Uebelacker, 2006). For example, when partners work cooperatively toward a shared goal, they typically experience increased relationship satisfaction, which has been directly correlated to an increase in psychological health. However, when they work competitively toward their own goals (or impede the goal of the other partner), they experience a decrease in individual psychological health, which has been

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correlated with decreased relationship distress (Johnson & Johnson, 2005). Thus, it is likely that when couples experience relationship distress, one or both partners is also experiencing individual distress, which in turn begets additional relationship distress (Lebow, Chambers, Christensen, & Johnson, 2012). This distress-begetting pattern may result in a worsening spiral effect that is often difficult for couples and individual partners to overcome.

Thus, intimate partners who are unsuccessful at reducing their individual and relationship distress on their own may require professional help (Carr, 2011; DeMaria, 2005), and cite their distress as the most important or common reason for seeking help (Fincham & Bradbury, 1987; Hawkins & Fackrell, 2011). Counseling, including conjoint couples counseling, has long been the usual choice for couples that are experiencing distress and seeking professional help (Christensen, Atkins, Baucom & Yi, 2010; Christensen, Atkins, Yi, Baucom & George, 2006; Long & Young, 2007). However, over the last three decades couples and relationship education (CRE), a psychoeducational treatment, has also become a source of assistance for couples in distress (DeMaria, 2005; Halford, 2011; Hawkins, Carroll, Doherty, & Willoughby, 2004). Although both interventions help couples to enhance their relationships, there are distinct differences between the two. Couples counseling is a specific form of counseling that occurs typically in a conjoint session with one or more counselors and the couple in a private, professional setting. Counselors focus on using therapeutic skills and interventions to reduce relationship distress and improving behavioral, cognitive, familial, and emotional aspects of the relationship (e.g., Carr, 2011; Christensen, Atkins, Baucom & Yi, 2010; Christensen, Atkins, Yi, Baucom & George, 2006; Long & Young, 2007). Although couples counseling can be brief (e.g.,

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six weeks), it is often conducted until the couple has reached their goal. On the other hand, CRE is distinctly different from counseling. CRE is "education for couples in committed relationships, which includes couples who are married or planning to marry and couples who cohabit in committed relationships" (Halford, 2004, p. 559). Facilitators offer CRE as an educational, skill-based prevention and intervention to multiple individuals and couples simultaneously in a group format (Larson, 2004). CRE often occurs by way of a time-limited, prescribed curriculum (e.g., 12 hours, four weeks) such as Prevention Relationship Enhancement Program (PREP; Markman, Floyd, & Stanley, 1988). Although both counseling and CRE share a goal of reducing distress, one of the more distinctive differences between them has been the type and extent of research conducted to examine individual and relationship distress within the context each intervention.

Counseling research on couples' individual and relationship distress has been extensive, consistent, and ongoing. Continuing research has allowed scholars to recently make strong conclusions about the levels of distress in couples who attend counseling and the circular relationship between individual and relationship distress in counseling. Together, past and recent findings in counseling research have enabled scholars to suggest and research important practical applications. These have led to a cumulative and growing knowledge of what works in psychotherapy, including couples counseling (Norcross & Lambert, 2011), resulting in the majority of couples in counseling experiencing some relief (Carr, 2011; Lebow et al., 2012). On the other hand, CRE studies have significantly less research on the individual and relationship distress of couples attending CRE. These gaps in CRE research include limited examination of relationship distress, sparse investigation of individual distress, and no research into the

relationship between the individual and relationship distress. These limited findings have made it difficult for scholars to make conclusive claims about the extent of distress couples are experiencing when they select CRE, the relationship between their individual and relationship distress, or if CRE is an effective means to reduce their individual and relationship distress.

Scholars have examined individual distress for more than 100 years and have consistently studied relationship distress since the mid-1900s (Gottman & Notarius, 2000; Johnson & Johnson, 2005; Messer & Gurman, 2011; Ryff, 1989). Ongoing research with couples in counseling has shown that the circular relationship between individual and relationship distress can affect presenting conditions and treatment outcomes. For example, when couples present with relationship distress, one or both partners is typically also experiencing individual distress (Shadish & Baldwin, 2003). Further, the presence of relationship distress makes coping with and recovering from individual distress more difficult, as well as contributes to relapse becoming more likely (e.g., depression, suicidal ideations, substance abuse, anxiety) (Whisman & Uebelacker, 2006). In addition to scholarly research, it has become common practice for professional helpers, such as licensed counselors, social workers, and psychologists, to use psychometric instruments, along with interviews and observations, to assess and measure the levels of relationship and individual distress that couples and individual partners are experiencing. The results of these assessments, along with the extensive, consistent, and ongoing research with couples in counseling, have produced two important practical implications for professional helpers. First, helpers know that most couples selecting counseling will be experiencing some level of relationship distress, and they can expect one or both partners also to

be experiencing individual distress. Second, helpers have information about what works to help couples reduce distress, such as types and frequency of assessments, screening and referral processes, and interventions, including types and dosages (Long & Young, 2007; Norcross & Lambert, 2011). The cumulative effect of these practical implications has been the finding presented in numerous studies (Carr, 2011; Lebow et al., 2012) and conclusive meta-analyses (Shadish & Bladwin, 2003) that compared to couples who do not seek help, 80% of couples attending counseling experience some reduction in distress (large cumulative effect size = .84; Cohen, 1988).

CRE has been a relationship enhancement intervention since the late 1800s (Burnard, 1984), and served as a catalyst for the development of couples and family counseling (Messer & Gurman, 2011). However, compared to extensive research of distress in the context of counseling, there is little research devoted to the study of individual and relationship distress among couples who select CRE as a source of help. Of the small number of studies that have examined the constructs, there is early evidence that CRE does help reduce relationship distress among some couples attending CRE (Hawkins & Fackrell, 2011). Compared to the claims scholars have been able to make from the extensive research of distress in counseling, there is insufficient research to make strong clinical and theoretical conclusions about the distress of couples attending CRE. Further, this lack of research related to individual distress in CRE has prevented the development of even early findings.

Literature points to at least five reasons for the paucity of CRE research related to individual and relationship distress. First, although CRE was available as a relationship

intervention before counseling, researchers only began consistently researching CRE since the 1980s (Burnard, 1984). Second, many CRE programs have been offered by faith- and community-based organizations that have not consistently used psychometric assessments to measure levels of distress before and after the intervention, if at all (Hawkins, Blanchard, Baldwin, & Fawcett, 2008). Third, much of the research that has been conducted in the context of CRE has focused on couples' acquisition of skills, such as communication and conflict resolution (Blanchard, Hawkins, Baldwin, & Fawcett, 2009). Fourth, the number of CRE-related studies that have examined individual and relationship distress are insufficient to make strong conclusions overall, and more specifically with certain populations, such as couples with low- to moderate-income and couples from diverse racial and ethnic backgrounds, that have been historically underrepresented in CRE research (DeMaria, 2005; Ooms & Wilson, 2004). For example, four meta-analyses (Blanchard, Hawkins, Baldwin, & Fawcett, 2009; Hawkins, Blanchard, Baldwin, & Fawcett, 2008; Giblin, Sprenkle, & Sheehan, 1986; Reardon-Anderson, Stagner, Macomber, & Murray, 2005) on CRE research between the late 1970s through 2008 noted that nearly two-thirds of CRE study samples have been made up of Caucasian couples, many of whom reported being from in the middle to upper socioeconomic backgrounds. Finally, in response to the underrepresented populations in CRE research, the federal government allocated more than $250 million in the past decade to study the effects of CRE with low- to moderate-income and diverse populations (Ooms & Wilson, 2004). However, the limited number of studies to date as well as a predominant focus on couples' skill acquisition has prevented the development of a complete and accurate understanding of the relationship between individual

distress and relationship distress in low-income, diverse populations and to what extent CRE may help them (Hawkins & Ooms, 2010).

Similar to demand of counselors in the mid-1900s, CRE providers and other stakeholders, such as funders (e.g., federal government, foundations) are actively seeking to determine what works in this psychoeducational format to reduce couples' distress and enhance their relationships. Yet, after three decades of research the question remains largely unanswered. The process of determining the answer has proven more difficult and has taken longer than anticipated, with a lack of focus on relationship development and distress among the reasons (Bradbury & Lavner, 2012). There is some research related to the effect CRE may have on relationship distress for some couples, however, there is very little CRE research related to individual distress. More outcome research related to both individual and relationship distress amongst couples in CRE is required, and some studies are currently underway (Bradbury & Lavner, 2012; Hawkins & Ooms, 2010; Halford, 2011). However, no research on the circular relationship between individual and relationships distress among low- to moderate- income married couples from diverse backgrounds has been conducted.

The focus of counseling research on the circular relationship of individual and relationship distress in couples who select counseling has informed and inspired future counseling research with couples. The research has also contributed, in part, to the development of significant practical implications for professional helpers, including assessment, screening, and intervention type and dosage. The cumulative effect of these developments has been 80% of couples in counseling experiencing some reduction in distress.

Considering the aforementioned contribution to counseling, and that counseling and CRE share goals such as reducing couples' relationship distress and enhancing their relationships, it is logical to investigate the question of to what extent, if any, this circular relationship between individual and relationship distress exists amongst couples selecting CRE as a source of help, specifically among married couples from low-income and racially and ethnically diverse backgrounds. It is also reasonable to consider any potential current implications and future research related to how a finding such as this may affect CRE administration and facilitation, counseling, education of professional helpers, and couples' outcomes. However, researchers have yet to address this question within the scope of CRE.

Discussed thus far in this chapter have been an overview of the problem, two sources of help for couples in distress, and the constructs of interest—individual distress, relationship distress, and the circular relationship between the distresses. These three areas along with a history of helping couples and families are discussed extensively through the literature review in Chapter 2. The remainder of this chapter covers an overview of the: (a) purpose and hypotheses, (b) theoretical framework and research design, (c) study methodology and analyses, and (d) findings and implications. Each of these areas is presented in detail throughout the subsequent chapters.

Purpose and Hypotheses

More outcome research related to both individual and relationship distress amongst couples in CRE is required, and some studies are currently underway (Bradbury & Lavner, 2012; Hawkins & Ooms, 2010; Halford, 2011). However, no research on the circular relationship

between individual and relationship distress among low- to moderate-income married couples from diverse backgrounds has been conducted. As a result of insufficient research into individual and relationship distress as well as the absence of research into the circular relationship between both distress types, we cannot make certain conclusions related to CRE. For example, we cannot (a) conclusively depict the distress levels of couples that select CRE, (b) make strong conclusions about the effect CRE may have on reducing individual and relationship distress, or (c) confidently determine if the members of couples who attend CRE have individual and relationship distress levels that are correlated, which has two additional ramifications. First, we do not know if, by reducing relationship distress through CRE, individual distress in one or both partners also decreases. Second, we cannot conclude whether CRE can effectively reduce relationship distress if individual distress coexists with it in one or both partners. In order to address the latter limitation and its related ramifications, research must first examine if and to what extent a circular relationship exists between the individual distress and relationship amongst couples selecting CRE.

Considering (a) the focus of counseling research on the circular relationship of individual and relationship distress in couples; (b) the implications of the cumulative findings related to the development of significant practical application for professional helpers, which have, in part, contributed to 80% of couples attending counseling experiencing some relief from their distress; and (c) the goals that counseling and CRE share such as reducing couples' relationship distress and enhancing their relationships, it is logical to investigate this circular relationship in the context of CRE as well. Thus, this study sought to examine the existence and extent of a circular

relationship between individual and relationship distress of, married couples from low-income and racially and ethnically diverse backgrounds who voluntarily selected CRE as a source of help for their relationship.

The *first hypothesis* proposed that the dyad members' individual distress would correlate with and predict (i.e., influence) the direction of each other's distress. For example, as one dyad member's individual distress increased, the partner's individual distress would be predicted also to increase. The *second hypothesis* proposed that the dyad members' relationship adjustment or distress would correlate with and predict (i.e., influence) each other's levels of relationship adjustment or distress. For example, as one dyad member's relationship distress increases, the partner's relationship distress would be predicted also to increase. The *third hypothesis* proposed that individual distress would influence the dynamic of the relationship as measured by its correlating with and predicting relationship distress. Hypothesis 3.1 proposed that the dyad members' individual distress would correlate with and predict *their personal* relationship distress. Hypothesis 3.2 proposed that the dyad members' individual distress would correlate with and predict *their partners'* relationship distress. For example, as members' individual distress increased, their and their partners' relationship distress would be predicted also to increase. Finally, the *fourth hypothesis* proposed that the dynamic of the relationship, as measured by the dyad members' relationship adjustment or distress, would correlate with and predict (i.e., influence) individual distress. Specifically, Hypothesis 4.1 proposed that dyad members' personal relationship distress would correlate with and predict *their personal* individual distress. Hypothesis 4.2 proposed that dyad members' personal relationship distress

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would correlate with and predict *their partners'* individual distress. For example, as members' relationship distress would increase, their and their partners' individual distress would be predicted to also increase.

Examining the effects of CRE on individual and relationship distress is beyond the scope of this study. However, the subject warrants brief mention here among gaps in CRE research. Future examination as to what extent, if any, CRE affects individual and relationship distress will add to counselors' and other helpers' understanding about what works in CRE to reduce distress levels overall, as well as providing insight into how specific variables or characteristics play a role in CRE's effectiveness in reducing individual and relationship distress. Examples of specific individual or couple characteristics include: (a) relationship status (e.g., married, unmarried, cohabiting), (b) socioeconomic status, (c) ethnicity, (d) years married, (e) children, (f) age, (g) education, (h) employment status and (i) the actual levels of distress (e.g., Is CRE effective at reducing low to moderate levels of individual or relationship distress, but not high levels of distress?).

Theoretical Framework and Research Design

Theories are found in literature from numerous fields including, but not limited to, business, law, education, engineering, and behavioral and social science (Creswell, 2009). Theories are road maps that help researchers, teachers, practitioners, students, and readers navigate existing and new information and phenomena. Kerlinger defined a theory as "a set of interrelated constructs (variables), definitions, and propositions that presents a systematic view

of phenomena by specifying relations among variables, with the purpose of explaining natural phenomena" (as cited in Creswell, 2009, p. 51).

Social Interdependence Theory

The theoretical support for this study is social interdependence. Social interdependence theorists have maintained that each member of a group of two or more individuals, including dyadic units (e.g., couples), inherently influence each other's behaviors, emotions, and thoughts (e.g., Deutsch, 1949; Johnson & Johnson, 1974; Johnson & Johnson, 2005; Lewin, 1935, 1948; Kenny, Kashy, & Cook, 2006). Social interdependence theory has a long history in fields such as business, education, and social science, having first been conceptualized in 1949. More than in most other fields, scholars in social psychology have applied social interdependence to their research, including the examination of romantic relationships (Johnson & Johnson, 2005). Since the reemergence of CRE in the 1980s, researchers have focused predominantly on attempting to measure the effectiveness of CRE, but have seldom approached CRE studies from the perspective of examining the interdependence and correlation of their dyadic data.

The theory of social interdependence, which has supported the studies that have discovered a circular relationship in counseling and other fields, has also provided rationale for the purpose of this study. As applied to this study, social interdependence would generally suggest that among couples who select CRE as a source of help for their relationships, the actions (e.g., behaviors, emotions, verbal and nonverbal communication) associated with the individual psychological health (e.g., individual distress) of each member of the dyad influence the actions associated with the individual psychological health (or distress) of the other member

of the dyad, and thus would influence the dynamic of the dyadic relationship itself (e.g.,

relationship satisfaction, relationship distress). Similarly, the theory would suggest that partners'

actions associated with their relationship distress would influence the action associated with each

other's individual distress as well as, by extension, each other's relationship distress. In this way,

the social interdependence theory provided support, and previously reviewed literature of the

circular relationship between the two types of distress, provided rationale and support for the

development of six hypotheses related to the sample population as means to addressing the

purpose of this study.

Correlation Research Design

In addition to framing the overall perspective of this study, the social interdependence

theory has informed the selection of an appropriate research design as well as the analyses

required in order to account for the interdependence of the dyadic data and test for a linear,

predictive relationship between individual and relationship distress. The data for this study was

previously collected data from a larger study. The institutional review board (IRB) previously

approved the larger study. The IRB approval for the larger study included a clause allowing

examination of study data by doctoral students for the purposes of dissertation. Thus, the current

IRB approval applies to this study, and a new IRB review is not required.

This proposed study used a correlational research design (Campbell & Stanley, 1963).

Despite some inherent limitations with a correlational research design, it is an appropriate and

strong research design for this current study (see Chapter 3). One of the most important

advantages of using a correlational investigation design in this study is the ability provided to

researchers to study the relationship between "two natural states" (p. 64). In this study the natural states are married partners' individual and relationship distress that may exist as a result of being members of the same dyad. The levels of distress are considered natural because they were reported upon the couples' selecting CRE as a course of help for their relationship, but before receiving any intervention. Appropriate protection was provided to guard against the potential threats to the internal and external validity of this study.

Methods

A review of the literature uncovered the aforementioned gaps in CRE research and the need to focus on the circular relationship between individual and relationship distress amongst couples selecting CRE as a source of help. Literature also informed decisions related to research design, make-up and size of the sample population, instruments, and procedures. Utilizing a correlational research design and prediction hypotheses to examine dyadic data required the use of advanced statistical analyses including the actor-partner interdependence model (APIM; Kenny, Kashy, & Cook, 2006) and multilevel modeling techniques (e.g., hierarchical linear modeling), which were founded on the statistical principles of regression (Tabachnick & Fidell, 2007). An overview of the methods used in conducting this study is provided here. A thorough treatment of the methods is provided in Chapter 3.

Participants and Sampling

The dyadic data used in this current study is archival data from couples that selected CRE as a source for help for their relationship, by way of a larger study conducted in a large metropolitan area in the Southeastern United States. The sample consisted of married couples

with zero (pregnant with first child) to four children ($M = 1.91$, $SD = 2.00$) living at home ages 0 (pregnant) to 17 years. Nearly 44% ($n = 126$) of the couples had cohabited before marrying, for an average of 8.14 months ($SD = 11.83$; Range $= 0 - 48$). Seventy percent of the couples ($n = 202$) had been married less than 10 years ($M = 8.48$, $SD = 6.60$; Range $= < 1 - 27$). Based on the comparisons of couples' combined annual income ($M = \$44,229.95$, $SD = \$28,784.67$) and family size to the federal poverty guidelines (U.S. Department of Health and Human Services, 2012), all income levels were represented (i.e., lower, moderate, upper). However, the couples predominantly had low- to moderate-income levels (94.7%, $n = 288$), with more than half meeting the federal criteria for low socioeconomic status (53.9%, $n = 164$). The average age for men ($M = 35.03$, $SD = 8.23$; Range $= 21 - 59$) and women ($M = 35.94$, $SD = 7.90$; Range $= 21 - 55$) was about the same. The married partners were predominantly from diverse racial and ethnic backgrounds (64.9%, $n = 187$), such as Latino/Hispanic, Black/Non-Hispanic, and Asian. The majority of men (83.2%, $n = 253$) and women (82.9%, $n = 252$) had earned less than a college degree (e.g., high school diploma, some college). Nearly 68% ($n = 103$) of men and 60.5% ($n = 92$) of women were employed. After the archival dyadic data was inspected and cleaned through an extensive preliminary analysis, the original dataset had been reduced from 180 dyads (360 participants) to 152 dyads (304 participants). This final sample size was large enough to achieve an optimal level of power (.80; Cohen, 1992) when conducting the statistical analyses (Erdler, Faul, & Bauchner, 1996). Table 1 displays detailed demographic data of study participants.

Statistical Analyses

Dealing with dyadic data required special treatment of the data during the preliminary and primary analyses. Standard statistical procedures were created to study data from individuals. Thus, in order to use standard statistics, data must meet the assumption that each datum is uniquely associated with one individual and therefore independent of all of data from individuals in the dataset. However, data from individuals who are members of the same dyad (e.g., couple) are often not independent due to the experiences they share as a result of their shared dyadic membership. Therefore, during the preliminary analysis, in addition to checking for potential violations of standard statistical assumptions, the potential of nonindependence amongst the dyadic data was measured.

Once the existence and extent of nonindependence was discovered, steps were taken to account for it, including: (a) converting the individual dataset into two dyadic datasets, (b) treating the dyadic datasets and merging them into one pairwise dataset, (c) and utilizing advanced multivariate statistical procedures. Failure to both specifically measure levels of non-independence and account for them can increase the chance researchers will find statistical significance when there is none (i.e., Type I error) by 70% (Barcikowski, 1981). The advanced statistics included using the actor-partner interdependence model (APIM; Kenny, et al., 2006) within a three-level hierarchical linear model, which is a form of multilevel modeling. Multilevel modeling has its foundation in statistical regression and was developed specifically to account for data that are not independent. Multilevel modeling is the umbrella-level statistical procedure that includes numerous procedures, such as repeated measures, multivariate analysis of variance,

and hierarchical linear modeling. For example, in this study the dyadic data was nested into three-level hierarchical linear models to test the hypotheses: (a) the dyad served as Level 3, the top level of the nested model; (b) the members of the dyad (i.e., husbands and wives) served as Level 2; and (c) dyadic members' individual and distress scores served as Level 1. The APIM was applied to expand the scope of the hierarchical linear model so that each model created could test the correlation and predictive relationship of dyadic members' distress variables on their personal distress as well as their partners' distress simultaneously and within the same model.

Instruments

Participants' demographic information was collected using a research-created demographic questionnaire. The two natural states of dyadic members' individual and relationship distress were measured through utilizing three separate psychometric instruments. Individual distress was measured by the Outcome Questionnaire 45.2 (OQ-45.2; Lambert, et al., 2004), and relationship distress was measured using the Dyadic Adjustment Scale (DAS; Spanier, 1976) and the Relationship Assessment Scale (RAS; Hendricks & Hendricks, 1998).

Procedures

Researchers of the larger study provided the previously collected data within an SPSS file with the identifying information of the participants removed (e.g., name) or transformed (e.g., exact date of birth transformed to age). Preliminary analysis was conducted to test the data for meeting statistical assumptions as well as reveal missing data, outliers, and extreme scores. Appropriate and necessary adjustments to the data were made related to missing data and outliers

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(Tabachnick & Fidell, 2007). This process resulted in the removal of 56 cases, which reduced the original archival dataset from 180 dyads (360 individuals) to 152 dyads (304 individuals). The original individual dataset was converted into a dyadic dataset and a pairwise dataset in preparation for correlation analyses and the main analyses of the advanced statistical procedures of the actor-partner interdependence model (APIM; Kenny, Kashy, & Cook, 2006) and hierarchical linear modeling (a form of multilevel modeling), both of which are forms of dyadic data analyses.

The APIM allows researchers to measure the association of variables with each other, examine the predictive relationship of variables, and account for the interdependence that exists within dyadic data. Within the APIM, one partner of the couple (usually the male) is the *actor* and the other partner of the couple (usually the female) is the *partner*. These terms help researchers and readers distinguish each partner more easily than if they referred to each member of the dyadic unit as the partner. The terms *actor* and *partner* also allow for a more consistent and accurate reference for members of the dyad, whether they are married or unmarried. For example, using the terms husband and wife is accurate for this proposed study, but would not be accurate if the sample for this proposed included a mixed sample of married and unmarried couples.

In this study, the APIM allowed for the examination of the relationship of the actors' and partners' levels of individual distress as well as the association of their individual distress and relationship distress. Additionally, the APIM allowed for testing the existence of any predictive nature between the variables. In the APIM, the levels of individual distress and relationship

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distress of each member of the couple 'takes turns' serving as the set of predictor independent variables as well as the predicted dependent variables. For example, one analysis will investigate if the actors' individual distress (predictor independent variables) can predict (and to what extent) the partners' relationship distress (predicted dependent variables).

Findings

The results from the dyadic data analyses showed statistically significant actor and partner effects in all but one part of the fourth hypothesis. Personal individual distress predicted partner individual distress as well as personal and partner relationship distress. Similarly, personal relationship distress predicted partner relationship distress as well as personal individual distress, but did not predict partner individual distress. The cumulative results confirmed that overall hypothesis that a circular relationship between the individual and relationship distress of married couples selecting CRE exists—distress begets distress. Some of the participant factors were significantly correlated with individual and relationship distress and significantly interacted with the actor and partner effects. This additional finding indicated that the extent to which distress begets distress was stronger among women, those with low-income, those that are unemployed, and those that live together before marrying.

Finally, an unexpected discovery of the *continuum of individual and relational functioning* was made during the correlation analyses. A continuum for each dyad member exists, and ranges from the individual functioning to a combination of individual functioning and relational functioning to relational functioning. The process of the continua flows from intrapersonal individual functioning to interpersonal relational functioning where they meet in

the middle at the *nexus of negotiation*. The nexus of negotiation is the center or heart of relational interaction, such as exchanges, communication, and decision making.

Implications and Future Research

The confirmatory discovery of a circular relationship between individual and relationship distress, the differences found in distress levels based on participant factors (e.g., gender, income, employment), and the discovery of the continuum of individual and relationship functioning have professional implications (i.e., implications) for various helpers and researchers of couples. The professionals for which this study is likely most significant are: (a) counselors; (b) CRE developers, staff, and facilitators; (c) those educating facilitators- and counselors-in-training, such as counselor educators; and (c) researcher in fields such as counselor education, social work, psychology, and social psychology, among others. Issues of significance include: (a) serving and recruiting underrepresented populations; (b) researching underrepresented populations, such as approximate replication studies, including participant and program factors in examinations, and utilizing the actor-partner interdependence model (APIM; Kenny et al., 2006) in future relationship research; (c) applying the circular model of individual and relationship functioning as well as the continuum of individual and relational functioning to assess and conceptualize individual and relationship functioning; (d) determining facilitator fit when serving distressed couples in CRE; (e) considering if counseling or CRE may each be more appropriately suited for couples based on their distress levels; (f) whether to work with couples as a unit from the start when they present with both individual and relationship distress; and (e) the importance of consistent research in these areas moving forward.

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Summary

Couples experiencing relationship distress and dissatisfaction often require help to resolve their current crises and learn skills to enhance their relationship. Two commonly utilized sources of help are counseling and CRE. Although both interventions are aimed at helping couples enhance their relationships, there are differences in their format and techniques. Counseling is a "professional relationship that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals" (Gladding, Tarvydas, Mascari, & Kaplan, 2010). Couples counseling is a specific form of counseling that occurs in a conjoint session with one or more counselors in a private, professional setting. Counselors focus on using therapeutic skills and interventions to reduce relationship distress and improve behavioral, cognitive, familial, and emotional aspects of the relationship (e.g., Carr, 2011; Christensen, Atkins, Baucom & Yi, 2010; Christensen, Atkins, Yi, Baucom & George, 2006; Long & Young, 2007). Although couples counseling can be brief (e.g., six weeks), it may also last for many months.

CRE is distinctly different from counseling. CRE is "education for couples in committed relationships, which includes couples who are married or planning to marry and couples who cohabit in committed relationships" (Halford, 2004, p. 559). Facilitators offer CRE as an educational, skill-based prevention and intervention to multiple individuals and couples simultaneously in a group format (Larson, 2004). CRE often occurs by way of a time-limited, prescribed curriculum (e.g., 12 hours, four weeks) such as Prevention Relationship Enhancement Program (PREP; Markman, Floyd, & Stanley, 1988). Parents, professionals, and

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paraprofessionals, facilitate CRE in community-based, faith-based, educational, healthcare, and corporate institutions (Hawkins, Carroll, Doherty, & Willoughby, 2004). Although many CRE facilitators do not hold a position-specific certification or license, such as the Certification in Family Life Education (CFLE; National Council on Family Relations, 2011), curriculum developers expect them to meet a set of standards related to professionalism, facilitator skills, and ability to use technology (Simons & Harris, 1999). Additionally, facilitators do not provide private interventions with individuals or couples as part of CRE (DeMaria, 2005); it is entirely a group procedure.

Although CRE has a long history, counseling has a more extensive and consistent history of research on relationship and individual distress (e.g., levels; correlations; treatment interventions, dosage, and outcomes). Counseling research has made important discoveries related to individual and relationship distress. For example, most couples attending counseling experience distress. Commonly when couples report relationship distress, one or more of the partners is also experiencing individual distress. Furthermore, the presence of relationship distress makes overcoming individual distress and maintaining psychological health more difficult and less likely. Counseling research has also found that there is a circular relationship between individual and relationship distress, that distress begets distress. Finally, scholars subsequently suggested changes in screening, intervention type, and dosage, which has led to discovery of models and approaches that help couples produce achievable outcomes. These findings, along with previous research in counseling, have resulted in more than 80% of couples that attend counseling experiencing some relief and reduction in relationship distress.

CRE research, which started in the about 1980s, has focused predominantly on skills acquisition, such as communication and conflict resolution. Thus, there is little research on individual and relationship distress of CRE couple populations. Additionally, CRE research overall and the studies that have examined individual and relationship distress have been conducted predominantly with Caucasian couples with moderate- to upper-income levels. This has limited the generalizability of the findings, which may not be entirely applicable to couples that are being treated in large numbers in federally funded programs. In the last decade the government has allocated more than $250 million to study CRE with the underrepresented populations of individual and couples from low- to moderate-income and racially and ethnically diverse backgrounds. Although some of these efforts have concluded and others are still underway, recent literature examining and summarizing this work have found that the efforts have taken longer and have proven more difficult than expected (Bradbury & Lavner, 2012). Some progress has been made, with numerous peer-reviewed published articles related to CRE appearing each year. However, the continued lack of sufficient research related to individual and relationship distress has made it difficult for us to make strong conclusions, akin to those of counseling research, about levels of distress among couples selecting CRE, any relationship between individual and relationship distress, and CRE effectiveness in reducing individual and relationship distress.

Therefore, the current study sought to examine levels of individual and relationship distress in a sample of married couples with predominantly low- to moderate-income levels and diverse racial and ethnic backgrounds. This study used a correlational research design framed in

the theory of social interdependence to examine the existence and extent of a circular relationship between the individual and relationship distress of couples selecting CRE as a source of help for their relationships. Multiple dyadic analytic approaches were used, including the actor-partner interdependence model (APIM; Kenny et al., 2006) within two three-level hierarchical linear models. Some results were statistically significant, confirming all hypotheses except one. This study found that a circular relationship does exist between husbands' and wives' individual and relationship distress regardless of participant factors, such as income status or racial and ethnic background. However, the results also showed that the extent to which husbands and wives influence their personal and partners' distress (e.g., individual distress influencing personal and partner relationship distress) is moderated and made stronger for certain couple populations based on the participant factors of cohabitation history, gender, ethnicity, income, and employment.

The statistically significant results are of potential professional significance to help those working with couples to make data-driven and clinically-informed decisions. The professionals most affected by this study include CRE funders and providers (administrators, staff, facilitators); licensed professionals, including counselors, social workers, and psychologists; (c) those professionals that educate the facilitators- and counselors-in-training as well as research couples and families, such as counselor educators, social workers, psychologists, and social psychologists. CRE providers should continue to (or begin to) recruit populations historically underrepresented in CRE research (e.g., low-income, racially and ethnically diverse), collect participant and program factor data, and assess for individual and relationship distress (among

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other areas, such as marital expectations) before and after providing CRE to couples. CRE

providers and researchers should continue to (or begin to) work together examining and

disseminating their data. The circular model depicting the relationship between individual and

relationship distress in which distress begets distress, may provide an additional tool to enable

professional helpers to assess and conceptualize individuals' and couples' functioning when they

seek help. Research has suggested that there may be two types of couples seeking help: those

distressed to the point of reaching the crossroads of divorce and all the other couples, including

those seeking to enhance the relationship with which they are generally already satisfied.

Subsequently, some scholars have suggested that perhaps certain interventions (e.g., counseling

and CRE) are more appropriate for certain couples. As practitioners and researchers continue to

study this potential dichotomization of couples based on distress, helpers may consider using the

aforementioned conceptualization function of the circular model to assist them in making data-

driven and clinically informed decisions, such as treating the couple as a unit when they present

with relationship and individual distress, or whether counseling or CRE would be a more

appropriate intervention for couples.

The findings in this study and other CRE and counseling studies related to couples'

individual and relationship distress have provided important insight into the complex nature of

the human experience, which is compounded when two individuals are involved in an intimate

relationship in which each partner's actions influence themselves and each other. Too few of

these research findings exist, including the ones discovered in this study, for us make strong

claims that would likely cause immediate paradigm shifts. Nevertheless, some research is

currently underway to help determine what these collective and cumulative findings mean for our work with individuals, couples and their family, both in the short-term and long-term. These findings, claims, and suggestions pose important questions to how we conceptualize and choose to work with individuals and couples, which can be answered in time through practitioners, educators, and researchers working together. Thus, these issues warrant careful consideration by clinicians and CRE providers, counseling and CRE educators, and researchers, such as counselor educators and couple and family scholars.

Conclusion

Every individual experiences periodic reductions in personal psychological health (e.g., stress, anxiety). Prolonged, repetitive, and unresolved reductions in psychological health can lead to *individual distress*. Similarly, every couple in an intimate relationship experiences periodic negative interactions that result in disagreement and disappointment. Characteristics such as respect, commitment, and forgiveness as well as communication skills can help couples resolve these differences, adjust to the relationship, and achieve relationship satisfaction (Bradbury, Fincham, & Beach, 2000). However, prolonged or repetitive as well as unresolved negative interactions lead to feelings of dissatisfaction and disillusionment with the relationship (Gottman & Notarius, 2000), and ultimately *relationship distress*. Couples unable to resolve their relationship distress often require professional help, and historically, have turned to counseling and more recently to couple and relationship education (CRE).

Social psychology and counseling researchers have discovered a circular relationship between relationship distress and individual distress in intimate relationships (Johnson &

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Johnson, 2005; Whisman & Uebelacker, 2006)—with one begetting the other. Questions and suggestions have been posed about how this might influence our work with couples, such as whether to work with the couple as a unit when couples present with relationship and individual distress (as opposed to first working alone with the partner who presents with individual distress) and whether certain couples, according to levels of distress, may benefit from certain interventions (e.g., counselor or CRE) more than others. Research in counseling in currently underway to help answer these and other questions and to test new or revised areas of practice. Although counseling researchers have yet to answer these questions, historically 80% of couples attending couples have experience some relief, such as reduction in distress.

Research related to CRE, however, has historically lacked sufficient findings related to individual and relationship distress in couples who select CRE as a source of help, to level of help to which it is understood in couples who select counseling or to the extent that we can make strong conclusions akin to those of counseling research. Progress is being made in CRE research, however, with studies area currently underway with both traditional populations as well as historically underrepresented populations (e.g., low-income, racially and ethnically diverse populations). CRE studies continue to examine skills acquisition, and more studies are beginning to focus on couples' relationship functioning and distress. This study confirmed that a circular relationship exists between the individual and relationship distress of married heterosexual couples who have children and are predominantly from low-income and racially and ethnically diverse backgrounds. The findings of this study have professional significance for clinicians and CRE providers, counseling and CRE educators, and researchers, such as counselor educators and

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couple and family scholars. The results highlight the need for additional focus in CRE research

not only on relationship functioning and distress, but also individual functioning and distress,

with a special focus on how the two distress types relate, to what extent they influence each other

among CRE populations, how participant factors moderate distress interaction, and what affect

CRE has on individual and relationship functioning and distress overall, as well as when couples

in CRE are experience the circular cycle of functioning begetting functioning or distress

begetting distress.

Most of the public as well as professional helpers agree that most couples marry wishing,

hoping, and dreaming of long-lasting and mutually pleasurable relationships (Munyon, 2012).

However, two-thirds of couples experience relationship distress, with many couples experiencing

decreased satisfaction within the first ten years of the their marriages (Bradbury, Fincham, &

Beach, 2000). Although the majority of couples that marry do not envision mounting discord and

divorce in their future, a new statistic has emerged; 50 percent of married couples divorce

(Center for Disease Control and Prevention [CDC], 2010). Most often when couples reach the

crossroads of divorce, deciding whether to work on and keep their relationship or to end it

(Hawkins & Fackrell, 2012), they have difficulty resolving their problems themselves and

require professional help. Couples most often select counseling and CRE as sources of help for

their relationship. Although counseling research has found that the majority of couples attending

counseling are distressed and that 80% of couples attending counseling experience some relief,

such as reduction in relationship distress (Carr, 2011; Lebow et al., 2012), CRE research lacks

sufficient findings related to couples' distress to make such strong conclusions about the state of

couples when they select CRE and the extent to which CRE may help them reduce relationship distress and improve relationship functioning (Bradbury & Lavner, 2012; Hawkins et al., 2008). The deleterious effects of family fragmentation and divorce are wide spread, affecting adults (e.g., finances, health) and children (e.g., adjustment, academics, health, social, intimate relationships) as well as the systems to which they belong, such as schools and businesses (e.g., absenteeism, presenteeism, productivity and profit losses) (Wilcox et al., 2011). Thus, counseling and CRE practitioners and researchers are strongly motivated to continue working with couples using current interventions to research new and revised approaches (Fals-Stewart et al., 2009; Whisman & Uebelacker, 2003) that might help prevent or reduce the couples' circularly-related individual and relationship distress (one begets the other) in order to find out what works to help couples achieve their wishes, hopes, and dreams of long-lasting and mutually pleasurable relationships (Munyon, 2012).

CHAPTER TWO: LITERATURE REVIEW

Romantic partners who are unsuccessful at reducing their individual and relationship distress on their own or with the assistance of family and friends may require professional help (Carr, 2011; DeMaria, 2005; Hawkins & Fackrell, 2011). Counseling, including conjoint couples counseling, has long been the usual choice for couples that are experiencing distress and seeking professional help (Christensen, Atkins, Baucom & Yi, 2010; Christensen, Atkins, Yi, Baucom & George, 2006; Long & Young, 2007). However, over the last three decades couples and relationship education (CRE), a psychoeducational treatment, has also become a source of assistance for couples in distress (DeMaria, 2005; Halford, 2011; Hawkins, Carroll, Doherty, & Willoughby, 2004). Scholars have examined individual distress for more than 100 years and have consistently studied relationship distress since the mid-1900s (Gottman & Notarius, 2000; Johnson & Johnson, 2005; Messer & Gurman, 2011; Ryff, 1989). Extensive research on individual and relationship distress in the context of couples counseling has helped professional helpers such as licensed counselors, social workers, and psychologists understand what works to reduce distress in the couple as well as the individual partners (Carr, 2011; Norcross & Lambert, 2011). Although research of CRE has helped promote it as an additional source of help for couples, so few CRE studies have focused on distress that it has been difficult for scholars to make strong conclusions about the individual and relationship distress, including knowledge about the level of distress in couples and individual partners who select CRE for help, the relationship between each type of distress as well as between other variables, and the effect CRE may have on reducing individual and relationship distress.

This study will begin to help professionals compare couples to determine if the couples they are serving are typical of other couples (e.g., levels of individual and relationship distress) that have chosen CRE as a source of help. Findings from this study related to the relationship between the individual and relationship distress of couples that choose to participate in CRE could help professionals and other helpers make intentional, data-driven decisions related to the CRE programs such as recruiting, screening, content, dosage, and resources. This chapter provides an extensive review of literature from numerous fields related to individual and relationship distress, the history of help offered to couples in distress, the current gaps in CRE research related to distress, and the theories and methods proposed to help contribute to needed literature on the subject.

Literature Review Process

Literature reviews for dissertations are a "precondition for doing substantive, thorough, sophisticated research" (Boote and Beile, 2005, p. 3). Thus, the searches for literature related to the three aspects of this review—theory, history, and variables of individual distress and relationship distress—were extensive. The collection of relevant articles to review involved numerous searches using a variety of search terms and strings. The search criteria were based on the scope of the coverage determined for the literature review. The criteria of topics established the parameters for the search terms and Boolean search strings. Generally, the search categories for this literature review were (a) theories (i.e., social exchange, social interdependence), (b) constructs (i.e., individual psychological distress, relationship satisfaction), (c) population (i.e., married couples), and (d) context (i.e., CRE).

Searches were conducted within multiple databases for published work as well as the *Dissertation Abstracts International* for unpublished works. Generally, the individual search terms and subsequent Boolean search strings for each area were dependent upon the database-specific search categories. When databases did not provide proprietary categories for search terms, general related terms were used.

For example, the search for individual distress and relationship distress related to married couples and CRE included the databases of (a) PsychINFO, (b) PsychARTICLES, (d) Academic Search Premier, (d) ERIC, (f) Family Study Abstracts, (g) World of Science, (h) CINAHL, (i) MEDLINE, (j) Contemporary Women's Issues (k), Sociological Abstracts, (l) Social Services Abstracts, (m) GenderWatch, (n) Ethnic NewsWatch, (o) InformaWorld, (p) WorldCat, and (q) Dissertation Abstracts International. The PsychINFO database provided specific search terms related to the criteria for this study. Thus, using the PsychINFO terms, the search for individual distress and relationship distress resulted in the following Boolean search strings: DE family life education and SU (relationship satisfaction OR satisfaction OR marital satisfaction OR interpersonal interaction OR interpersonal relationships OR relationship quality OR distress) and SU (marriage OR couples OR dyads OR spouses).

On the other hand, when databases did not provided specific categories or terms, the Boolean search strings consisted of general, logical terms related to the topics. For example, the generally-termed Boolean searches for individual distress and relationship distress related to married couples and CRE included: (["couple*" OR "dyad*" OR "relation*" OR "interpersonal relation*"] AND ["distress" OR "psychological distress" OR "relationship satisfaction" OR

"satisfaction" OR "martial satisfaction" OR "relationship quality"] AND ["relationship education" OR "marital education" OR "premarital education" OR "marriage and relationship education" OR "couples and relationship education" OR "family life education"]). The asterisk was used with shortened forms of terms that had the potential to result search returns related to the longer versions of the terms. For example, using an asterisk with "relation*" was likely to produce search results based on the terms (a) relation, (b) relations, (c) relational, (d) relationship, and (e) relationships.

Various operational approaches to collecting, organizing, and synthesizing the literature were used (Boote & Beile, 2005; Creswell, 2009; Hart, 2004). During the search process, articles were collected in electronic form (e.g., PDF). Articles were organized in folders based on the primary topic. Additionally, tags (i.e., terms related to the article content) were used in the property portion of the electronic files to denote the terms and topics relevant to this study (e.g., individual distress, interdependence, CRE). Based on suggested guidelines for organizing articles for literature reviews, study citations, abstraction, and key information (e.g., sample, methodology, instruments, findings) were arranged in separate tables based on study-related topics. This organizational approach aided in the analysis and synthesis of literature for each topic. Analysis continued until the point of saturation was reached. Saturation occurred at the point of a repetitive review of articles when no new history, data, implications, or otherwise new information could be gleaned (Randolph, 2009). Once saturation was reached, the literature was synthesized to represent landmark and recent studies. The syntheses consisted of findings, critiques, and gaps in research.

The Crossroads of Divorce: Individual and Relationship Distress

Married couples commonly cite that they were experiencing relationship distress long before they found themselves at the crossroads of divorce, deciding whether to work on saving their marriage or to end it (Hawkins & Fackrell, 2011). Research has confirmed couples' personal observations and has traced couples' trajectory back from the crossroads of divorce to the presence of unresolved relationship distress (Gottman & Notarius, 2000). Further, studies in counseling have discovered a comorbidity of relationship distress in couples and individual distress in at least one of the two partners. Understanding the extent of this potential comorbidity among couples selecting CRE as a source of help for their relationship will help CRE providers and facilitators and licensed clinicians, among others, to make important data-driven and clinically-informed decisions related to their work with couples, such as screening, intervention type, and dosage. An understanding of how individual and relationship distress develop is required before proceeding.

Individual Distress

The study of individual psychological health dates back to earliest days and seminal works of psychology. Ryff (1989) integrated the major theories and research of psychological health and functioning pioneered by leaders in psychology and counseling—Jung, Allport, Erickson, Maslow, and Rogers, among others—into a summative conceptualization of individual psychological health. The six components of individual psychological health include: (a) self-acceptance, (b) positive relations with others, (c) autonomy, (d) environmental mastery, (e) purpose in life, and (f) personal growth. *Self-acceptance* refers to individuals' functioning at

optimal levels, displaying maturity, and accepting past experiences. *Positive relations with others* is marked by interactions with others that are genuine, positive, trusting, and warm, as well as some interpersonal relationships that include closeness and intimacy. *Autonomy* refers to self-motivation, independence, and decision-making based on internal loci of control. *Environmental mastery* is conceptualized as individuals making or selecting surroundings and activities appropriate for them throughout the lifespan. *Purpose in life* represents individuals discerning their own meaning, setting goals, and guiding themselves through making intentional decisions. Finally, *personal growth* refers to a personal view of self as a life-long learner who is dynamic, open to change, accepting of new experiences, and willing to grow.

Individuals will likely experience some reduction in their psychological health periodically throughout their lives (e.g., stress). These reductions are typically intermittent and after a short time, individual usually return to a familiar form of functioning. However, research in multiple fields, such as social psychology and counseling, has shown when individuals experience frequent, persistent, or unresolved reductions, their psychological health often declines to the point of impairing function in intimate, social, and professional relationships; occupations; and other areas of importance. This set of conditions is generally referred to as individual distress (4th ed., text rev; *DSM-IV-TR;* American Psychiatric Association, 2000; Young, 2012). While individuals typically experience some level of reduction in their psychological health throughout their lives, which can lead to individual distress, they may also experience distress within their intimate relationships.

Relationship Distress

Similar to individuals experiencing periodic reductions in individual psychological health, couples experience periodic reductions in their overall relationship health. More specifically, members of couples commonly experience some negative interactions with each other throughout their relationships such as disagreements and conflict, which can be a source of emotional pain (Markman, 1978; Gordon, 1990; Karney & Bradbury, 1995). These negative interactions are rooted in numerous aspects of the relationship such as (a) exchange of actions, (b) emotions, (c) conflict, (d) sexuality, (e) hostility, (f) criticism, and (g) forgiveness, among others (Fincham & Bradbury, 1987; Karney & Bradbury, 1995; Lebow, et al., 2012). When negative interactions cease to be temporary, couples typically develop feelings of disillusionment and dissatisfaction with their relationship (Gottman & Notarius, 2000). Couples with persistent negative interactions tend to have poor communication, listening, and problem-solving skills (Blanchard, Hawkins, Baldwin, & Fawcett, 2009). Similar to the trajectory from reduced individual psychological health to individual distress, frequent, prolonged, and unresolved negative interactions and feelings of dissatisfaction cumulatively result in relationship distress.

Levels of relationship distress generally range from low to high or mild to severe (DeMaria, 2005; Long & Young, 2007), with couples typically experiencing their initial and subsequently increasing levels of relationship distress with the first 10 years of their marriages (Bradbury, Fincham, & Beach, 2000), The presence of relationship distress have been found to predict couples' future functioning together (Gottman & Notarius, 2000), and has been associated with couples considering or deciding to divorce (Hawkins & Fackrell, 2011). A

consistent lexicon in literature addressing relationship distress does not currently exist. Most commonly, researchers as well as technicians who catalog articles in scholarly databases have used the terms dissatisfaction, distress, relationship dissatisfaction, and relationship distress interchangeably to describe relationship distress. In this study, the term relationship distress was used, and refers specifically to mild to severe reductions in individuals' adjustment to and satisfaction with their relationship. When couples cannot resolve their relationship distress themselves or with the help of family members and friends, they may require professional help.

Measuring Individual and Relationship Functioning

Individual and relationship distress are correlated, thus it is not uncommon for individuals may experience individual and relationship distress simultaneously (Johnson & Johnson, 2005; Whisman & Uebelacker, 2003, 2006). Individuals and couples experiencing frequent, persistent, or unresolved reductions in their functioning may require professional help. Professional helpers, such as counselors, social workers, and psychologists, typically assess individuals' functioning when they initially seek services. The focus of measurement includes determining reductions in individual psychological health, the presence and levels of individual distress, and the extent of impairment as a result of the distress. Helpers utilize various accepted and expected methods such as psychometric instruments, interviews, observations, and clinical criteria, and the Global Assessment of Functioning (GAF; 4th ed., text rev; *DSM-IV-TR;* American Psychiatric Association, 2000). When working with couples, professional helpers commonly for to assess both individual and relationship functioning (Long & Young, 2007).

Professional helpers use the information they learn about individuals and couples to determine level of need, appropriate services or service fit, and treatment interventions and dosage.

Helping Couples in Distress

Counseling and CRE

Although, couples experiencing distress and seeking help have historically selected couples counseling more than CRE, CRE is not a new source of help for individuals. This choice has been more a function of history than a story of selecting between two viable alternatives. CRE, which existed before counseling, is partially responsible for the emergence of family counseling and couples counseling (Messer & Gurman, 2011). Although counseling and CRE are both a source of helping couples enhance their relationships, they consist of unique components and processes.

Counseling is a "professional relationship that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals" (Gladding, Tarvydas, Mascari, & Kaplan, 2010). Couples counseling is a specific form of counseling that occurs in a conjoint session with one or more counselors and the couple in a private, professional setting. Counselors focus on using therapeutic skills and interventions to reduce relationship distress and improving behavioral, cognitive, familial, and emotional aspects of the relationship (e.g., Carr, 2011; Christensen, Atkins, Baucom & Yi, 2010; Christensen, Atkins, Yi, Baucom & George, 2006; Long & Young, 2007). Although couples counseling can be brief (e.g., six weeks), it is often conducted until the couple has reached their goal.

On the other hand, CRE is distinctly different from counseling. CRE is "education for couples in committed relationships, which includes couples who are married or planning to marry and couples who cohabit in committed relationships" (Halford, 2004, p. 559). Facilitators offer CRE as an educational, skill-based prevention and intervention to multiple individuals and couples simultaneously in a group format (Larson, 2004). CRE often occurs by way of a time-limited, prescribed curriculum (e.g., 12 hours, four weeks) such as Prevention Relationship Enhancement Program (PREP; Markman, Floyd, & Stanley, 1988). Parents, professionals, and paraprofessionals, facilitate CRE in community-based, faith-based, educational, healthcare, and corporate institutions (Hawkins, Carroll, Doherty, & Willoughby, 2004). Although many CRE facilitators do not hold a position-specific certification or license, such as the Certification in Family Life Education (CFLE; National Council on Family Relations, 2011), curriculum developers expect them to meet a set of standards related to professionalism, facilitator skills, and ability to use technology (Simons & Harris, 1999). Additionally, facilitators do not provide private interventions with individuals or couples as part of CRE (DeMaria, 2005); it is a group procedure.

CRE in the History of Helping Families

Family Counseling

Family therapy began as a movement and has its origins from the late 1800s and early 1900s. Social workers and family life educators provided the earliest forms of CRE through preventative education classes, predominantly to women, who wanted more information about and help with relationships (Gurman & Messer, 2003). Through the early 1900s, social workers,

family life educators, and eventually psychiatrists, expanded their services to include families in their treatment of individual clients. From this focus on families emerged a conceptualization of the family as a unit or system that could support or detract from a client's recovery.

In the 1930s and 1940s, the 'family movement' established a professional identity. The identity of the movement included having formed the National Council on Family Relations. During these two decades, the leaders of the movement also established the American Association of Marriage Counseling, which eventually became the American Association of Marriage and Family Therapy (AAMFT) in the 1970s.

Also in the 1970s, the family movement coined the term family therapy as a specialty of psychotherapy. The leaders of the movement also established the specialty's first peer-reviewed publication, *The Family Process*. The journal initially focused on theory and practice, most of which was continuing to emerge, and in later years amended its focus to include research. Additionally, the 1970s saw one of family therapy's pioneers, Murray Bowen, form another association called the American Family Therapy Association.

Gurman and Fraenkel (2002) referred to the period after 1970s as Post-1970s. The author's open-ended date stamp on this time period indicated that family therapy was still growing and refining itself. The family therapy field has broadened during this period to include multiple theoretical approaches. Some of the most influential theories have included (a) intergenerational (Bowen, 1972); (b) strategic (Haley, 2003); (c) systemic developed by the Milan Family Institute in Milan, Italy (Gelosa et al., 1999); and communications and experiential family therapy (Satir, 1988).

Family therapy has evolved from a movement among social workers and family life educators in the late 1800s to becoming one of the most widely used and borrowed-from specialties to help families cope with distress and dysfunction (Gurman & Messer, 2003). In a recent Delphi study, Norcross, Hedges, and Prochaska (2002) interviewed 62 psychotherapy experts to understand how the field of psychotherapy overall has changed relative to theory and practice. The purpose of the study was to discover the future direction of the psychotherapy field beginning in the decade that started in 2010. Experts predicted that family therapy would be one of top 10 (rank = eighth) approaches used in the future of psychotherapy.

Couples Counseling

Ackerman (1970) stated that within family counseling, the couple had emerged as the core of the family unit. There was early widespread agreement among family theorists and practitioners that the couple was the core of the family. Despite this consensus, work with couples did not initially become a central part of their work with families. Many psychotherapists have only recently come to consider couples counseling as a distinct specialty of psychotherapy (Gurman & Messer, 2003).

In studying the history of psychotherapists' work with couples, Gurman and Fraenkel (2002) identified four phases of couples counseling. The first phase was *atheoretical marriage counseling* from 1930 to 1963. During this period, practitioners formed marriage counseling centers as well as the aforementioned American Association of Marriage Counselors, which became the AAMFT. The second phase, *psychoanalytical experimentation*, occurred around the same time from 1931 to 1966 when psychiatrists included family members in their work

individual patients. This gave way to conjoint therapy between psychiatrists working with couples. However, psychiatrists still viewed *a couple* as two individuals, and not a dyadic unit.

The next phase began a process that would eventually solidify couples counseling as its own specialty. From 1963 to 1985, during the *family therapy incorporation phase*, leaders in family counseling (e.g., Haley, Bowen, Satir) helped lend a family systems view to couples counseling. This led to the current phase of couples therapy from 1986 to present day, which Gurman and Fraenkel denoted by four distinct efforts of *refinement, extension, diversification, and integration*. *Refinement* referred to theorists, experts, and practitioners refining the approaches used in work with couples. *Extension* indicated a shift away from working only with couples in distress where part of the relationship was the primary problem, to including couples in which a partner was suffering from a specific, diagnosable disorder. *Diversification* represented the important increased attention on and inclusion of multiculturalism, religion, and sexual orientation in work with couples. Finally, *integration* represented professionals in couples counseling integrating couples approaches with combinations of behavioral and psychodynamic concepts.

Reemergence of CRE

After its early start in the late 1880s, CRE had taken a back seat to family counseling and couples counseling as these specialties emerged and grew. Although CRE decreased in prominence as a widely available service to individuals, it continued predominantly in religious settings until the 1980s (Burnard, 1994). In the 1980s, new manualized versions of CRE emerged, with increased use in non-religious settings as well as with early emerging evidence of

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efficacy with couples of moderate to upper socio-economic status (e.g., PREP; Markman, Floyd, & Stanley, 1988). In the 1990s, states such as Oklahoma, Florida, and Utah launched studies and commissions as well as allocated resources (including State and Federal TANF funds) to study and support marriages, families, and fathers with a goal of improving child well-being (Ooms & Wilson, 2004). Much of this work confirmed that Ackerman's (1970) conceptualization of the couple as core of the family was still true more than 20 years later, whether the couple was married or not (e.g., parental involvement; U.S. Department of Education, 1999). Additional research found that a healthy marriage benefited adults (e.g., finances, health) and children (e.g., adjustment, academics) (Wilcox et al., 2011).

In the 2000s, the focus of practitioners, parents, and policy makers on couples, marriage, and fathers, and the emergence of promising findings related to CRE (e.g., DeMaria, 2005) reached a tipping point. Because CRE research had predominately included samples of couples of moderate and upper socio-economic statuses, the Federal government allocated over $200 million over eight years to expand evaluation of efficacy of CRE with populations previously underrepresented in CRE research. These populations included couples and fathers of low socio-economic status, diverse populations, married and unmarried couples (including cohabiting), and intact, fractured, and blended families. Since this time, there has been a sharp increase in the number of peer-reviewed publications related to CRE. In addition to participant-related outcomes, many of these publications have included implications for counselors to use CRE as a stand-alone service in a private practice or mental health agency, as well as referring individuals

and couples to CRE offered in non-therapeutic settings (e.g., community centers, schools) (e.g., Hawkins et al., 2004).

Family counseling experts contributed to the coalescing of couples counseling, and thus helped define it and give it credibility. Similarly, family and couples experts, researchers, and practitioners, including Virginia Satir among others (e.g., Gordon, 1975, 1990; Hawkins et al., 2009a; Hawkins, Carroll, Doherty, & Willoughby, 2004; Hawkins et al., 2009b; Satir, 1975) have shared their knowledge, experiences, and research lines to offer CRE as an alternative source of help for couples, studied CRE with various populations, and incorporated it as part of the scope of couples work.

Distress Research in Counseling and CRE

When working with couples, professional helpers, such as counselors, social workers, and psychologists, typically determine levels of individual and relationship distress through various assessment methods. The methods typically include observation, interview, clinical criteria (4th ed., text rev; *DSM-IV-TR;* American Psychiatric Association, 2000), and standardized instruments. Advancements in standardized assessments have provided increased validity, reliability, detail, and generalizability, and have become an expected part of the assessment process (Lebow et al., 2012). When using these methods to assess individual distress, professionals measure the baseline levels of individual psychological health, reduction in typical individual psychological health, and impairment of social, relational, occupational, and other functioning. When assessing relationship distress, professionals use these methods to measure negative and positive interactions, satisfaction and dissatisfaction, and other relational

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functioning. Clinicians typically use measurements of distress to help them determine treatment interventions (e.g., types and dosages) as well as couples' outcomes such as a reduction of individual and relationship distress or an increase in individual psychological health and relationship satisfaction and adjustment (Gottman & Noturius, 2000; Lebow et al., 2012; Norcross & Lambert, 2011).

Distress in Counseling Research

In the 20th century, as the specialties of family counseling and couples counseling grew in size and the number of theories, models, and techniques increased, practitioners sought out what worked in psychotherapy. Clinicians desired, and eventually demanded, evidence-based treatments and evidence of the efficacy of currently used treatments (Norcross & Lambert, 2011). Couples experiencing distress and the clinical interventions used to help them have been consistent subjects of research since the mid-1900s. The cumulative findings from this extensive research have permitted professional helpers to understand the distress levels of couples attending counseling as well as confidently determine what works in couples counseling that effectively reduces distress (Lebow et al., 2012; Messer & Gurman, 2011; Norcross & Lambert, 2011). For example, the majority of couples attending counseling are experiencing some level of distress and 70% of couples attending couples counseling show decrease in distress and increase in satisfaction compared to couples who didn't seek help (Carr, 2011).

Distress in CRE Research

CRE has expanded the work with couples, increased the focus on couples work, and contributed to couples work being further considered as a separate specialty in psychotherapy.

As CRE reemerged with a steady increase in volume and diversity of venues and populations, policy makers, practitioners, and researchers sought evidence of whether current CRE was effective in enhancing relationships and what future research was needed to thoroughly study CRE (Halford, 2011). With fewer than 50% having studied couples who were from racially and ethnically diverse or from a low socioeconomic status, recent research efforts have focused on low-income and diverse populations (Hawkins & Ooms, 2010; Ooms & Wilson, 2004). Although more than 300 studies have been published related to CRE, few of them have focused on individual and relationship distress.

Four meta-analyses, including three recent ones, have captured the majority of CRE-related research and reports ($n = > 300$) published since the reemergence of CRE in the 1980s (Blanchard, Hawkins, Baldwin, & Fawcett, 2009; Hawkins, Blanchard, Baldwin, & Fawcett, 2008; Giblin, Sprenkle, & Sheehan, 1985; Reardon-Anderson, Stagner, Macomber, & Murray, 2005). Collectively, these meta-analyses as well as CRE studies since 2008 have told a similar statistical story: research on CRE has not explored the individual distress in members of couples attending and completing CRE, nor has it sufficiently measured their levels of relationship distress. For example, of more than 300 studies, only 53% included a discussion of relationship distress, and of these less than 50% had examined and reported on levels of relationship distress or relationship satisfaction. Of the CRE research conducted since 2008, a little more than half have studied relationship distress. Few CRE studies have investigated the relationship between married or unmarried partners' individual distress and other variables (including relationship distress). No CRE studies have examined the relationship between married or unmarried

partners' individual distress. Few CRE studies related to individual distress and relationship distress have prevented scholars from making definitive claims related to the distress levels of couples attending CRE, how married or unmarried partners may influence each other's distress, or the effect that CRE has on distress that is akin to that of couples counseling.

Individual Distress in CRE Research

Many of the CRE studies used the actual term of distress in the article title or keywords. However, drilling down into the measurements and results revealed that researchers used multiple terms—distress, relationship distress, satisfaction, relationship satisfaction, and relationship dissatisfaction—synonymously and interchangeably with relationship distress. The lack of common lexicon related to relationship distress or relationship satisfaction, especially using the sole term *distress* in article titles and abstracts, made the literature search results initially appear that researchers had examined participants' individual distress. However, among the articles included in the four meta-analyses, none studied the relationship between married and unmarried partners' individual distress and other variables, including relationship distress, related to themselves and their partners.

Since 2008, few CRE studies have examined the individual state of the members of the couples as well as the state of the couple as a dyadic unit. The analyses have included individual distress and variables such as psychophysiology and communication among others (e.g., Burr, 2011). For example, some studies examined the effect of CRE on individual levels of the stress hormone cortisol (e.g., Ditzen, Hahlweg, Fehm-Wolfsdorf, & Baucom, 2011). Other studies, for example, investigated the effect of individual stress on communication among various

populations such as military-couples (e.g., Frisby, Byrnes, Mansson, Booth-Butterfield, & Birmingham, 2011).

Only two CRE studies have examined the correlation between individual distress and relationship distress, and both were published within the last two years. In the first study, researchers provided CRE to 422 predominantly Caucasian (80%) married and unmarried couples, less than half of whom were low-income status (Veldorale-Brogan et al., 2010). The researchers used short versions of two of the assessments included in this current study: the short version of the Outcome Questionnaire (OQ; Lambert, et al., 2004) and the short version of the Dyadic Adjustment Scale (DAS; Spanier, 1976). Veldorale-Brogan and colleagues examined the relationship of each partner's own individual distress and own reported relationship distress, and did not examine the predictability of the constructs from one partner to another. They found individual distress was negatively correlated with relationship distress ($B = -0.18$, $p < .05$). The second study was partially reviewed in the previous section (Burr, 2011). Burr found that global stress and relationship quality were correlated between the males and females. Male stress was negatively correlated with female relationship quality ($B = -.23$, $p < .05$), and female stress was negatively correlated with male relationship quality ($B = -.55$, $p < .01$, indicating that males were more likely to experience higher levels of relationship distress when their female partners were experiencing individual distress.

Extensive literature exists on the study of individual psychological health and individual distress. Previous research has included individual distress within the context of romantic relationships. However, few CRE studies have examined the individual distress of the

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participating married and unmarried partners, including the relationship between the individual

distress of each partner and their relationship distress.

Relationship Distress in CRE Research

Less than 25% of CRE studies have included data related to couples' relationship

distress. Most of the studies examined one or more specific characteristics or behaviors of

couples such as communication. For example, Hawkins, et al. (2008) indicated that only 61 of

the 117 studies in their meta-analysis had included data related to couples' relationship distress.

8.5% of these studies ($k = 10$) reported that more than half of participating couples experienced

significant levels of relationship distress. Since 2008, the end of the period covered by the four

meta-analyses, fewer than 50% of the studies have specifically studied the relationship distress of

couples in CRE. CRE studies that have examined and reported levels of relationship distress

have indicated that most couples reported some level of relationship distress ranging from low to

high at intake.

Among the CRE studies that have examined relationship distress, few have specifically

investigated if CRE effectively reduced relationship distress for married or unmarried couples

(e.g., Cordova et al., 2005; Cowan, Cowan, Pruett, & Pruett, [in press]; Cummings, Faircloth,

Mitchell, Cummings, & Schermerhorn, 2008). These studies reported varying instrumentation,

outcomes, and effect sizes. Although among these studies there were little to no significant

differences, the overall initial findings revealed that CRE seemed to reduce relationship distress

for some couples. The overall effect sizes ranged from .015 to .94.

For example, Reardon-Anderson, et al. (2005) reported that fewer than half ($k = 18$) of the 39 studies included in their meta-analysis measured relationship distress using commonly known, reliable, and valid assessments such as the Marital Adjustment Test (MAT; Locke & Wallace, 1959) and the Dyadic Adjustment Scale (DAS; Spanier, 1976). Of these studies, CRE appeared to reduce relationship distress with a large effect size of .94. The studies in Hawkins et al. (2008) used the same standardized assessments as reported in Reardon-Anderson et al. (MAT and DAS), and also indicated early signs that CRE may help couples reduce relationship distress. However, the effect sizes of these studies were lower, ranging from .24 to .36. Fawcett et al. (2010) reported that the overall findings of the studies in the meta-analyses related to relationship distress were "small and nonsignificant…for control-group ($d = .218$, ns, $k = 17$) and one-group/pre-post studies ($d = .113$, ns, $k = 11$)" (p. 234).

Correlation of Individual and Relationship Distress

The actions of two members of a group, including dyadic units or couples, are related and are at least partially dependent of the actions of other group members (Johnson & Johnson, 2005; Levine, 1935, 1948). This dependent interaction applies to the assessment scores of group or dyadic members. Researchers have simultaneously examined the individual psychological health as well as relationship interactions of married and unmarried partners, including the relationship between the two variables. This interdependence of actions and scores has required researchers to use advanced statistical analyses such as dyadic data analysis (Kenny, Kashy, & Cook, 2006). Studies of the interdependence of couples' individual and relationship distress have shown that (a) members of couples can experience both individual and relationship distress at the same time,

(b) members of couples can experience one or both types of distress at the same time as their partners, (c) members' relationship distress is often correlated to their partners' individual and relationship distress, and (d) members' relationship distress can directly influence their partners' individual distress and relationship distress (Johnson & Johnson, 2005; Kenny et al., 2006; Wilcox et al., 2011). Previous research has included couples participating in counseling and CRE.

Research of couples in counseling has shown a strong association, as well as early findings of causal relationships, between couples' relationship distress and one or both partners' individual psychological distress such as depression, anxiety, and substance abuse (Whisman & Uebelacker, 2006). Despite the long history of CRE, researchers have rarely examined the correlation between individual and relationship distress as well as between relationship distress and other variables. What little literature exists on the topic is found sporadically throughout the literature from the 1970s and through 2011 (e.g., Burr, 2011; Markman 1978; Murray, Holme, & Griffin, 1996). However, CRE studies have not investigated the relationship between the individual distress levels of married or unmarried partners.

For example, Markman (1978) conducted a landmark 21-year study with 14 couples that was the first such research to suggest romantic partners' negative interactions could lead to and predict their relationship distress. The length of time negative interactions occurred and the intensity of the interactions both accounted for varying levels of relationships distress. The more time partners engaged in negative interactions and more intense the interactions, the more likely that couples experienced higher levels of relationship distress than couples that experienced

periodic negative interactions. The most recent study on the topic examined the relationship between the variables of stress, negative emotions, aggression, and relationship distress and couples' decisions to seek help through CRE (Burr, 2011). The sample consisted of 99 predominantly Caucasian (77%) married and unmarried couples from low, moderate, and high socioeconomic levels. Regarding relationship distress, unmarried, low-income partners, especially males, with moderate levels of relationship distress were more likely to have a positive perspective of CRE than married or unmarried partners from other socioeconomic statuses or with other levels of relationship distress. Although the study contributed to the knowledge of the levels of relationship distress in couples participating in CRE as well as the correlation between relationship distress and other variables, it did not investigate the relationship between each partner's level of individual distress.

Although there is extensive research of individual and relationship distress of couples in counseling, there is a paucity of research on the individual and relationship distress of couples participating in CRE (DeMaria, 2005; Blanchard, et al., 2009). This lack of research includes negligible CRE research that has simultaneously studied individual and relationship distress, and no CRE research that has examined the correlation within-dyad individual distress between married or unmarried partners.

As a result, we cannot (a) conclusively depict the distress levels of couples that select CRE, (b) make strong conclusions about the effect CRE may have on reducing individual and relationship distress, (c) confidently determine if the members of couples who attend CRE have

individual and relationship distress levels that are correlated, or if members' individual and relationship distress influences their partners' distress.

Purpose and Hypotheses

Thus, this study sought to examine the existence and extent of a circular relationship between individual and relationship distress of, married couples from low-income and racially and ethnically diverse backgrounds who voluntarily selected CRE as a source of help for their relationship. A correlational research design was employed, framed within the social interdependence theory. Both the purpose of this study and the discovery of a circular relationship in counseling and other fields are supported by the theory of social interdependence. Social interdependence theory states that in groups of two or more people (e.g., dyads), each individual's actions (e.g., behaviors, emotions, verbal and nonverbal communication) influence the actions of the other members, and by extension the dynamic of the group itself, which in turn influences the actions of the group members (Levine, 1935, 1948). For example, much of social psychologists' research with intimate partners that has confirmed this circular relationship between individual and relationship functioning (e.g., distress, satisfaction) has been founded upon the perspective of the social interdependence theory. As applied to this study, social interdependence would generally suggest that among couples who select CRE as a source of help for their relationships, the actions (e.g., behaviors, emotions, verbal and nonverbal communication) associated with the individual psychological health (e.g., individual distress) of each member of the dyad influence the actions associated with the individual psychological health (or distress) of the other member of the dyad, and thus would influence the dynamic of the

dyadic relationship itself (e.g., relationship satisfaction, relationship distress). Similarly, the theory would also suggest that partners' actions associated with their relationship distress would influence the action associated with each other's individual distress as well as, by extension, each other's relationship distress. In this way, the social interdependence theory provided support, and previously reviewed literature of the circular relationship between the two types of distress provided rationale and support for the development of four hypotheses related to the sample population as means to addressing the purpose of this study.

The *first hypothesis* proposed that the dyad members' individual distress would correlate with and predict (i.e., influence) the direction of each other's distress. For example, as one dyad member's individual distress increased, the partner's individual distress would be predicted also to increase. The *second hypothesis* proposed that the dyad members' relationship adjustment or distress would correlate with and predict (i.e., influence) each other's levels of relationship adjustment or distress. For example, as one dyad member's relationship distress increases, the partner's relationship distress would be predicted also to increase. The *third hypothesis* proposed that individual distress would influence the dynamic of the relationship as measured by its correlating with and predicting relationship distress. Hypothesis 3.1 proposed that the dyad members' individual distress would correlate with and predict *their personal* relationship distress. Hypothesis 3.2 proposed that the dyad members' individual distress would correlate with and predict *their partners'* relationship distress. For example, as members' individual distress increased, their and their partners' relationship distress would be predicted also to increase. Finally, the *fourth hypothesis* proposed that the dynamic of the relationship, as

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measured by the dyad members' relationship adjustment or distress, would correlate with and predict (i.e., influence) individual distress. Specifically, Hypothesis 4.1 proposed that dyad members' personal relationship distress would correlate with and predict *their personal* individual distress. Hypothesis 4.2 proposed that dyad members' personal relationship distress would correlate with and predict *their partners'* individual distress. For example, as members' relationship distress would increase, their and their partners' individual distress would be predicted to also increase. Utilizing a correlational research design and prediction hypotheses to examine dyadic data required the use of advanced statistical analyses including the actor-partner interdependence model (APIM; Kenny, Kashy, & Cook, 2006) and multilevel modeling techniques (e.g., hierarchical linear modeling), which were founded on the statistical principles of regression (Tabachnick & Fidell, 2007). An overview of the study methods and these advanced analytical procedures is provided later in this chapter; they are discussed at length in Chapter 3.

Examining the effects of CRE on individual and relationship distress is beyond the scope of this study. However, the subject warrants brief mentions here amongst gaps in CRE research. Future examination as to what extent, if any, CRE affects individual and relationship distress (e.g., lowers levels) will add to counselors' and other helpers' understanding about what works in CRE to reduce distress levels overall as well as illuminating how specific variables or characteristics play a role in how effective CRE is in reducing individual and relationship distress. Examples of specific individual or couple characteristics include (a) relationship status (e.g., married, unmarried, cohabiting), (b) socioeconomic status, (c) ethnicity, (d) years married,

(e) children, (f) age, (g) education, (h) employment status and (i) the actual levels of distress (e.g., Is CRE effective at reducing low to moderate levels of individual or relationship distress, but not high levels of distress?).

Although this study has contributed to knowledge in the aforementioned areas (with the exception of treatment effect), it is only one study. Extensive examination of individual and relationship distress in future CRE studies is needed in order for researchers to make strong conclusions distress among couples selecting CRE as a course of help for their relationships. Discussing the theoretical framework, the constructs of interest, and CRE helps provide a rationale for researching CRE at all and in this study.

Theoretical Framework

Researchers use theories to frame the purpose and hypotheses of studies as well as to explain what they observed in the laboratory and what is occurring among the population at large. Theories are found in literature from numerous fields including, but not limited to, business, law, education, engineering, and behavioral and social science (Creswell, 2009). A theory is "a set of interrelated constructs (variables), definitions, and propositions that presents a systematic view of phenomena by specifying relations among variables, with the purpose of explaining natural phenomena" (Kerlinger, as cited in Creswell, 2009, p. 51). Metaphorically, theories provide road maps that help researchers, teachers, practitioners, students, and readers navigate existing and new information and phenomena. Thus, framing research within the context of a theory is an important part of the preparation, publishing, and presenting of studies, and should be applied consistently.

The theoretical support for this study is social interdependence. Literature related to social interdependence theory spans from the 1930s through the current decade. The tenets behind social interdependence were first introduced as a part of Gestalt psychology. Lewin (1935, 1948) posited that a change in one group member would result in a change in one or more of the other group members, thus altering the state of the group as a whole. In essence, the state of each individual group member was at least partially dependent upon the state of other members of the group. Therefore, the interdependence amongst members of a group helped to create and explain the dynamic of the group as a whole.

Based on the early work in Gestalt psychology, Deutsch (1949) formally introduced the broader concept of the social interdependence theory that would have application implications within and beyond psychology. Related to cooperation and competition in groups, Deutsch formally conceptualized that the outcomes of individuals in groups were influenced by the actions of other individuals in the same group. Since this seminal work, scholars have conducted more than 800 studies on the broad application of social interdependence theory in numerous fields, especially business and education. These studies have helped to conceptualize the theory more clearly. For example, social interdependence has been categorized as positive and negative. Interdependence is positive if the actions of an individual influence the shared goals of the group. Interdependence is considered negative when an individual's actions disrupt the individual goal of another group member or impede a shared goal.

Social Interdependence and Romantic Relationships

Researchers and theorists have maintained that social interdependence exists amongst individuals in groups of two or more, and occurs when the outcomes of individuals' goals are influenced by the actions of other individuals in the group (Deutsch, 1949; Johnson & Johnson, 1974; Johnson & Johnson, 2005; Kenny, Kashy, & Cook, 2006). Thus, social interdependence theory applies to members of dyadic units including couples in romantic relationships. As a result, some scholars who have conducted studies related to couples have framed their research within the context of social interdependence. This research has rarely included studies related to CRE.

Since the late 1930s, fewer than 200 studies have included social interdependence as the theoretical basis for examining relationship distress. Since the late 1940s, nearly 100 studies have applied the social interdependence theory to investigating individual distress. These nearly 300 studies represented diverse samples including individuals and couples, married and unmarried participants, and participants from various racial and ethnic backgrounds. Collectively, the findings were consistent amongst the studies (Johnson & Johnson, 2005). When group members experienced individual-initiated actions to help achieve shared goals, they reported more positive relationships and higher levels of psychological well-being.

Social Interdependence and CRE Research

Researchers have studied CRE from within different theoretical frameworks such as social exchange (Markman, 1978; Karney & Bradbury, 1995), human ecology (Burr, 2011), self-regulation (Halford & Wilson, 2009), and social interdependence (Veldorale-Brogan, Bardford,

& Vail, 2010), among others. The social exchange theory has been the most widely applied theoretical framework (Karney & Bradbury, 1995). Conversely, researchers have only recently begun to frame their CRE research within the social interdependence theory. The emergence of social interdependence in CRE research has coincided with recent publications related to analyzing and accounting for the interdependence of dyadic data in studies of couples including those participating in CRE (Kenny, Kashy, & Cook, 2006). The study of individual and relationship distress was amongst the first applications of social interdependence in CRE research (Veldorale-Brogan et al., 2010).

Applying the Theoretical Framework

In this study, social interdependence theory would suggest that the levels of the independent variables of partners' individual distress would influence the dependent variables of their partners' individual distress. Further the theory would dictate that dynamics of the dyadic unit are driven by the partners' individual actions, and thus account for relationship distress. This study will test if applying social interdependence theory to studying the individual distress of low-income, married, heterosexual partners from diverse backgrounds that participate in CRE is accurate and appropriate.

Summary

Conflict, disappointment, and emotional pain are expected to occur at some point within romantic relationships (Gordon, 1990; Karney & Bradury, 1995). However, when left unresolved or allowed to escalate, these can result in relationship distress that can increase to a level that leads couples to a crossroads of deciding between saving their relationship or ending it (Gottman

& Notarius, 2000; Hawkins & Fackrell, 2011). Couples typically marry with the goal of long-lasting and mutually pleasurable relationships, yet as many as half them choose to divorce (CDC, 2010; Munyon, 2012). As a result, professional counselors, clergy, and other caring individuals have sought to help couples reduce relationship distress and learn skills to create and maintain a pleasurable relationship.

Couples have typically chosen counseling when seeking help with reducing their distress and improving relationship quality (Christensen, Atkins, Baucom & Yi, 2010). Couples and relationship education (CRE), which has existed in some form since the late 1880s, reemerged in the latter part of the twentieth century as another option for couples experiencing distress (Burnard, 1994). Since the 1980s, and increasingly over the last decade, professionals, policy makers, and funders have sought to study CRE effectiveness (Ooms, 2004; Halford, 2011).

Research has proven counseling as an effective means of helping couples reduce relationship distress (Carr, 2011), and has shown early findings that CRE may help some couples reduce relationship distress (Halford, 2011). However, CRE studies have historically lacked diverse samples, including limited numbers of couples from low socioeconomic and racially and ethnically diverse backgrounds, and too few have examined couples' relationship distress (Hawkins et al., 2008). Thus, researchers do not thoroughly understand the relationship distress of married or unmarried couples in CRE, and their findings of CRE effectiveness related to reducing relationship distress are not yet considered conclusive or generalizable (Blanchard et al., 2009).

Social interdependence theory has stated that within a group of two or more individuals, one individual's actions influence the other members of the group as well as the overall group dynamic (Lewin, 1935, 1948). Since the 1930s, scholars have framed research related to romantic relationships within the theory of social interdependence. Generally, this research has examined how married and unmarried partners' actions influence or predict their partners' actions (Kenny, et al., 2006), which has included the study of individual distress. Collectively, non-CRE studies related to social interdependence and individual distress have shown that when individuals' partners initiate action to fulfill shared goals, they reported lower levels of individual distress (Johnson & Johnson, 2005).

CRE studies related to the romantic relationships of participating married and unmarried couples have rarely applied social interdependence as a theoretical framework for their research or examined the predictive relationship between married or unmarried partners' individual distress and other variables. Only one CRE study framed its research within the social interdependence theory and studied the predictive relationship between participating married and unmarried partners' individual distress and relationship distress (Veldorale-Brogan et al., 2010). Veldorale-Brogan and colleagues found that individual well-being ($B = 1.13$, $p < .001$) was correlated with relationship adjustment. However, no studies have examined the predictive relationship between personal individual distress and partners' individual distress among couples selecting CRE as a source of help for their relationships.

The purpose of this study is to address some of the aforementioned gaps in CRE research. Using social interdependence as its theoretical framework, this study will investigate the

potential various predictive relationships between the individual and relationship distress among married, heterosexual couples who have children and are predominantly from low-income and racially and ethnically diverse backgrounds. The primary focus of this study is on the potential existence of a circular relationship between individual and relationship distress, with an emphasis on individual distress due to that being a larger gap in CRE research.

Conclusion

Scholars from various fields have extensively studied individual psychological health and individual distress for more than 100 years as well as intimate relationships, including relationship satisfaction and distress. Various forms of help exist for couples experiencing distress. One of the first sources of couples work was family life education or couples and relationship education (CRE) provided by social workers and family life educators in the late 1800s. CRE was a catalyst for the formation of family and couples counseling. Consistent research of counseling since the mid-1900s found among couples that attend counseling, their relationship distress is strongly associated with one or both partner's individual distress, and that counseling effectively reduces individual and relationship distress. These findings were important in helping professional helpers such as licensed counselors, socials workers, and psychologists determine treatment interventions, dosage, resources, and outcomes. While CRE existed before couples counseling, CRE research has only recently begun to examine the individual and relationship distress of its married and unmarried participants, with little to no research of the association between the two types of distress. This paucity of CRE research has made it difficult for scholars to make strong conclusions about couples individual and

relationship distress. Additional CRE research on individual and relationship distress will help us confidently determine (a) the levels of individual and relationship distress, (b) the relationship between individual and relationship distress, and (c) the effects of CRE on reducing distress in individuals and their relationships. Like the ramifications of the counseling research on the topic, we can eventually make strong conclusions about practical and clinical implications such as recruitment, screening, dosage, and outcome.

CHAPTER THREE: METHODS

Every individual experiences periodic reductions in personal psychological health (e.g., stress, anxiety). Prolonged, repetitive, and unresolved reductions in psychological health can lead to *individual distress*. Similarly, every couple in an intimate relationship experiences periodic negative interactions that result in disagreement and disappointment. Characteristics such as respect, commitment, and forgiveness as well as communication skills can help couples resolve these differences, adjust to the relationship, and achieve relationship satisfaction (Bradbury, Fincham, & Beach, 2000). However, prolonged or repetitive as well as unresolved negative interactions lead to feelings of dissatisfaction and disillusionment with the relationship (Gottman & Notarius, 2000), and ultimately *relationship distress*. Couples unable to resolve their relationship distress often require professional help, and historically, have turned to counseling and more recently to couple and relationship education (CRE).

Social psychology and counseling researchers has discovered a circular relationship between relationship distress and individual distress in intimate relationships (Johnson & Johnson, 2005; Whisman & Uebelacker, 2006)—with one begetting the other. Questions and suggestions have been posed about how this might influence our work with couples, such as whether to work with the couple as a unit when couples present with relationship and individual distress (as opposed to working the partners with individual distress alone first) and whether certain couples, according to levels of distress, may benefit from certain interventions (e.g., counselor or CRE) more than others. Research in counseling in currently underway to help answer these and other questions and to test new or revised areas of practice.

In the meantime, couples continue to also select CRE as a course of help for their relationships. However, we have little research about the relationship distress of these couples selecting CRE, even less about their individual distress, and no information about numerous potential ways in which individual and relationship distress interact and influence each other, including if a circular relationship between the distresses exists. This lack of research has prevented us from making strong claims about the individual and relationship distress among couples selecting CRE. Thus, the purpose of this study was to examine if and to what extent a circular relationship between individual and relationship exists, as well as to measure the levels of these distresses among the sample population. In this chapter a detailed account of the methods applied to this study are presented and discussed. Specifically, this chapter includes detailed information about (a) the correlational research design; (b) protections against potential threats to internal and external validity; (c) participants, sampling, and power; (d) instruments; and (e) procedures, such as variables included, the preliminary analysis conducted, and the statistical analyses selected.

Research Design

The data for this study were previously collected data from a larger federally-funded study operated by a large, metropolitan university in the Southeastern United States to investigate the effects of CRE on low-income, married, heterosexual couples from diverse backgrounds. The larger study is described in detail later in this chapter. The institutional review board (IRB) of the metropolitan university previously approved the larger study, which included a clause allowing examination of study data by doctoral students for the purposes of dissertation.

Thus, the currently IRB approval applies to this study, and a new IRB review is not required (see IRB in Appendix).

The researchers of the larger study employed an experimental research design. The researchers randomly assigned low-income, married heterosexual couples with children into a treatment group or a wait-list control group. In the present study, we will use a correlational research design (Campbell & Stanley, 1963). Despite some inherent limitations with a correlational research, it is appropriate for this proposed study because this design is appropriate for investigating the relationship between "two natural states" (p. 64). However, a correlational design does not include an examination of differences between or the influence of an intervention or treatment on the variables, and does not usually account for many other variables associated with the constructs or variables of interest in the current study. It does not identify causes of change. For example, in this present study married or unmarried partners' individual distress prior to their involvement in CRE represents the partners' two natural states of distress without any intervention. On the other hand, the larger study testing the effectiveness of CRE to reduce individual distress of married or unmarried couples through a randomized pre-post experimental design represents testing the influence of an intervention on the variable of individual distress.

Despite the limitations, correlational research *(a) provides researchers with rich opportunities to analyze data from large datasets that have not previously been examined and may have undiscovered relationships with potential clinical significance, (b) provides researchers with opportunities to conduct a preliminary test of research questions, and (c)*

allows researchers to conduct more extensive studies related to the variables that remain after an initial test. Thus, correlational research design is an appropriate fit for this proposed study because the studying is a preliminary test of the social interdependence theory as a guide to discovering the naturally occurring predictive relationship between low-income, married partners' individual distress and relationship distress.

Internal Validity

In this study, one of the internal validity threats is history. History is when events occur between treatment and measures. Using previously collected data has precluded any control over the life events of participants in the original study. A second potential threat is related to maturity. Maturity is when events occur to participants with the passage of time (e.g., growing older). Although this study includes the use of previously collected data, maturity, in a way with this sample, was automatically protected. Participants in both the treatment group and the control group of the original study matured at the same time. The larger study included protection against the third threat of biases. The researchers actively recruited in person, passively recruited through referrals and advertisements, and randomly assigned participants into a treatment group or a control group.

A fourth way that internal validity could be threatened is through instrumentation or instrument decay. Examples of instrument decay include researchers administering assessments differently to participants, using older and updated versions of the same instrument at different times during the study, and using poorly designed assessments (e.g., ambiguous questions). The researchers of the larger study protected against instrument decay by (a) using the same version

of the reliable and valid assessments throughout the study at pre-test, post-test, and follow-up with all participants; (b) administering the tests in the same manner each time with the same instructions and collection procedures; and (c) inputting the data into SPSS in the same manner and time frame. The final potential threat to the study is experimental mortality. Experimental mortality is the loss of research subjects over the life of the study. The researchers protected against experimental mortality by providing participation assistance and incentives in the form of childcare and food. For those couples that did disengage from the study, the researchers followed up with them via phone and e-mail.

External Validity

External validity is related to the generalizability of the study. Results of studies are *externally valid* when researchers can generalize them beyond the confines of the study relative to the characteristics of the sample population, procedures, settings, and other study conditions (Prohaska & Etkin, 2010). The researchers of the larger study protected some of the external validity by using active and passive recruitment strategies, and by randomly assigning the couples to either a treatment group or control group. However, there remains some risk to external validity. Although the individual members of the couples were from racial and ethnically diverse backgrounds, the results from this study are limited to couples that are of low socioeconomic statuses, are married, and have children. Thus, the results may not be generalizable to other couple types (e.g., dating and cohabiting, couples without children, same sex couples).

Participants and Sampling

The dyadic data used in this current study is archival data from couples that selected CRE as a source for help for their relationship, by way of a larger study conducted in a large metropolitan area in the Southeastern United States. The original sample size for this study was 180 couples (360 participants). After the archival dyadic data were inspected and cleaned through an extensive preliminary analysis (discussed in detail later in this chapter), the original dataset had been reduced to 152 couples (304 participants).

Power Considerations

An analysis of sample size via G*Power (Erdler, Faul, & Bauchner, 1996) revealed that the sample size of the larger study was sufficient for this correlational investigation study. G*Power is a computer software that allows researchers to conduct, amongst other analyses, an a priori analysis of required sample size based on the minimum effect size, statistical power, number of groups, and number of instruments. The actor-partner interdependence model (APIM; Kenny, Kashy, & Cook, 2006), a form of dyadic data analysis, was utilized within three-level hierarchical linear model. Hierarchical linear modeling part of the multilevel modeling family of analyses, and is a form of multiple regression. Because G*Power does not have an a priori sample size computation available for multilevel modeling specifically, the option for predicting sample size when using a multiple regression was used. Thus, inputting the minimum effect size (.25; Sink, 2006) and optimal power (.80; Erdler, Faul, & Bauchner, 1996) for multiple regression as well as the total number of predictors in this study (*n* = 17) and the number of

predictors actually tested ($n = 16$), G*Power denoted that the required sample size for this study was 92 participants.

Participant Factors

The sample consisted of married couples with zero (pregnant with first child) to four children ($M = 1.91$, $SD = 2.00$) living at home ages 0 (pregnant with first child) to 17 years. Nearly 44% ($n = 126$) of the couples had cohabited before marrying for an average of 8.14 months ($SD = 11.83$; Range $= 0 - 48$). Seventy percent of the couples ($n = 202$) had been married less than 10 years ($M = 8.48$, $SD = 6.60$; Range $= < 1 - 27$). Based on the comparisons of couples' combined annual income ($M = \$44,229.95$, $SD = \$28,784.67$) and family size to the federal poverty guidelines (U.S. Department of Health and Human Services, 2012), all income levels were represented (i.e., lower, moderate, upper). However, the couples predominantly had low- to moderate-income levels (94.7%, $n = 288$), with more than half meeting the federal criteria for low socioeconomic status (53.9%, $n = 164$). The average age for men ($M = 35.03$, $SD = 8.23$; Range $= 21 - 59$) and women ($M = 35.94$, $SD = 7.90$; Range $= 21 - 55$) was about the same. The married partners were predominantly from diverse racial and ethnic backgrounds (64.9%, $n = 187$), such as Latino/Hispanic, Black/Non-Hispanic, Asian. The majority of men (83.2%, $n = 253$) and women (82.9%, $n = 252$) had earned less than a college degree (e.g., high school diploma, some college). Nearly 68% ($n = 103$) of men and 60.5% ($n = 92$) of women were employed.

Instruments

The researchers of the larger study used an author-created demographic form to collect information about participant factors, and three individual- and relationship-focused assessments. One assessment, the Outcome Questionnaire 45.2 (OQ-45.2; Lambert, et al., 2004) measured each partner's individual distress. Two assessments, the Dyadic Adjustment Scale (DAS; Spanier, 1976) and the Relationship Assessment Scale (RAS; Hendricks & Hendricks, 1998), measured the relationship distress.

Participant Factor Form

The researcher from the larger study created an informational form from which to gather participants' demographic data—participant factors. Data collected included dyadic-level factors such as number of months cohabited before marrying, number of years married, number of children at home under the age of 17 years (including if wife was pregnant), and level of annual combined income. Participant factor data also included individual level information such as gender, age, race/ethnicity, years of education, and employment status of the participant and of the spouse. Detailed participant factor information is presented in Table 1. Detailed individual and relationship functioning data are displayed in Table 2.

Outcome Questionnaire

The OQ-45.2 (Lambert, et al., 2004) contains 45 items that measure individuals' overall psychological distress. The assessment contains three subscales. The first subscale is *symptom distress* (SD). The SD subscale measures symptoms related to the most commonly diagnosed mental health disorders including anxiety, affective, adjustment, and stress-related. The SD

subscale score ranges from zero to 100. Individuals with a total clinical cut-off score of 36 or higher are typically affected by some of the symptoms associated with anxiety, affective, adjustment, and stress-related disorders. The SD scores have been strongly correlated with assessments that measure similar symptoms such as Beck Depression Inventory (Beck & Steer, 1993) and the State-Trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970).

The second subscale is *interpersonal relations* (IR). The IR subscale measures relational issues such as interpersonal conflict with others, problems within close and intimate relationships such as marriage and family, and associated feelings such as loneliness. The score range for the IR subscale is zero to 44. A clinical cut-off score of 15 or more denotes that individuals are currently experiencing distress in one or more interpersonal relationships. A score of 14 or lower indicates that individuals are currently satisfied with the state of their close and intimate relationships.

The third subscale is *social role* (SR). The SR subscale measures if individuals are currently finding difficulty in functioning as desired or expected in roles they have in one or more environments such as family, job or career, and school, amongst others. Social role scores range from zero to 36. When individuals have an SR score of 12 or higher, they are expressing difficulty, distress, or conflict in one or more roles. A score of 11 or lower indicates that individuals are adjusted appropriately (i.e., as desired or expected) to their multiple social roles. Participants' three subscale scores are added together to form a total score determining individual distress.

Lambert and colleagues normed the OQ-45.2 with 2,829 individuals from multiple settings including universities, inpatient treatment centers, outpatient treatment centers, employee assistance programs, community mental health providers, and other community organizations. The OQ-45.2 scores have concurrent validity of .78 with the Global Assessment of Functioning (GAF; 4th ed., text rev; *DSM-IV-TR;* American Psychiatric Association, 2000) that professional helpers such as counselors and psychologists use to diagnose clients and patients. The OQ-45.2 total score has a Cronbach alpha of .93, and its subscales have Cronbach alphas that range from .74 to .84. The test-retest Cronbach alpha is .96.

For this study, only participants' OQ-45.2 total scores will be used. A limitation of the OQ-45.2 is that the populations used with its validity and reliability testing consisted of more than 90% Caucasian participants. Because the participants' individual responses for each question were not recorded in SPSS, a test of the internal consistency within this current study was not possible. Despite these shortcomings, the OQ-45.2 remains one of the most widely adopted instruments used to track mental health, and more than 100 studies have been published over 30 years examining and confirming its reliability (OQ Measures, 2007).

Dyadic Adjustment Scale

The DAS is a 32-item psychometric assessment used to measure dyadic adjustment. Spanier (1976) described the concept of dyadic adjustment as "a process, the outcome of which is determined by the degree of: (1) troublesome dyadic differences; (2) interpersonal tensions and personal anxiety; (3) dyadic satisfaction; (4) dyadic cohesion; and (5) consensus on matters of importance to dyadic functioning'' (p. 17). The DAS consists of four subscales, which are

summed together to calculate a single total score. A total clinical cut-off score of 44 or lower indicates that the individual has some level of relationship distress and reduced relationship adjustment. Scores at or below 44 indicated that individuals are experiencing difficulty with adjusting to their relationships; the lower their scores, the higher their levels of relationship distress.

The first subscale consisting of 13 items is *dyadic consensus*, which measures the extent to which the partners agree on important issues that affect the relationship. The second subscale, *dyadic satisfaction*, which consists of 10 items, measures to what extent the partners feel satisfied with their relationship. The third subscale, *dyadic cohesion*, consists of five items and measures how close the partners feel and the extent to which they share activities. *Affective Expression* is the fourth subscale consisting of four items, and measures the extent to which the partners engage in affection and sexual behavior with each other.

Three independent professionals functioning as judges helped to determine the content validity of the assessment items. The DAS has concurrent validity (.86) with the Marital Adjustment Test (MAT; Locke & Wallace, 1959). The reliability of the DAS subscales range between .91-.93 (Spanier, 1976). Participants' four subscale scores are added together in order to calculate a total score, which determines the overall level of relationship adjustment or relationship distress. Only participants' total DAS scores will be used in this study.

The author reported a high reliability for the DAS total score with a Cronbach alpha of .96 (Spanier, 1976). However, a limitation is that the sample used to norm the DAS consisted of a dataset from 1976 that consisted of a non-diverse population, that is 218 Caucasian

participants. On the other hand, more than 1,000 studies having utilized the DAS with

participants from diverse backgrounds. A recent meta-analysis of the DAS reliability (Graham,

Liu, & Jeziorski, 2006) reported a high Cronbach alpha level for the total score (.92). Further,

because the individual responses of participants in this study were entered into SPSS, a reliability

analysis was conducted. The results indicated a high internal consistency of .93 (DeVillis, 2003).

Thus, the DAS is an appropriate assessment of relationship distress for the participants of this

study who are from diverse backgrounds.

Relationship Assessment Scale

The RAS is a seven-item assessment that measures to what extent individuals feel

satisfied with a close and intimate relationship (e.g., married couples, dating couples).

Individuals score their responses to the seven items on a five-point Likert scale from a low level

of satisfaction (1) to a high level of satisfaction (5). The RAS has no subscales, thus the seven

items are summed to create one total score. The RAS has concurrent validity with the DAS total

score (.80) and dyadic satisfaction subscale score (.84). The RAS was normed in two studies.

The first study examined the relationship satisfaction of 125 undergraduate males and females

who reported being "in love" (Hendrick, 1988, p. 94). Other demographic information, such as

age, race and ethnicity, and marital status, were not reported. Hendrick reported a high reliability

with a Cronbach alpha of .91. The second study investigated the relationship satisfaction of 118

males ($n = 53$) and females ($n = 65$) attending outpatient counseling. Two-thirds of the norming

population was Caucasian (66.1%); however, the racial and ethnic backgrounds of the other

33.9% were not reported. All participants were married between one and 32 years ($M = 5.55$, *SD*

= 8.55). The author reported a high reliability with a Cronbach alpha of .91 (Vaughn &
Matuastik Baier, 1999).

A potential limitation of the RAS is its relatively recent introduction to the field and
frequency of use as compared to more well-established instruments such as the DAS. The DAS
is the most widely used instruments to measure relationship satisfaction and distress (Graham,
Liu, & Jeziorski, 2006), having been administered in more than 1,000 studies including those
related to CRE. Conversely, the RAS has been applied to significantly fewer non-CRE studies
and has rarely been used in CRE studies. Thus, there are fewer CRE studies with which to
compare relationship distress findings of this study as measure by the RAS.

Because the individual responses of participants in this study were entered into SPSS, a
reliability analysis was conducted to test the internal consistency of the RAS (DeVillis, 2003)
after reverse-coding two questions of the RAS that were negatively worded (questions 4, 7;
Hendrick, 1988). The initial Cronbach alpha was very low .27, which was expected and has been
a common finding amongst instruments with fewer than 10 items such as the RAS (Pallant,
2007). Thus the mean inter-item correlation was inspected, with an optimal statistic falling
within the range of .2 - .4 (Briggs & Check, 1986). However, the mean of the correlation
between items for this current study was .06, which indicated, "it is unlikely that a single total
score could adequately represent the complexity of the items" (p. 115). Thus, the decision was
made to remove RAS-related data from the final analyses.

Procedures

Researchers of the larger study previously collected the data within an SPSS file. For the purposes of examining the archival data in this study, the SPSS file was obtained electronically with the participants' identifying information having been removed (e.g., names, addresses, e-mail addresses, phone numbers) or transformed (e.g., exact date of birth transformed to age). Prior to conducting the primary analyses, a preliminary analysis was conducted to check the integrity of the data. However, before starting the preliminary analysis the variables that applied to this current study were identified and selected, the remaining variables were deleted, and the file was saved with a new name, thus creating an individual dataset that was uniquely applicable to this study.

Variables

The archival dataset from the larger study included 394 variables and 360 participants or 180 married couples. Two criteria were applied to determine which variables to include for the study. All variables needed to either contain participants' factors (e.g., demographic information) or their scores from assessments used to measure individual and relationship distress. As a result, 17 variables met one of these two criteria. The variables were categorized as 14 participant factor variables and three assessment variables. The participant variables were: (a) gender (*Gender)* to distinguish each group member as either husband or wife; (b) age (*Age*); (c) ethnicity (*Ethnic*); (d) years of education (*EducYrs*); (e) participant's current employment status (*EmployP*); (f) spouse's current employment status (*EmployS*); (g) years married (*MarrYrs*); (h) number of times married, including current marriage (*MarrNum*); (i) number of months cohabited before

married (*MarrCoh*); (j) current living arrangement (together or apart; *Reside*); (k) combined annual income (*IncoAnn*); (l) number of children at home under 18 (*ChldNum*); (m) expecting a child (yes or no; *ChldExp*); and (n) income level (low-income, moderate-income, upper-income; *IncoLvl*). The three assessment variables included participants' pre OQ total score (*OqTotPr*), which measured individual distress, as well as their pre DAS total score (*DasTotPr*) and pre RAS total score (*RasTotPr*), both of which measured relationship distress.

Within the actor-partner interdependence model (APIM), the 14 demographic variables were predictor independent variables, and each of the assessment variables served as both predictor independent variables and predicted dependent variables. Thus, within the individual dataset (individual-level data) there were 17 predictor independent variables and three predicted dependent variables. The rationale for utilizing the assessment variables as both independent and dependent variables is provided within the primary analysis section.

Two other organizational variables existed: *Dyad* and *Person*. The dyad variable denoted to which group or dyadic unit each male and female participant belonged, and the person variable served to denote the individual participants within each dyad. The variables were important in creating the dyadic and pairwise datasets, which are necessary in order to analyze dyadic data regardless of analytic procedures utilized (e.g., file structure helps account for the nonindependence of the participants' data). The dyad and person variables are further described within the dataset conversion and APIM analysis sections. The variables did not serve as independent or dependent variables. Having selected all applicable variables for this current study, the preliminary analysis was conducted.

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Table 1. Detailed Demographic Data (Participant Factors)

Between-Dyad Participant Factors	Dyad Level (*n* = 152)	
	% (*n*)	*M* (SD)
Cohabitation before marrying		
Cohabited	27 (82)	—
Did not cohabit	73 (222)	—
Months	—	8.9 (13.43)
Years Married	—	8.7 (6.61)
10 or fewer years	67.8 (103)	—
11 or more years	32.2 (49)	—
Number of Children at Home	—	1.19 (2.00)
0 children (pregnant)	1.3 (2)	—
1 child	32.9 (50)	—
2 children	44.7 (68)	—
3 children	7.9 (24)	—
4 children	2.6 (8)	—
Combined Annual Income	—	$44,229.95 ($28,784.67)
Low-income	53.9 (82)	—
Moderate-income	40.8 (62)	—
Upper-income	5.3 (8)	—

Within-Dyad Participant Factors	Individual Level (*n* = 304)				
	Males		Females		Total
	% (*n*)	*M* (SD)	% (*n*)	*M* (SD)	
Age	—	36.3 (8.23)	—	35.9 (7.90)	36.4 (8.05)
Race/Ethnicity					
Caucasian/Non-Hispanic	36.2 (55)	—	34.2 (52)	—	35.2 (107)
Diverse Background	63.8 (97)	—	65.8 (100)	—	64.8 (197)
Hispanic/Latino	47.4 (72)	—	50.0 (76)	—	48.7 (148)
Black/Hispanic	11.8 (18)	—	10.5 (16)	—	11.2 (34)
Native American	.7 (1)	—	—	—	.3 (1)
Asian American	—	—	.7 (1)	—	.3 (1)
Other	3.9 (6)	—	4.6 (7)	—	4.3 (13)
Years of Education	—	14.19 (2.26)	—	14.0 (2.49)	14.3 (2.38)
H.S. or some college	66.4 (101)	—	65.8 (100)	—	66.2 (201)
College or higher	33.6 (51)	—	34.2 (52)	—	33.8 (103)
Employment					
Employed	67.8 (103)	—	60.5 (92)	—	64.1 (195)
Unemployed	32.2 (49)	—	39.5 (60)	—	35.9 (109)

Table 2. Individual and relationship distress by sample, gender, income, race and ethnicity

Functioning	Sample	Gender		Income		Race and Ethnicity	
		Male	Female	Lower	Moderate Upper	Caucasian Non-Hispanic	Ethnically Diverse
Individual*							
M (SD)	47.6 (20.4)	47.2 (20.8)	52.9 (21.4)	53.04 (22.5)	46.6 (19.3)	54.64 (22.2)	47.6 (20.4)
% (n) Distressed	26.3 (80)	23.0 (25)	29.6 (45)	32.3 (53)	19.3 (27)	32.7 (35)	22.8 (45)
Range	6 – 102	6 – 104	9 – 112	6 – 112	11 – 97	6 – 112	6 – 102
Relationship*							
M (SD)	44 (11.9)	44.6 (11.0)	38.84 (10.9)	40.76 (11.4)	42.87 (11.1)	38.7 (9.4)	43.3 (11.9)
% (n) Distressed	56.9 (173)	45.4 (69)	68.4 (104)	59.1 (97)	54.3 (76)	69.2 (74)	50.3 (99)
Range	20 – 65	20 – 65	20 – 60	20 – 64	20 – 65	20 – 58	20 – 65

*   OQ-45.2: Distress cut-off score = 63 or higher
** DAS: Distress cut-off score = 44 or lower

Preliminary Analysis

Prior to conducting the primary analysis using the APIM, a preliminary analysis of the dataset was conducted. During the preliminary analysis, the data were inspected to verify that they have met required assumptions and expectations related to the population from which a study sample has been recruited. For example, one of the most common assumptions is that the data are *normally distributed* throughout the population. Data are normally distributed when the majority of values associated with a variable are grouped near the center of the distribution, while lower and higher values also exist in nearly equal smaller groupings the left and the right sides of the central distribution, respectively. Statistical tests that are used to examine data and require that they meet a specific set of parameters, such as normal distribution, are called *parametric tests*. Data that do not fit within the desired parameters can still be analyzed with analytical procedures called *nonparametric tests.* While nonparametric tests allow for more flexibility related to statistical assumptions or parameters, they also increase the risk of researchers making a Type II error, which is not finding statistically significant differences that may actually exist.

Because this study included multiple variables, both univariate and multivariate normality were assumed. Univariate normality refers to the assumption that the distribution of values for each variable is normal, and thus assesses the distribution of each variable individually. On the other hand, multivariate normality assumes that the mean for each individual case differs normally from the grand mean of all the remaining cases across all the dependent variables. As the description suggests, the test for multivariate normality compares the

case of each study participant to the cases of all the other study participants collectively. Addressing the multivariate assumptions during the preliminary analysis ensure uniformity of the data before running the primary analysis, and makes testing the multivariate assumptions again during the primary analysis unnecessary (Tabachnick & Fidell, 2007).

The primary analyses for this current study included utilizing the actor-partner interdependence model (APIM) by way of the advanced statistical procedure hierarchical linear modeling. Hierarchical linear modeling, which is a form of multilevel modeling and is based in regression, is an advanced multivariate parametric test. Therefore, the archival dyadic data in this study were carefully inspected to ensure that they met the assumptions and expectations associated with the previously described parametric tests, in order to determine if these more robust statistical analyses could be used.

The preliminary analysis included determining if the following assumed parameters were met: (a) data were present for all cases and variables; (b) data were normally distributed; (c) all data values existed within the confines of the distribution, and any extreme values did not significantly influence data distribution; (d) variables had a linear relationship with each other; (e) variables measured individual constructs and were not a combination of other variables; (f) data had equal variances and co-variances; and, specific to dealing with dyadic data, (g) dyad members' data were nonindependent. The findings of all univariate, multivariate, and dyadic data tests have been presented. Data found to violate any of the assumptions were discussed, including the rationale for acceptable and reliable methods used to treat data that violated any of the assumptions.

Missing Data

The first part of the preliminary analysis was to inspect 360 cases for missing data, which included four steps. First, a frequency distribution analysis was run to display the number of times a value (both present and missing values) appeared in each variable along with the percentage of the data that the value represented. The analysis revealed that seven of the 17 variables contained missing values. These included: (a) *Age* ($n = 1$; 0.3%), (b) *EducYrs* ($n = 4$; 1.5%), (c) *IncoAnn* ($n = 14$; 3.6%), (d) *EmployP* ($n = 4$; 1.1%), (e) *ChldNum* ($n = 1$; 0.3%), (f) *OqTotPr* ($n = 4$; 1.1%), and (g) *DasTotPr* ($n = 6$; 1.6%).

Second, the options for addressing missing data were reviewed to determine the best method for this current study (Howell, 2010; Tabachnick & Fidell, 2007). Among the options for addressing missing data, the two that scholars have used most often are mean imputation and case deletion. Replacing missing values with the estimated mean of a variable through mean imputation would provide a complete dataset (or at least a complete variable), while also avoiding the loss of cases. However, researchers have come to use mean imputation less often because it typically results in the unintended consequences of decreased variance of the affected variable and decreased correlation between the affected variable and other variables in the dataset.

On the other hand, using case deletion to omit the cases that contained missing values would increase the likelihood of producing unbiased estimates, such as variances and means, would result in a fully populated dataset, and is among the simplest approaches to dealing with missing data. As a result, case deletion has become the most common method that scholars and

statisticians have used for addressing missing data. A concern researchers have raised with the case deletion method is the potential of intended reduction of power due to a decrease in sample size (Howell, 2010). Although researchers must weigh this risk when deciding how to address missing data, the concern is more often a threat to studies with initially small samples, than with larger samples, such as this current study. Thus, case deletion was selected as the approach for dealing with the missing data found during the preliminary analysis.

Third, the procedure of deleting cases was implemented. In order to delete the affected cases immediately after discovery, the amount of data missing must be less than 5% of the total data in a variable (Tabachnick & Fidell, 2007). This *5% rule* was applied to the output of the previously run frequency distribution. Of the seven variables that were missing data, all were missing less than 5%. As a result, all affected cases could be immediately deleted. There were 34 missing values in one or more of these variables spread amongst 13 cases. The 13 affected cases represented only one partner from a dyadic unit. Within dyadic data analysis, the dyad is the unit of study rather than an individual. Thus, within the individual datasets with dyadic data, individual cases are organized by dyad with every two cases consisting of one male and one female from the same dyadic unit. Therefore, in order to maintain the dyadic integrity of the dataset when deleting these cases, both partners were deleted. Consequently, the cases of both partners from the affected dyadic units were deleted, which resulted in the removal of 26 cases or 13 dyads.

Fourth and finally, a second frequency distribution was run, which confirmed that there were no missing data in any of the variables in this current study. Using the case deletion

method, 26 cases (13 couples) were removed from the sample. Thus, the sample size was reduced from 360 cases (180 couples) to 334 cases (167 couples). As previously reviewed in Chapter 3, the sample size required in order to achieve the preferred statistical power of .80 was 92 (Erdfelder, Faul, & Buchner, 1996).

Univariate Normality

As the first step, descriptive statistics were produced within SPSS in order to examine the normality of the distribution for each dependent variable. The second step included checking the Kolmogorov-Smirnov statistic, which was statistical significant for all the variables ($p < .05$). Although this finding has been found to be "quite common in larger samples" (Pallant, 2007, p. 62), the statistically significant alpha has typically indicated the presence of some level of non-significant or significant non-normal distribution.

Thus, the second step of inspecting the histograms and q-q plots was taken. The shape of histograms and q-q plots can reveal the presence of one or both of the statistical phenomena *skewness* and *kurtosis*, which are often responsible for values being distributed non-normally (Howell, 2010). Skewness is the non-normal, one-sided clustering of the values amongst the low values (to the left) or high values (to the right) rather than in the middle. This largely one-sided distribution would indicate the presence of extreme values existing far from the mean that are skewing the distribution to one side or the other. Positive skewness would mean that the distributions were clustered to the left toward the lower values. Conversely, negative skewness would denote that the distributions were clustered to the right toward the higher values. Kurtosis is the non-normal clustering of values in the center of the distribution would denote a high or low

frequency of identical or similar values, which would cause the distribution to be peaked (leptokurtic) or flat (platykurtic). Positive kurtosis would indicate that the distributions were leptokurtic, which is peaked or clustered in the center of the values with tails on either side that are thin and long. On the other hand, negative kurtosis would mean that the distributions were platykurtic or relatively flat in the center of the values.

Among the predictor independent demographic variables all but two of their histograms and q-q plots denoted normal distributions. The dyad-level predictor independent variables combined annual income (IncoAnn) and months cohabited before married (MarrCoh) appeared to have positive skewness, and combined annual income appeared to also have positive kurtosis. Inspection of the predicted dependent variables showed that the distribution of males' individual distress scores (OqTotPr) appeared to have slight positive skewness, and their relationship distress score (DasTotPr) appeared to have slight negative skewness. Females' individual distress and relationship distress scores appeared to be normally distributed. No predicted dependent variables appeared to have any kurtosis.

Kurtosis has minimal effect on estimates within the analyses; however, extreme values causing the skewness could significantly influence the estimates produced in subsequent analyses (Lomax, 2012). Thus, although researchers can consider accepting some level of skewness or kurtosis, they should inspect more closely those affected variables to determine is the observed skewness or kurtosis is significant with statistics greater than 2.0 or -2.0 (Howell, 2010). Therefore, the preliminary analysis continued with the third step of inspecting the skewness and kurtosis statistical values in the previously run descriptive statistics. The specific

means, standard deviations, and skewness and kurtosis statistics for the predicted dependent variables and the predictor independent variables affected by skewness or kurtosis are detailed in Table 3.

The predicted dependent variables had non-significant skewness and kurtosis statistics of less than 2.0 or -2.0. These findings indicated that extreme values within the variables did not significantly influence the distributions. Thus, predicted dependent variables were left intact. The dyad-level predictor independent variable IncoAnn had non-significant skewness (1.34) and significant positive kurtosis (3.24). Closer inspection of the frequency distribution revealed that although couples' combined annual income ranged from $0 to $189,600 ($M = $43,734.17, $SD = $28,824.86, $n = 167$), the most frequently reported income levels were pooled within the range of $36,000 and $60,000, which caused the distribution to a be leptokurtic or peaked. The target population for this current study was couples with low- to moderate-income levels, thus finding most of the income levels grouped in this range were expected and acceptable; the variable was left intact. Finally, the dyad-level predictor independent variable MarrCoh had both significant skewness (3.39) and significant positive kurtosis (13.67). Inspection of the previously run frequency distribution showed wide range in the number of months couples cohabited before marrying—zero to 202 ($M = 16.51$, $SD = 2.43$, $n = 167$). Further, the majority of couples cohabited less than 12 months (70.7%, $n = 118$), including more than 40% (41.3%, $n = 69$) of the sample having not cohabited, which explained the cause for the large number of values being grouped closely together (positive kurtosis or peakedness) on the left of the distribution (positive skewness).

As a result of the variable MarrCoh have statistically significant skewness, the mean was compared to the 5% *trimmed mean* (Pallant, 2011). Through an explore analysis of this variable, SPSS produced the 5% trimmed mean by removing 5% of the cases from the top and bottom of the dataset, and calculated a new trimmed mean based on the remaining cases. When the original mean (based on all cases) and the new 5% trimmed mean are close, then the extreme values that had caused the statistically significant skewness in the distribution did not strongly influence the original mean. However, if the two means are not close, then further action, such as deleting the cases with extreme values will likely be necessary. For MarrCoh the original mean ($M = 16.51$, $SD = 2.43$, $n = 167$) and 5% trimmed mean ($M = 11.27$) were not close. Therefore, each dyadic case (which included the data for both partners) with an extreme value was deleted one at a time, and rerunning an explore analysis to inspect the variance between the mean and 5% trimmed mean. This process was repeated until the two means were close. This resulted in omitting 15 additional dyadic cases or 30 additional participants from the analysis, which reduced the variance between the mean (8.56, $SD = 12.64$, $n = 152$) and the 5% trimmed mean (7.00).

As a result of the deleting additional cases during the test for univariate normality, the sample size was reduced to 152 dyads or 304 participants. This new sample size was still larger than the sample needed to achieve optimal power of .80 ($n = 92$). With all the variables being normally distributed, the test for univariate normality was completed, and the preliminary analysis continued with testing for multivariate normality.

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Table 3. Statistics for dependent variables and those affected by skewness and kurtosis

Variable	Sample Size	Mean	Standard Deviation	Standard Error of Mean	Skewness	Standard Error of Skewness	Kurtosis	Standard Error of Kurtosis
M Ind. Distress	167	48.56	21.37	1.65	.65	.19	.53	.37
M Rel. Distress	167	100.36	20.82	1.61	-.38	.19	-.53	.37
F Ind. Distress	167	52.99	22.35	1.73	.25	.19	-.33	.37
F Rel. Distress	167	97.46	22.13	1.71	-.47	.19	.05	.37
D IncoAnn	167	$43,734.17	$28,824.86	$2,230.53	1.34	.19	3.24	.37
D MarrCoh	167	16.51	31.48	2.43	3.39	.19	13.67	.37

Key: M = Male (Husband), F = Female (Wife), D = Dyad

Multivariate Normality

Multivariate normality was examined using the Mahalanobis distance, which measures the distance of each case from the center of mass relative to the remaining cases, was produced by running a regression with predicted dependent variables. The maximum Mahalanobis distance (15.53) was compared to the chi-square critical value for four predicted dependent variables (18.46)—recall that within the APIM, the two assessment scores for individual and relationship distress serve as predicted dependent variables for each member of a dyad. The finding that the Mahalanobis distance was less than the chi-square critical value indicated that there were no multivariate outliers (Tabachnick & Fidell, 2007).

Additional Multivariate Assumptions

Additional multivariate assumptions were tested. Scatterplots were produced to examine linearity and homoscedasticity. A multiple regression was run to test multicollinearity and singularity,and homogeneity of variances-covariances was tested through conducting a multivariate analysis of variance (MANOVA).

Inspection of the scatterplots confirmed linearity and homoscedasticity. The p-p plot showed that the relationship between the predicted dependent variables took the form of a straight line. The residuals plot showed that the standard deviation errors for the predicted dependent variables were approximately equal.

The collinearity statistics indicated that there was no multicollinearity or singularity present. All variables were correlated at levels less than .6 with values ranging from .30 to .58. The tolerance values were greater than .10 with levels ranging from 1.35 to 3.44, and the

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variance inflation factor values were below 10 with levels ranging from .29 to .74. These findings denoted that each predictor independent variable measured an individual construct, and was not a combination of the other variables (Pallant, 2011).

Finally, when testing the assumption of homogeneity of variance-covariance with the actor's predictor individual distress variable with the partner's predicted individual and relationship distress dependent variables, Box's M was $F_{(63, 2394)} = 1.16$, $p = .18$. When assessing the assumption with the partner's predictor individual distress variable with the actor's predicted individual and relationship distress dependent variables, Box's M was $F_{(60, 2440)} = 1.19$, $p = .15$. With significance levels of greater than .001, the assumption was not violated (Tabachnick & Fidell, 2007).

Nonindependence

Standard parametric analyses were created explicitly to examine the independent scores of numerous individuals and are based on the assumption that each participant's data are independent of the other participants' scores (Lomax, 2012). The standard method for assessing whether the assumption of independence has been met is inspecting the homogeneity of variance statistic (e.g., Levine's test; Howell, 2010); an alpha of less than .05 denotes a violation of independence. However, violating the assumption of independence informs not only that there are unequal variances amongst the data; it also is a signal that data may actually be related. While researchers studying individuals assume the their subjects' data are independent, theoretically (e.g., social interdependence theory; Levine, 1935, 1948; Johnson & Johnson, 2005) dyadic data should be approached with the expectation that the scores of two members of the

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same dyad (e.g., husband and wife) are quite possibly not independent of each other. Ignoring this potential nonindependence of dyadic data significantly increases the chance of a Type I error (i.e., finding statistical significance when none exists). Although nonindependence is expected, it cannot be assumed, and must be examined to determine among which pairs of variables it exists and to what extent it exists.

Statistically, the level of significant correlation between two variables, and the strength of that correlation (i.e., intracorrelation), determine whether and how much nonindependence exists (Kenny et al., 2006; Tabachnick & Fidell, 2007). Practically, nonindependence is a function of how much two variables are related and how much the variables' relatedness is explained by the individuals' shared experience in a group (e.g., couple, family, classroom, treatment group). Although standard tests of the assumption of independence identify the presence or absence of independence, they do not measure how much two variables are related or how that association is dependent upon an independent variable, such as group membership. Thus, a three-step method is required in order to measure the nonindependence between variables (Kenny et al., 2006) and was implemented in this current study.

The first step involved conducting a bivariate correlation with the predicted dependent variables to determine the level of relationship between them. Second, the intraclass correlation was calculated to determine the strength of the association. Third, the power of the test of nonindependence was determined. The results of the bivariate, intraclass correlations, and power analyses are presented later in this section. However, in order to conduct the correlation analyses the individual dataset had to first be converted into a dyadic dataset.

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Creating Dyadic and Pairwise Datasets

When examining dyadic data, the dyad is the unit of study, and the focus of the analysis lies within the dyad (i.e., between the members of the dyad). Because participant data for this current study was inputted into SPSS at the individual level, the individual dataset needed to be converted to a dyadic dataset. Further, because APIM examines the predictive interaction between the two members of each dyad, the dyadic dataset must be converted to a pairwise dataset. This latter dataset conversion was conducted following the completion of the preliminary analysis; however, it is discussed here for continuity purposes. Although Kenny et al. (2006) have reviewed the detailed steps required for these conversions, a brief description of each dataset has been provided here so that the reader can follow along with the remainder of the preliminary analysis and the subsequent primary analyses for which both datasets are utilized.

Individual to Dyadic

Whereas in the individual dataset each participant's data make up one case, in the dyadic dataset the dyad itself is one case and consists of the data from both members. The CASETOVARS (case to variables) command in SPSS (see Figure 1) assigned each dyadic unit to a separate and unique case ($n = 167$) using a previously created *Dyad* variable, and converted variables containing participant-specific demographic and assessment data, such as gender (*Gender*), employment status (*EmployP*), and individual distress score (*OqTotPr*), among others, into two variables for each dyadic case. The software program used the previously created *Person* variable to index each new participant-specific variable—*Person 1* was the male partner and *Person 2* was the female partner. For example, for each dyadic case the formerly singular

variable age became two variables, *Age.1* (age of the male partner) and *Age.2* (age of the female partner). The dyad-level variables, those that related to both participants with equal values, such as years married (*MarrYrs*) and number of children (*ChldNum*), were left intact as singular variables.

```
CASESTOVARS
/ID=Dyad /INDEX=Person
/GROUPBY=index /AUTOFIX=NO.
```

Figure 1. SPSS: Cases to variables command syntax

Dyadic to Pairwise

Although dyadic datasets are useful in studying the differences or correlations of within-dyad data (i.e., between the members of a dyad), they are not helpful in examining the predictive relationships of how one dyad member's score might influence the other member as well as the dynamic of the dyad itself. Thus, examining the predictive interaction of within-dyad data requires that a pairwise dataset be created in which participants' outcome variables—typically dependent-only variables when analyzing individuals with independent data—serve as both predictor independent variables and predicted dependent variables.

In order to create the pairwise dataset, two dyadic datasets are created and merged into one file. In the previously created dyadic dataset, the participant-specific data were created into variables with males appearing first (e.g., *OqTotPr.1*) and females (e.g., *OqTotPr.2*). The

variables in this dataset served as the predictor independent variables for the dyad. The individual dataset was then converted a second time into a dyadic dataset in which the females' participant-specific data became variables that were listed first (e.g., *OqTotPr.1*) followed by variables created from the males' participant-specific data (*OqTotPr.2*). These newly created variables served as the predicted dependent variables for the dyad. In both dyadic datasets, all dyad-level variables (e.g., years married) were left intact.

For the purposes of the APIM, variables in each of the two dyadic datasets were merged to form *actor* and *partner* variables. The term *actor* refers to participants' data (e.g., individual distress score) as the predictor independent variable. The term *partner* refers to participants' data as the predicted dependent variable (e.g., relationship distress score). The terms actor and partner help researchers and readers distinguish each partner more easily than if they referred to both members of the dyadic unit as the partner, as well as allow for a more consistent and accurate reference for members of dyads. For example, in the first dyadic dataset the variables for individual distress (i.e., *OqTotPr.1* and *OqTotPr.2*) were merged to create one individual distress actor variable (predictor independent variable; *aOqTotPr*). Similarly, in the dyadic dataset the variables were merged to create one individual distress partner variable (predicted dependent variable; *pOqTotPr*). The altered dyadic datasets were then saved as the *actor dyadic dataset* and the *partner dyadic dataset*. Finally, the *actor* and *partner* datasets were merged to create the *APIM pairwise dataset*. An example of how APIM uses a pairwise dataset to test the predictive interaction between actor and partner variables appears in Figure 2.
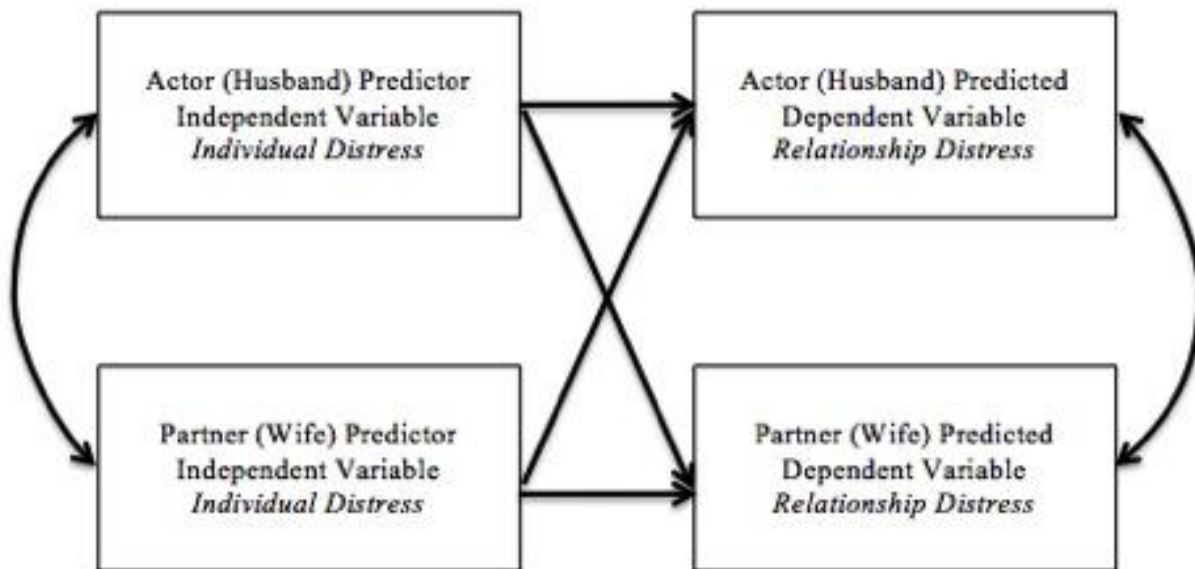
Figure 2. APIM example diagram

Measurement of Nonindependence

Following the dataset conversion, the previously mentioned multi-step approach required

for measuring nonindependence amongst dyadic data was implemented with the dyadic dataset

($n = 152$ dyads). First, a partial correlation was conducted, controlling for participant factors

(e.g., age, income, ethnicity) to measure how related were the male and female partners'

independent and relationship distress. A partial correlation was chosen over the traditional

bivariate correlation method of measuring correlation. Using a bivariate analysis without

controlling for participant factors, could result in inflated Pearson correlation statistics (r; Kenny

et al., 2006; Tabachnick & Fidell, 2007). The level of relatedness was estimated using Cohen's D

(Cohen, 1988; Sink, 2006): (a) small ($r = .01 - .29$), (b) medium ($r = .30 - .49$), or (c) large ($r = .50$ to 1.0). Second, the intraclass correlation was calculated by squaring the correlation statistic

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to determine to what extent did being part of the same dyad explain the amount of shared variance between the variables. Higher intraclass correlation coefficients signify greater violations of the assumption of independence, which denote stronger relationships between the variables, which typically indicate that a percentage of the variance shared by the variables is due to the relationship between them (Tabachnick & Fidell, 2007). Third, a nonindependence power matrix was consulted to determine the level of power or chance of rejecting the null hypothesis given the extent of nonindependence discovered (Kenny, et al., 2006). Fourth, correlation findings for each variable pairing were compared to the established level of *consequential nonindependence* (Kenny, Kashy, & Bolger, 1998) to determine type of analyses required to examine the dyadic data. Consequential nonindependence is the level of nonindependence that must exist before increasing the chance of committing a Type I error; the established level is .45 with an alpha level of .10 for a two-tailed test. When the level of nonindependence is smaller, utilizing advanced statistical approaches such as hierarchical modeling is not necessary, and the applicable variables may be examined at the individual level (Tabachnick & Fidell, 2007) using standard statistical procedures such as regression (Kenny et al., 2006).

However, a form of dyadic data analysis must be used to examine variables with nonindependence levels at or above this level (Kenny et al., 2006). The rationale for this requirement lies in the fact that as the amount of nonindependence increases, so does the rate of committing a Type I error. For example, in a dataset with a large sample (e.g., 100), if two variables have a significant moderate association of .45, the intraclass correlation would be .20, and the chance of committing a Type I error is as high as 70% (Barcikowski, 1981).

The most common analytic approach to measuring nonindependence includes converting the individual dataset into dyadic and pairwise datasets, and using multilevel modeling. This statistical concept for measuring nonindependence between members of the same dyad is very similar to the one that would be used to test the differences between students' pre- and post-scores in a classroom. Consider the example of a teacher who has 30 students in one classroom, and who tests her students' basic skills before and after an academic semester in an attempt to determine to what extent the classroom curriculum accounted for variances in their pre- and post-semester scores. A repeated measures analysis of variance would be applied and could consist of each student's case with one variable representing the pre-semester score (Time 1) and another variable representing the post-semester score (Time 2). The results of the test, depending on the significance level, would help explain how much the intervention (i.e., curriculum) accounts for the difference that may exist between the two scores. Similarly, when measuring for nonindependence, the individual dataset with dyads members' scores in it is converted into the same format as the dataset required for conducting a repeated measures analysis. When working with dyadic data, this dataset format is typically referred to as a dyadic dataset (Kenny et al., 2006). The cases consist of dyads (in place of the students from the previous example) with one member's (e.g., husband) score entered in as *Person 1* (in place of Time 1) and the score from the other member (e.g., wife) entered is as *Person 2* (in place of Time 2). The test then measures the extent to which, not an intervention, but the "natural states" (Campbell & Stanley, 1963, p. 64) account for the differences in the dyadic members' scores. The natural state for couples is the

collective and cumulative interactions and experiences they share that stem naturally from their

being in a close relationship (i.e., belonging to the same group).

Multilevel modeling, such as repeated measures analyses and hierarchical linear

modeling, was developed not only to measure nonindependence of data from group or dyad

members who commonly influence each other's experiences, but also to account for it during

analyses. Thus, multilevel modeling is an increasingly popular family of analytic procedures for

dealing with dyadic data should moderate to high levels of nonindependence exist (Tabachnick

& Fidell, 2007), and it is appropriate for this current study. Therefore, if the multi-step process

resulted in moderate or large levels of nonindependence with ample power, the decision was

made to use the APIM and hierarchical modeling. On the other hand, if the findings indicated

low nonindependence and insufficient power, standard statistical analyses were used to test the

variables at the individual level. The specific results of the bivariate correlation, intraclass

correlation, and intervariable power analysis are present below for each pairing of distress

variables. The detailed nonindependence measurement statistics are provided in Table 4.

Individual Distress with Individual Distress

The first hypothesis stated that personal individual distress would correlated with and

predict partner individual distress. The partial correlation showed that there was a small positive

association between males' and females' individual distress. This meant that as males' and

females' personal scores on the OQ-45.2 increased (toward individual distress), partners' scores

on the OQ-45.2 would also increase. Being part of the same dyad only explained about 6% of the

shared variance between these variables. This indicated that about 94% of variance between

partners' individual distress was explained by other things. The power was below the optimal

setting of .80 (Cohen, 1992) at about .70 (given an alpha of .05 for a two-tailed test), signifying

that there was a 70% chance of rejecting the null hypothesis. As a result of the low level of

nonindependence below .45, using APIM and hierarchical modeling was not necessary. The

nonindependence that was found had been accounted when converting the individual data into

the dyadic dataset. Thus, the decision was made to test the predictive interaction between

partners' individual distress through conducting a regression analysis with the dyadic dataset.

Relationship Distress with Relationship Distress

The second hypothesis suggested that personal relationship distress would correlate with

and predict partner relationship distress. A strong positive correlation between the two variables

meant that as personal DAS scores decreased (toward relationship distress), partner DAS scores

also increased. Dyadic membership explained more than 30% of the shared variance between

partners' relationship distress. Consequently, the chance of rejecting the null hypothesis when

testing these variables was greater than .995. As a result of the high level of nonindependence,

which was higher than the cut-off for consequential nonindependence, and substantial power, the

variables could be tested using the APIM and hierarchical modeling. However, the APIM

requires that the model have one actor-scoring variable serving as the predicted dependent

variable, and both an actor- and partner-scoring variable serving as covariate predictor

independent variables. The construct of relationship distress in this current study has only one

actor variable and one partner variable. Thus, the APIM could not be used to test this hypothesis.

Therefore, it was determined that the next appropriate approach would be to use the dyadic

dataset to conduct a regression analysis that would test the predictive interaction between partners' relationship distress.

Individual Distress with Relationship Distress

The third hypothesis suggested that partners' individual distress would influence the dynamic of the relationship distress. Hypothesis 3.1 stated that personal individual distress would correlate with and predict personal relationship distress. The correlation analysis indicated a moderate negative correlation for both males and females. This relationship denoted that as personal scores on the OQ-45.2 increased (toward individual distress), personal DAS scores would decrease (toward relationship distress). Dyadic membership explained at 27% of the variance shared by these variables for both males and females, resulting in a power level of greater than .995.

Hypothesis 3.2 stated that personal individual distress would correlate with and predict partner relationship distress. There was a moderate negative relationship between the variables for both males and females. This indicated that as personal scores on the OQ-45.2 increased (toward individual distress), partner DAS scores would decrease (toward relationship distress).

Shared dyadic membership explained between 11% to 13% of the variance for females and males, respectively. The power associated with testing these variables was about .95; well above the optimal .80 level. The levels of nonindependence for personal individual distress paired with personal and partner relationship distress were below the consequential nonindependence coefficient of .45. However, based on the strength of the association between personal individual distress and personal relationship distress as well as the considerable power

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for both variable pairings, the decision was made to test the influence of both relationships with the APIM through a three-level hierarchical linear model.

Relationship Distress with Individual Distress

The fourth hypothesis suggested that dynamic of the relationship would correlate with and predict individual distress. Hypothesis 4.1 stated that personal relationship distress would influence personal individual distress. The partial correlation indicated a moderate association between the two variables. This meant that as personal DAS scores decreased (toward relationship distress), personal scores on the OQ-45.2 would increase (toward individual distress). Hypothesis 4.2 stated that personal relationship distress would influence partner individual distress. The analysis showed a moderate correlation between the two variables, indicating that as personal DAS scores decreased, partner scores on the OQ-45.2 would increase. Shared dyadic membership accounted between 11% to 13% of the variance for females and males, respectively. This meant that the power associated with testing the fouth hypothesis was about .95

Nonindependence Summary

Overall, the multi-step process to measure the nonindependence revealed that all pairings of distress variables were significantly correlated. Participants' levels of individual distress were correlated with their own relationship distress as well as those of their partners. This finding was also true for the association of individual distress and relationship distress as well as relationship with relationship distress. The results were interpreted to mean that directional relationships

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existed between the distress variable, such as individual distress, increasing as relationship distress worsened.

Preliminary Analysis Summary

The initial inspection of the data by means of the frequency distribution and descriptive statistics revealed the missing data across seven variables. Because the missing values were missing completely at random, the affected cases were removed from the dataset along with their dyadic partners in order to maintain the dyadic integrity of the dataset for the APIM analysis. The test of univariate normality revealed that all variables were normally distributed with the exception of one dyad-level variable that required the removal of 30 additional cases whose extreme data value were significantly skewing the distribution. Within the test for multivariate normality the Mahalanobis distance was less than the chi-square critical value, which indicated that there were not multivariate outliers. Additionally, there were no violations to the assumptions of linearity, homoscedasticity, multicollinearity and singularity, and homogeneity of variances-covariances. The removal of 56 cases resulted in a reduced sample size from 360 participants (180 dyads) to 304 participants (152 dyads). However, sample size still met the requirement to generally achieve the optimal power of .80 (Cohen, 1992; Sink, 2006).

The assumption of independence was tested by measuring the level of nonindependence between variables using a multi-step method of conducting a bivariate correlation, calculating the intracorrelation, and determining the statistical power of the variable pairs. The decision was made to analyze variable sets with moderate to large correlations and ample power using multilevel modeling, specifically the APIM and hierarchical modeling. It was also determined to

test variable pairings, weak correlations, and insufficient power using standard statistical procedures (Tabachnick & Fidell, 2007). Having completed the preliminary analysis, producing a sound dataset with no missing data that met all statistical assumptions, and determining appropriate statistical analyses for the variables in this current study, the primary analyses were implemented.

Table 4. Pearson correlation, intraclass correlation, and power analysis of distress variables

		M Individual Distress (OqTotPr.1)	M Relationship Distress (DasTotPr.1)	F Individual Distress (OqTotPr.2)	F Relationship Distress (DasTotPr.2)
M Individual Distress (OqTotPr.1)	Pearson's r	—	-.521**	.254**	-.357**
	Intraclass		.27	.06	.13
	Power		> .995	.70	.95
M Relationship Distress (DasTotPr.1)	Pearson's r	—	—	-.334**	.563**
	Intraclass			.11	.32
	Power			.95	> .995
F Individual Distress (OqTotPr.2)	Pearson's r	—	—	—	-.503**
	Intraclass				.25
	Power				> .995

** $p < .001$ (2-tailed)

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CHAPTER FOUR: RESULTS

The theory of social interdependence that suggests that the actions (e.g., behaviors, emotions, verbal and non-verbal communication) of individuals in groups with two or more members—including couples and other dyadic units—influence the actions of the other group members, and by extension the dynamic of the group itself (Johnson & Johnson, 2005; Kenny, et al., 2006; Levine, 1935, 1948). Literature from the field of counseling, historically the usual choice of help for couples in distress, has illustrated this theory in action through their discovery of a circular relationship between the individual and relationship distress of intimate partners who attend counseling (Lebow et al., 2012), resulting in scholarly and practical clinical applications and implications. Couples and relationship education (CRE) has reemerged as an additional source of help for couples, and couples have been attending in increasing numbers over the last three decades. Theoretically, based on the social interdependence theory and findings among counseling, it would seem plausible that a circular relationship would exist between the individual and relationship distress among intimate partners who select CRE as a source of help for their relationships. However, researchers have yet to examine the existence and extent of such a circular relationship in CRE, especially among sample populations that have been historically underrepresented in CRE research and have yet to consider the scholarly and clinical applications and implications of such findings.

Thus, this current study used archival dyadic data from a larger study conducted in a large metropolitan area in the Southeastern United States with married heterosexual couples from

diverse economic and ethnic backgrounds that elected CRE as a source of help for their

relationships. This study used a correlational research design (Campbell & Stanley, 1963),

framed within the theory of social interdependence, and used advanced statistical analyses such

as the actor-partner interdependence model (APIM; Kenny et al., 2006) and multilevel modeling

techniques (e.g., hierarchical linear modeling), which are founded in the principles of regression

(Tabachnick & Fidell, 2007), to test the hypotheses that a circular relationship exists between the

two natural states of individual and relationship distress among the sample population.

The *first hypothesis* proposed that the dyad members' individual distress would correlate

with and predict (i.e., influence) the direction of each other's distress. For example, as one dyad

member's individual distress increased, the partner's individual distress would be predicted to

also increase. The *second hypothesis* proposed that the dyad members' relationship adjustment or

distress would correlate with and predict (i.e., influence) each other's levels of relationship

adjustment or distress. For example, as one dyad member's relationship distress increases, the

partner's relationship distress would be predicted also to increase. The *third hypothesis* proposed

that individual distress would influence the dynamic of the relationship as measured by its

correlating with and predicting relationship distress. Hypothesis 3.1 proposed that the dyad

members' individual distress would correlate with and predict their *personal* relationship

distress. Hypothesis 3.2 proposed that the dyad members' individual distress would correlate

with and predict their *partners'* relationship distress. For example, as members' individual

distress increased, their and their partners' relationship distress would be predicted also to

increase. Finally, the *fourth hypothesis* proposed that the dynamic of the relationship, as

measured by the dyad members' relationship adjustment or distress, would correlate with and predict (i.e., influence) individual distress. Specifically, Hypothesis 4.1 proposed that dyad members' personal relationship distress would correlate with and predict their *personal* individual distress. Hypothesis 4.2 proposed that dyad members' personal relationship distress would correlate with and predict their *partners'* individual distress. For example, as members' relationship distress would increase, their and their partners' individual distress would be predicted also to increase. The implications of the findings, such as professional significance, are discussed in Chapter Five.

Analyses Selection

The selection of statistical analyses used to test each hypothesis was based predominantly on the level of nonindependence measured between two variables. The measurement of nonindependence revealed that the variable pairings of personal individual distress with personal and partner relationship distress exceeded the level of consequential nonindependence of .45 (Kenny et al., 1998), indicating that multilevel modeling was required to test the related hypotheses. The variable pairings of personal individual distress with partner individual distress (first hypothesis) and personal individual distress with partner relationship distress (hypothesis 3.2) did not exceed consequential nonindependence, the decision was made to use a form of multilevel modeling for these related hypotheses when possible for both consistency and as additional protection against the chance of committing a Type I error (Barcikowski, 1981; Tabachnick & Fidell, 2007).

Actor-Partner Interdependence Model

The APIM produces an *actor effect* and a *partner effect*. The actor effect represents the extent to which individuals' scores from a predictor independent variable influences their personal scores on a predicted dependent variable. For example, in this study an actor effect could be the extent which husbands' personal scores on the OQ-45.2 (e.g., individual distress) influence or predict their personal scores on the DAS (e.g., relationship distress). On the other hand, the partner effect is the extent to which individuals' scores from a predictor independent variable influence their partners' scores on a predicted dependent variable. The extent to which wives' scores on the OQ-45.2 (e.g., individual distress) influence or predict their husbands' scores on the DAS (e.g., relationship distress) is an example of a partner effects.

The APIM was applied through hierarchical linear modeling requires one partner-level predicted dependent variable (e.g., one relationship distress variable) and a minimum of one actor-level and one partner-level predictor independent variable (e.g., an actor individual distress variable and a partner individual distress variable). Thus, the APIM, which required the pairwise dataset, was only used to test the related hypotheses that had one partner dependent variable and two independent variables from the actor and partner, which included: individual distress influencing (personal and partner) relationship distress and relationship distress influencing (personal and partner) individual distress. The hypotheses related to personal individual distress influencing partner individual distress and personal relationship distress influencing partner relationship distress had only one actor and one partner variable to serve as either a predictor independent variable or a predicted dependent variable. Thus, these hypotheses were tested with

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linear regression analyses with no intercept requested using a previously created dyadic dataset (Kenny et al., 2006).

In all hierarchical linear models using the APIM in this current study, variable types and settings that remained constant are reviewed here to avoid repeating the same information for each model built and tested. Components or settings unique to particular models are presented within the subsequent subsections. First, the hierarchical linear model analysis was accessed from the SPSS menu: (a) analyze, (b) mixed models, and (c) linear. Second, the repeated covariance type was set to *compound symmetry: heterogeneous*. Third, the variable *Dyad* was inputted in as the Level-3 grouping variable ($n = 152$), and the actor gender variable (*aGender*; $n = 304$) was inputted as the Level-2 repeated variable. Fourth, the actor gender variable, which was a continuous variable (1 = Husband, -1 = Wife), was inputted in the models as a covariate. Additionally, any other participant factor variables (e.g., income) that correlated with the dependent distress variable as well as correlated with other participant factors that were significantly associated with the dependent variable were inputted as covariates. The process for determining which additional participant factors to include in the models are discussed in the sections related to the third and fourth hypotheses. Furthermore, when models' results indicated significant interaction effects on the dependent variable (e.g., relationship distress), additional tests were conducted to determine if the effects were mediated or moderated by one of the other variables (Fritz, Taylor, & MacKinnon, 2012). Mediating variables explain relationships between other variables, whereas moderating variables influence the strength of a relationship between other variables (Baron & Kenny, 1986). The process for testing for mediation and moderation are

discussed in subsequent subsections. Fifth, the actor and partner distress variables (individual or relationship, depending on the hypothesis being tested) also served as Level-1 variables, and were inputted into the covariates box as predictor independent variables. Sixth, the partner distress variable (individual or relationship, depending on the hypothesis being tested) was entered into the dependent box as the predicted dependent variable. Finally, within the optional settings, the fixed main effects and interactions of the Level-1 variables were requested with the intercept, within statistics the confidence interval was set to .95 (or an alpha of .05; Kenny et al., 2006), and restricted maximum likelihood (REML) was selected as the estimation method over the (full) maximum likelihood (FML) method; a decision that is the subject of some debate related to multilevel modeling, and specifically hierarchical linear modeling (Albright & Marinova, 2010). A full review of the literature related to the debate over using REML versus FML as the estimation method in hierarchical linear modeling was beyond the scope of this current study. However, the intentional decision was made to briefly present both sides of the argument in order to provide a rationale for selecting REML as the estimation method when testing models in this study.

Before building the models to test the hypotheses in this current study, a review of the literature related to selection of estimation methods within hierarchical linear models, including with dyadic data, was conducted. Despite FML and REML resulting in similar to identical fixed effects for tested models (Tabachnick & Fidell, 2007), the decision and rationale amongst scholars and statisticians on which method of estimation to use is split. For example, some researchers prefer using the FML estimation method for its ability to estimate effects despite data

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being unequal or unbalanced (Atkins, 2005). A criticism of using FML with family of multilevel models is that it does not use degrees of freedom, and thus produces biased estimates (Kenny et al., 2006). On the other hand, some researchers recommend REML specifically because the method does use degrees of freedom, and produces unbiased estimates. However, REML is more sensitive than FML in that the data must be balanced (Albright & Marinova, 2010). Although there are claims to both estimation methods, "the question of which method to use remains a matter of personal taste" (StataCorp, 2005, pg. 188). Despite the ongoing discussion and debate, and in light of lacking a consensus of which method to use with multilevel modeling overall, the decision was made to draw from dyadic and family literature, which recommends REML as the preferred method of estimation when examining dyadic data, and specifically when using with the APIM to analyze actor and partner effects (Kenny et al., 2006).

Testing for Mediation Effects

Mediating variables explain relationships between other variables. For example, in a CRE study, education (a predictor independent variable) might be a mediator variable that explains a significant correlation discovered between income level (another predictor independent variable) and relationship distress (a predicted dependent variable). In order for a predictor variable to mediate the relationship between another predictor variable and a predicted variable, four to five criteria must be satisfied. The fourth criterion (or Step 4) is examined only if the first four criteria are met (via Steps 1-4). In Step 1, the *suspected mediated* variable must have a statistically significant effect on the predicted dependent variable. In this example, income must significantly affect relationship distress. Because the data are from members of dyads and are

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nonindependent, this criterion is tested through using a three-level hierarchical linear model similar to the one prepared for investigating the final model. In this test, *dyad* is the group variable, *gender* is the repeated variable, *relationship distress* is the predicted dependent variable, and *income* is the predictor independent variable entered as a covariate and inputted into the fixed model. Figure 3 illustrates the syntax required to produce the test for Step 1 in SPSS.

```
MIXED
        RelDistress WITH aIncome
        /FIXED = aIncome
        /PRINT = SOLUTION TESTCOV
        /REPEATED = aGender | SUBJECT(Dyad)
                COVTYPE(CSH).
```

Figure 3. SPSS syntax for variable mediation test, step 1

In Step 2, the suspected mediated variable must have a significant effect on the *suspected mediator* variable. In this example, income must have a significantly affect education. The relationship between the variables is tested with the same hierarchical linear model utilized in Step 1. In Step 2, education is entered into the model as the predicted dependent variable, and income is the predictor variable entered as a covariate and inputted as a fixed variable. Figure 4 displays the syntax a research would use to perform the test in Step 2 via SPSS.

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```
MIXED
        aEducation WITH aIncome
        /FIXED = aIncome
        /PRINT = SOLUTION TESTCOV
        /REPEATED = aGender |  SUBJECT(Dyad)
                COVTYPE(CSH).
```

Figure 4. SPSS syntax for variable mediation test, step 2

Steps 3 and 4 are performed together, because the variables' paths are tested in the same model.

The results from Steps 3 and 4 are reported separately. In Step 3, the suspected mediator variable

must have a significant effect on the predicted dependent variable. In this example, income must

significantly affect relationship distress. In Step 4, the suspected mediated variable must

significantly affect the predicted dependent variable. In this case, education must have a

significant effect on relationship distress. The criteria in Steps 3 and 4 are tested through

previously prepared hierarchical model. Relationship distress is entered as the predicted

dependent variable, and income and education are predictor independent variables entered as

covariates and inputted in fixed effects as a factorial model. The syntax for performing the test

required for Steps 3 and 4 is shown in Figure 5.

```
MIXED
        RelDistress WITH aIncome aEducation
        /FIXED = aIncome aEducation aIncome x
            aEducation
        /PRINT = SOLUTION TESTCOV
        /REPEATED = aGender | SUBJECT(Dyad)
            COVTYPE(CSH).
```

Figure 5. SPSS syntax for mediation test, steps 3-4

If any of the effects tested in Steps 1-4 are non-significant, the suspected mediator

variable (education) would not have explained the relationship between suspected mediated

variable (income) with the predicted dependent variable (relationship distress). At this point the

results would be reported. Additionally, the variable pair would be retained in the final model so

as to avoid sampling errors (West et al., 2008). The dyadic data from the archival dataset used in

this study was able to use the gender variable to distinguish between dyad members. In datasets

containing indistinguishable dyads (i.e., same-sex couples) or a combination of disguisable and

indistinguishable dyads (e.g., a study comparing distress between heterosexual and same-sex

couples), the hierarchical linear model tests for Steps 1-4 are slightly more complicated, include

both actor and partner variables (and perhaps others), and require slightly different syntax

(Kenny et al., 2006; West et al., 2008).

On the other hand, if the results for Steps 1-4 were all statistically significant, then the

suspected mediator variable (education) would have appeared to provide the reason that the

suspected mediated variable (income) had a relationship with the predicted dependent variable

(relationship distress). In order to confirm the apparent mediated relationship an additional step

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is required, which tests the approximate significance of the suspected mediation (Baron & Kenny, 1986; Fritz et al., 2012; Sobel, 1982). The Sobel test of Step 5 are performed by conducting two regression analyses, and by inputting statistics from the regressions' output into Equation 1 (Sobel, 1982).

$$\sqrt{b^2 s_a{}^2 + a^2 s_b{}^2 + s_a{}^2 s_b{}^2} \hspace{4cm} (1)$$

In the first regression analysis conducted for Step 5, the suspected mediated variable (MV_y; income) is entered into the model as the predictor independent variable and the suspected mediator variable (MV_x; education) is entered as the predicted dependent variable (MV_y ▶ MV_x). The *unstandardized* coefficient from the resulting output is entered into Equation 1 as *a*, and the standard error of the unstandardized coefficient in entered as s_a. In the second regression analysis, the suspected mediator variable (education) is entered into the model as the predictor independent variable, and original predicted variable (relationship distress) is entered as the dependent variable (MV_x ▶ DV). The *unstandardized* coefficient from the resulting output is entered into Equation 1 as *b*, and the standard error of the unstandardized coefficient in entered as s_b. The steps required to compute Equation 1 in SPSS (or other statistical software packages) in order to determine the level of significance are quite complex. However, researchers can easily and quickly calculate the Sobel equation by inputting the raw data from Equation 1 into an online interactive calculation tool for the Sobel test (Preacher & Leonardelli, 2001). A *p* value for the Sobel test less than .05 means that suspected mediated relationship is statistically

significant and thus confirmed. This would mean that (now) *confirmed mediated variable* (income) would have an *indirect effect* on relationship distress moderated through or explained by the *direct effect* that the (now) *confirmed mediator variable* (education) would have on relationship distress. The interaction of the indirect effect and the direct effect is referred to as the *total effect* (West et al., 2008). As final note, perfect mediation is considered to exist when the mediated variable (income) does not significantly affect the predicted dependent variable when controlling for the mediator variable (education) (Baron & Kenny, 1986).

Testing for Moderating Effects

Moderating variables influence the strength of a relationship between other variables. Researchers can investigate a hypothesis that a variable influences the strength of a relationship that one or more variables has with a predicted dependent variable (Baron & Kenny, 1986). The test required to test for moderation already included in hierarchical linear models when researchers have inputted interaction effects or factorial models (West et al., 2008). Thus, the process of testing potential moderating relationships between variables is significantly easier than the tests required to test for mediation. However, researchers can also test for moderation effects apart from the test of their final model. For example, Figure 6 shows the syntax required in SPSS to determine if, from the example in this subsection, the suspected moderator variable (employment) is influencing the strength of the relationship between the suspected moderated variable (income) with the predicted independent variable (individual distress).

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```
MIXED
        IndDistress WITH aIncome aEmployment
        /FIXED = aIncome aEducation aIncome x
                aEmployment
        /PRINT = SOLUTION TESTCOV
        /REPEATED = aGender | SUBJECT(Dyad)
                COVTYPE(CSH).
```

Figure 6. SPSS syntax for moderation test

In this example, individual distress would be entered as predicted dependent variable, and

both income and employment would be the predictor independent variables entered as covariates

and inputted as a fixed factorial model. Researchers would report the results whether they tested

the moderation inclusive or exclusive of the final model. As a final note, similar to the mediation

tests, the dyadic data from the archival dataset used in this study was able to use the gender

variable to distinguish between dyad members. However, hierarchical linear models containing

indistinguishable dyads or a combination of disguisable and indistinguishable dyads include both

actor and partner variables (and perhaps others) and require slightly different syntax (Kenny et

al., 2006; West et al., 2008).

Results for Hypothesis One

The first hypothesis proposed that the dyad members' individual distress would correlate

with and predict (i.e., influence) the direction of each other's distress. In this study, testing this

hypothesis using the APIM required both actor individual distress variable and the partner

individual distress variable to be entered into the model predictor independent variables as well

as a different variable entered in as the predicted dependent variable. However, this hypothesis

included only the two individual distress variables; thus, the APIM could not be used. Therefore, a no-intercept linear regression was conducted using the distress variables from the dyadic dataset, after preparing the gender and individual distress variables based on requirements for using dyadic data with linear regression analyses (Kenny at al., 2006).

The results showed that there was a statistically significant model, $F(1, 151) = 7.74$, $p = .006$, which explained about 5% of the variance (R square change = .049) between the individual distress scores of husbands ($M = 47.16$, $SD = 20.85$) and wives ($M = 52.99$, $SD = 21.45$). This means that as husbands' and wives' personal individual distress scores on the OQ-45.2 increase by one point, their partners' individual distress scores on the OQ-45.2 increase by nearly three points ($\beta = 2.91$, $p = .006$).

Results for Hypothesis Two

The second hypothesis proposed that the dyad members' relationship adjustment or distress would correlate with and predict (i.e., influence) each other's levels of relationship adjustment or distress. Like the first hypothesis, the second hypothesis included only the two relationship distress variables, thus the APIM could not be used. Therefore, a no-intercept linear regression was conducted using the distress variables from the dyadic dataset, after preparing the gender and relationship distress variables based on requirements for using dyadic data with linear regression analyses (Kenny at al., 2006). The analysis indicated that there was a statistically significant model, $F(1, 151) = 69.03$, $p < .001$, which explained about 31% of the variance (R square change = .314) between the relationship distress scores of husbands ($M = 44.63$, $SD = 11.02$) and wives ($M = 38.84$, $SD = 10.93$). This means that as husbands' and wives' scores on

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the DAS increase by one point toward personal relationship distress, their partners' scores on the DAS increase by nearly three points ($\beta = 2.89$, $p < .001$) toward relationship distress.

Results for Third Hypothesis

The third hypothesis proposed that individual distress would influence the dynamic of the relationship as measured by its correlating with and predicting relationship distress. Hypothesis 3.1 (actor effect) proposed that the dyad members' individual distress would correlate with and predict their *personal* relationship distress. Hypothesis 3.2 (partner effect) proposed that the dyad members' individual distress would correlate with and predict their *partners'* relationship distress. Hypotheses 3.1 and 3.2 were tested using the APIM by way of a three-level hierarchical linear model. The dependent predicted variable was actor relationship distress. The predictor independent variables were determined through a path analysis. The criteria for model inclusion were that a variable must first be significantly correlated with relationship distress and second that it must also correlate with the other variables that were significantly associated with the dependent variable. The hypothesized path was that all participant factors would correlate with relationship distress as well as with each other. The path analysis revealed that only gender, employment (participant only, not spouse), and income level were significantly correlated with relationship distress and each other. The multilevel model determined during the path analysis was significantly better than the intercept-only model, $\chi2$ (4, $n = 304$) = 415.61 − 369.19 = 46.42, $p < .001$.

The model tested included the predictor independent variables of gender, participant employment, income level, actor individual distress, and partner individual distress. Literature

related to dyadic data analysis, and specifically the APIM, suggests transforming continuous variables into dichotomous variables when possible for easier calculation in regression equations should the model or effect within the model be significant (Kenny et al., 2006). Gender and employment were already dichotomous (-1 = Female, 1 = Male; -1 = Unemployed, 1 = Employed). Thus, income was transformed into a dichotomous variable (-1 = Moderate- and Upper-Income, 1 = Low-income) differentiating between those in the sample that reported low-income levels (54%, $n = 164$) and those that reported moderate- to upper-income levels (46%, $n = 140$; note: only 12 subjects reported upper-income levels). The main effects were entered for all predictor independent variables. Additionally, in order to determine if any participant factors interacted significantly with individual distress levels or the actor and partner effects, factorials between and among participant factors as well as between participant factors and the actor and partner individual distress were entered (West, Popp, & Kenny, 2008). Significant interaction effects may indicate that one or more participant factor variables is mediating or moderating individual distress or the actor and partner effects.

Main and Interaction Effects

When controlling for individual distress, there were statistically significant main effects between relationship distress and the participant factors of gender, $t (249) = 3.66, p < .001$, employment, $t (234) = -1.97, p = .02$, and income, $t (262) = -3.06, p < .001$. These results indicated that there would be significant mean differences in the DAS scores that married men and women reported upon signing up for CRE. Specifically, (a) wives ($\beta = -6.28, p < .001$; gender coding applied [-1 = Female]) were likely to have lower DAS scores than their husbands,

(b) those who were employed ($\beta = -3.12$, $p = .02$) were expected to have lower DAS scores than those that were employed, and (c) those reporting a low socioeconomic status ($\beta = -5.09$, $p < .001$) were expected to have lower DAS scores than those with moderate to upper levels of income.

Gender interacted significantly with income and employment to affect relationship distress, as did income with employment. These differences suggested that participant factors might be mediating each other's effects on relationship distress. Thus, before proceeding with interpreting the findings, several steps were followed to test for potential mediation, including conducting the Sobel test (Sobel, 1982) on all applicable variables. As shown in Table 5, the results were all non-significant, meaning that the relationships were not mediated effects.

Table 5. Results of Sobel tests for mediation effects of participant factors (Hypothesis 3)

Predictor x Potential Mediator	Sobel Statistic	Standard Error	p value
Gender x Employment	1.06	.07	.28
Gender x Income	-1.17	.16	.23
Income x Employment	-1.08	.01	.17

Therefore, additional tests were conducted to determine whether one participant factor was moderating the effect of the other on relationship distress (West et al., 2008). The results, which are presented in Table 6, indicated that neither employment nor income influenced the

extent of the effect that gender had on relationship distress. Additionally, income did not

moderate or influence the strength of the effect that employment had on relationship distress.

Table 6. Results of moderator analyses with participant factors (Hypothesis 3)

Predictor x Potential Moderator	Estimate	S.E.	p value (1-sided)
Gender x Employment			
Gender	3.19	.378	**
Employment	.142	.451	.37
Gender x Employment	-1.08	.502	.01
Gender x Income			
Gender	2.76	.354	**
Income	-.602	.807	.22
Gender x Income	.699	.354	.02
Employment x Income			
Employment	.357	.559	.26
Income	-1.05	.856	.11
Employment x Income	.686	.562	.11

Coding: Gender -1=Female 1=Male, Employment -1=Unemployed 1=Employed,

Income -1=Moderate- to Upper-Income 1=Low-Income. ** $p < .001$

Although no participant factor explained why another factor was associated with

relationship distress (mediation) or influenced the extent to which another factor affected

relationship distress (moderation), the factors did interact to produce significant effects. Income

and employment produced the strongest interaction effect between two participant factors on

relationship distress ($\beta = 5.44$, $p < .001$), indicating statistically significant mean differences in

DAS scores. When applying variable coding ($1 = $ low-income, $-1 = $ unemployed), this interaction

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effect denoted that married men and women who were unemployed and reported a low socioeconomic status were expected to score lower on the DAS (toward relationship distress) than participants with low-income who were employed or than those who were unemployed with moderate- to upper-income levels. Applying variable coding in another direction (-1 = moderate- to upper-income, 1 = employed) indicated that married men and women with moderate- to upper-income and who were employed were likely to score significantly lower on the DAS (toward relationship distress) than those who were employed with low-income levels. The significant interaction effects of income and gender, (β = -5.26, p < .001) showed that among couples with low-income levels, wives scored significantly lower on the DAS than their husbands. However, among couples with moderate- to upper-income levels, husbands were likely to score lower on the DAS than their wives. Finally, the significant interaction between employment and gender (β = -3.40, p < .01) indicated that married women who were unemployed scored lower on the DAS than married men who were unemployed (variable coding: -1 = unemployed, -1 = female). Additionally, among those that were employed, married men were more likely to score lower on the DAS than married women who were employed (variable coding: 1 = employed, 1 = male). Overall, a comparison of the interaction effects that participant factors had on relationship distress suggested that between husbands and wives, married women were more strongly affected by unemployment and low-income than their were married men. These significant interaction effects illustrated the importance of considering participant factors in addition to the main effect of each participant factor alone. In addition to

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participant factors, the actor and partner effects also influenced levels of relationship distress experienced.

Actor-Partner Effects

The actor ($\beta = -.219$, $p < .001$) and partner ($\beta = -.213$, $p < .001$) effects were statistically significant, meaning that as husbands' and wives' individual distress increased their and their partners' relationship distress decreased. Specifically, as husbands' and wives' personal scores on the OQ-45.2 increase by one point toward individual distress, their personal scores on the DAS are predicted to decrease by about .22 toward relationship distress, and their partners' DAS scores are predicted to decrease by about .21. When accounting for the interaction of participant factors (i.e., gender, income, and employment) with individual distress, the results indicated that the actor effects remained the same for married men and women regardless of participant backgrounds, whereas the partner effects were significantly stronger for certain parts of the population.

The most significant participant factor interaction with the partner effect was gender and income, when controlling for employment. This indicated that the partner effect was strongest for married women with low socioeconomic status ($\beta = .121$, $p < .001$; variable coding applied [-1 = female]). Equation 2 denotes the strengthened partner effect for the individual distress of wives with low socioeconomic status predicting their husbands' relationship distress levels (variable coding applied). When controlling for gender, the partner effect was stronger among married men and women with low-income socioeconomic status and who were employed ($\beta = .09$, $p < .001$; variable coding applied [-1 = unemployed]). Equation 3 represents the individual

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distress of husbands' and wives' that are of low socioeconomic status and employed predicted each other's relationship distress levels (variable coding applied). When controlling for income, gender and employment did not significantly interact with individual distress to influence relationship distress. Figure 7 illustrates the extent to which husbands' and wives' individual distress influences their and their partners' relationship distress overall. Not represented in the Figure 7 are the partner effects strengthened by participant factors interacting with individual distress.

$$\ddot{Y}_{\text{HusbDAS}} = -.213 \text{ [partner effect]} + (.121)(-1 \text{ [female]})(1 \text{ [low-income]}) = -.334 \tag{2}$$

$$\ddot{Y}_{\text{DAS}} = -.213 \text{ [partner effect]} + (-.095)(1 \text{ [employed]})(1 \text{ [low-income]}) = -.308 \tag{3}$$
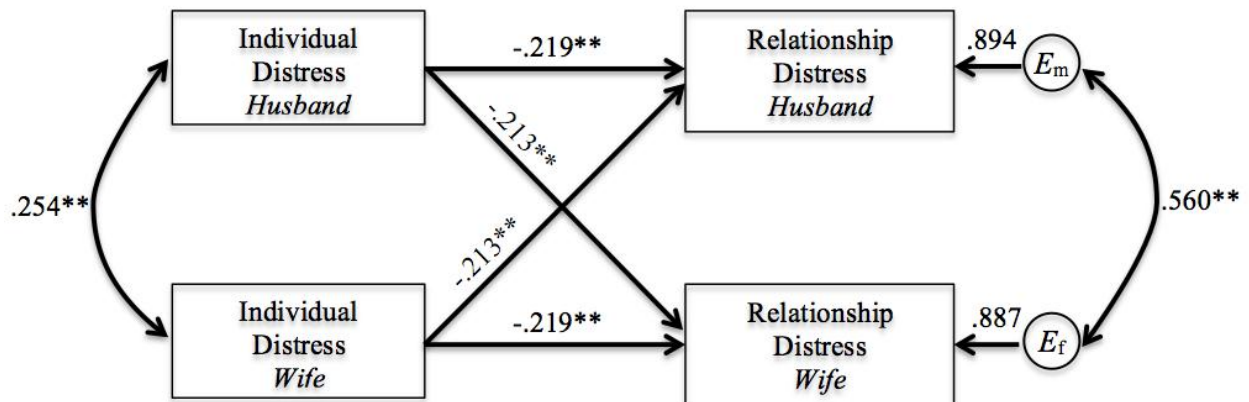
Figure 7 APIM: Individual distress predicting relationship distress.

Note. Standardized coefficients reported: ** $p < .001$.

Hypothesis 3 Summary

The results of the APIM conducted through a three-level hierarchical level model found statistically significant actor and partner effects, confirming the hypothesis that married husbands' and wives' individual distress influences their and their partners' relationship distress. As husbands' and wives' individual distress increases, their and their partners' relationship distress decreases. The analysis also revealed statistically significant differences in levels of distress and strength of partner effects experienced by certain parts of the population. Most significant amongst relationship distress levels were the findings that married men and women who had a low socioeconomic status and were unemployed reported significantly more relationship distress, and among those couples with a low socioeconomic status, wives reported higher levels of relationship distress than their husbands. Among the partner effects strengthened by participant factors, the most significant finding was that the partner effect was strongest for married women with a low socioeconomic status. Overall, low-income status was the prevailing predicting factor that influenced mean difference in reported relationship distress followed by gender (female), and unemployment. The model accounted for 59% of the variance in relationship distress ($\rho = .589$, $p < .001$).

Table 7. Significant results of three-level hierarchical linear model of individual distress predicting personal and partner relationship distress (Hypothesis 3)

Effect	Estimate	Standard Error	df	t Ratio	p (1-sided)	95% CI Lower	Upper
Intercept	52.57	1.66	261	31.52	**	49.29	55.85
Gender	6.28	1.71	249	3.66	**	2.90	9.67
Employed	-3.12	1.58	234	-1.97	.02	-6.25	.003
Income	-5.09	1.66	262	-3.06	**	-8.37	-1.81
iDistressA	-.219	.026	273	-8.27	**	-.271	-.166
iDistressP	-.213	.031	272	-6.81	**	-.275	-.151
Gender by							
Employed	-3.40	1.41	184	-2.41	*	-6.18	-.623
Income	-5.26	1.71	253	-3.08	**	-8.63	-1.90
Employed by							
Income	5.44	1.58	234	3.44	**	2.32	8.57
iDistressP by							
Gender x Income	.121	.033	252	3.63	**	.055	.186
Employed x Income	-.095	.031	246	-3.05	**	-.157	-.033

$*\ p < .01$ $**\ p < .001$. Variable Key. iDistressA = Actor Individual Distress, iDistressP = Partner Individual Distress; Dependent Variable = rDistressA (Actor Relationship Distress). Variable coding. Gender -1 = Female, 1 = Male; Income -1 = Moderate to Upper, 1 = Low; Employed -1 = Unemployed, 1 = Employed.

Results for Fourth Hypothesis

The fourth hypothesis proposed that relationship distress would influence relationship distress. Hypothesis 4.1 (actor effect) proposed that the dyad members' relationship distress would correlate with and predict their *personal* individual distress. Hypothesis 4.2 (partner

effect) proposed that the dyad members' relationship distress would correlate with and predict

their *partners'* individual distress. Hypotheses 4.1 and 4.2 were tested using the APIM by way of

a three-level hierarchical linear model. The dependent predicted variable was actor individual

distress. The predictor independent variables were determined through a path analysis.

The criteria for inclusion in the model as a predictor variable were that a variable must

first significantly correlate with individual distress and second, that it must also correlate with

the other variables that were significantly associated with the dependent variable. The

hypothesized path was that all participant factors would correlate with individual distress as well

as with each other. The path analysis revealed that only gender, months cohabited before

marriage, income, ethnicity, and years of education were significantly correlated with individual

distress and each other. The multilevel model determined during the path analysis was

significantly better than the intercept-only model, $\chi 2$ (6, $n = 304$) = $350.41 - 307.04 = 43.37$, $p <$

.001. Thus, the model tested included the predictor independent variables of gender,

cohabitation, income, ethnicity, education, actor relationship distress, and partner relationship

distress. The participant factors were transformed into dichotomous variables for easier

calculation in regression equations should the model and effect within the model be significant

(Kenny et al., 2006). Gender and income were already dichotomous (-1 = Female, 1 = Male; -1 =

Moderate- to Upper-Income, 1 = Income). Thus, the remaining participant factors were

transformed as follows: MarrCoh > MarrCohYN (-1 = No, 1 = Yes), Ethnicity > EthnDiv

(ethnically diverse; -1 = No or Caucasian/Non-Hispanic, 1 = Yes or Hispanic/Latino, Black/Non-

Hispanic, Native American, Asian, Other), and EducYrs > EducLvl (-1 = High School or Some

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College, 1 = College or Graduate School). The main effects were entered for all predictor variables. Additionally, interactions between each participant factor and actor and partner individual distress were entered to determine if any participant factors were mediating or moderating variables that affected individual distress levels or the strength of the actor and partner effects (West, et al., 2008). The results of the analysis are summarized here, and the statistically significant data are displayed in Table 10.

Main and Interaction Effects

When controlling for relationship distress, and considering only the participant factors, gender interacted significantly with cohabitation, t (164) = -2.10, p = .01, as well as income, t (165) = 2.40, p < .01, indicating that there were statistically significant mean differences in OQ-45.2 scores. In order to determine if the participant factors cohabitation and income might be mediating the effect gender had on individual distress, several steps were followed to test for potential mediation (West et al., 2008), including conducting the Sobel tests (Sobel, 1982) on all applicable variables. As shown in Table 8, the results were all non-significant, meaning that the relationships were not mediated effects. Thus, the significant results of the multilevel model test indicated that one participant factor moderated the effect of another participant factor on levels of individual distress experienced. None of the other participant factors had significant interaction effect on individual distress, and no participant factor had a total or main effect on individual distress.

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Table 8. Results of Sobel tests for mediation effects of participant factors (Hypothesis 4)

Predictor x Potential Mediator	Sobel Statistic	Standard Error	*p* value
Gender x Cohabitation	.336	.01	.78
Gender x Income	.82	.02	.41

Therefore, additional tests were conducted to determine if one participant factor was moderating the effect of the other on relationship distress (West et al., 2008). The results, which are presented in Table 9, were not statistically significant. Although neither cohabitation nor income were moderators for gender, the initial statistically significant interaction effect from the main model indicated mean differences in individual distress.

Table 9. Results of moderator analyses with participant factors (Hypothesis 4)

Predictor x Potential Moderator	Estimate	S.E.	*p* value (1-sided)
Gender x Cohabitation			
Gender	-2.85	1.05	**
Cohabitation	3.48	1.32	**
Gender x Cohabitation	-.213	1.06	.42
Gender x Income			
Gender	-2.77	1.07	**
Income	2.23	1.36	.05
Gender x Income	-.602	1.07	.28

Coding: Gender -1=Female 1=Male, Cohabitation -1=Did not cohabit 1=Cohabited, Income -1=Moderate- to Upper-Income 1=Low-Income. ** $p < .001$

The interaction effect between gender and income ($\beta = 3.97$, $p < .01$) meant that among couples reporting low socioeconomic status, wives were likely to report significantly higher scores on the OQ-45.2 (toward individual distress) than their husbands (gender coding applied, -1 = female). Additionally, among couples reporting having cohabited before marrying, husbands were likely to score significantly higher on the OQ-45.2 (toward individual distress) than their wives ($\beta = -3.31$, $p < .01$). Participant factors influenced the likelihood that some husbands' and wives' would experience higher levels of individual distress than others. Participant factors also played a role in the extent to which husbands' and wives' relationship distress influenced their personal individual distress.

Actor-Partner Effects

The actor effect ($\beta = -.745$, $p < .001$) was statistically significant, but the partner effect was not ($\beta = -.110$, $p = .56$). This indicated that as husbands' and wives' relationship distress increased their individual distress are predicted to also increased, but their partners' are not. The negative correlation between relationship distress and individual distress means that as one score moves in one direction (i.e., down), the other score moves in the opposite direction. Thus, because individuals move toward relationship distress with decreased DAS scores, the negative estimate for the actor effect will actually be treated as a positive estimate (i.e., $\beta = .745$). Specifically, as husbands' and wives' personal scores on the DAS decrease by one point toward relationship distress, their personal scores on the OQ-45.2 are predicted to increase by about .75 toward individual distress.

When accounting for the interaction of participant factors with relationship distress, the results indicated that the actor effect was significantly stronger for two subgroups of the population, those with low socioeconomic status and those from racially and ethnically diverse backgrounds. Among couples reporting low socioeconomic status, wives are predicted to have a stronger actor effect ($\beta = .323$, $p < .01$), whereas when their relationship distress increases their individual distress is predicted to also increase. Among participants from racially and ethnically diverse backgrounds, those with less than a college degree are predicted to have a stronger actor effect ($\beta = .354$, $p = .02$) than those participants from racially and ethnically diverse backgrounds with a college degree and than participants from a Caucasian/Non-Hispanic background. As Equations 4 and 5 show, as the DAS scores for both of these subgroups decrease by one point toward relationship distress, their personal scores on the OQ-45.2 are predicted to increase by more than one point toward individual distress. Recall that although the equations result in a negative result, because the DAS score decreases (toward relationship distress), the OQ-45.2 score will move in the opposite direction. Thus, the results of these two prediction equations should be interpreted as if positive. Figure 8 illustrates the extent to which husbands' and wives' relationship distress influences their personal individual distress overall. Not represented in the Figure 8 are the actor effects strengthened by participant factors interacting with relationship distress.

$$\ddot{Y}_{OQ} = -.745 \text{ [actor effect]} + (.323)(-1 \text{ [female]})(1 \text{ [low-income]}) = -1.07 \qquad (4)$$

$$\ddot{Y}_{OQ} = -.745 \text{ [actor effect]} + (.354)(-1 \text{ [employed]})(1 \text{ [diversity]}) = -.110 \qquad (5)$$
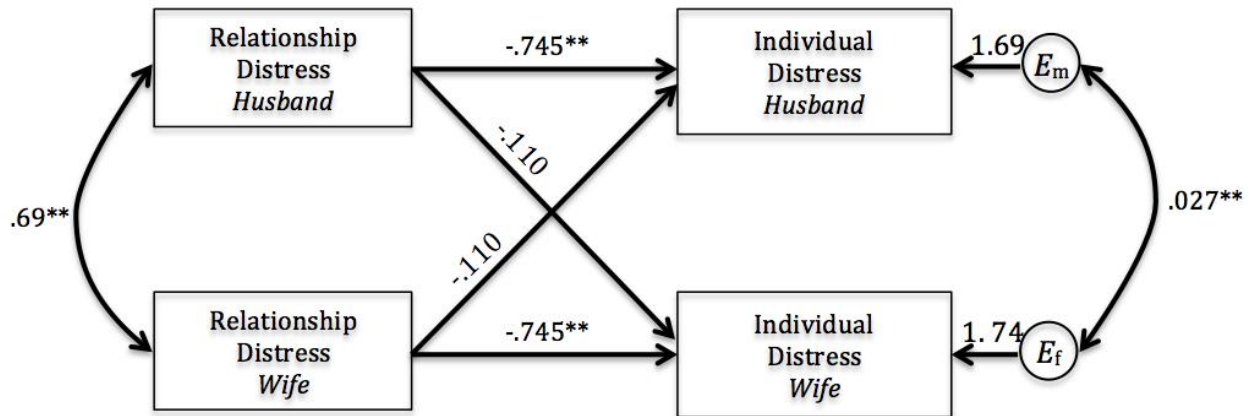
Figure 8. APIM: Relationship distress predicting individual distress.

** $p < .001$

Hypothesis 4 Summary

The results of the APIM conducted through a three-level hierarchical level model found mixed results related to the fourth hypothesis. The statistically significant actor effects confirmed Hypothesis 3.1 that married husbands' and wives' relationship distress influenced their personal individual distress. The results partially confirmed Hypothesis 3.2. Relationship distress was significantly correlated with individual distress, but the non-significant partner effect indicated that relationship distress did not predict partners' individual distress. As husbands' and wives' relationship distress increases, their personal individual distress was also predicted to increase. This effect was stronger for wives with low-income levels and for participants from racially and ethnically diverse backgrounds with less than a college degree. Additionally, the interaction

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effect between participant factors indicated that wives with low-income levels and husbands that

cohabited before marrying their wives were likely to report significantly higher levels of

individual distress. Overall, gender and low-income status were prevailing predicting factors in

levels of individual distress and the strength of the extent to which relationship distress would

influence individual distress. The model accounted for 6% of the variance in relationship distress

($\rho = .061$, $p < .001$), indicating that about 94% of the variance is explained by other factors.

Table 10. Significant results of three-level hierarchical linear model of relationship distress predicting personal and partner individual distress (Hypothesis 4)

Effect	Estimate	Standard Error	df	t Ratio	p (1-sided)	95% CI	
						Lower	Upper
Intercept	48.95	1.70	164	28.71	**	45.58	52.32
rDistress	-.745	.191	192	-3.88	**	-1.12	-.367
Gender by							
Cohabitation	-3.31	1.57	164	-2.10	.01	-6.41	-.205
Income	3.97	1.65	165	2.40	*	.701	7.23
rDistressP by							
Gender x Income	.323	.154	173	2.09	*	.018	.628
Education x Ethnicity	.354	.183	209	1.93	.02	0.007	.716

$* p < .01 \ ** p < .001$. Variable Key. rDistressA = Actor Relationship Distress, rDistressP = Partner Relationship Distress; Dependent Variable = iDistressA (Actor Relationship Distress). Variable coding. Gender -1 = Female, 1 = Male; Income -1 = Moderate to Upper, 1 = Low; Employed -1 = Unemployed, 1 = Employed.

CHAPTER FIVE: DISCUSSION

Individuals experience periodic reductions in psychological health throughout their lives. Within intimate relationships, such as marriage, individuals usually experience periodic negative interactions with each other, such as disagreements and disappointment. When either reduced individual psychological health or negative interactions within a relationship become persistent, unresolved, and impair functioning in areas of importance (e.g., academic, occupational, social), individuals and relationships also become distressed. Although one form of distress occurs within the person and other occurs within the dyad (the relationship), research shows that these forms of distress are typically correlated (Johnson & Johnson, 2005; Whisman & Uebelacker, 2003).

Within the important findings related to distress in counseling, there are four claims that stand out and are related to this current study. First, most couples attending counseling are experiencing significant relationship distress (Carr, 2011; Long & Young, 2007). Second, relationship and individual distress in couples attending counseling are correlated to the point that a circular relationship exists between the two types of distress (Whisman & Uebelacker, 2006). When couples report relationship distress, often one or both partners is also experiencing individual distress. Third, this finding that distress begets distress inspired additional research that has found that relationship distress has made overcoming individual distress more difficult as well as relapse more likely, with the same being true when the direction of the association is reversed (Lebow et al., 2012). The third claim has informed practitioners about screening, intervention type, and dosage as well as inspired ongoing research in this area. And fourth,

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counseling research has found that 80% of the couples attending counseling, when compared to couples that don't seek help, experience some reduction in relationship distress (Carr, 2011; Lebow et al., 2012).

Couples and relationship education (CRE), which was a catalyst for the development of couples and family counseling, reemerged in the 1980s as a source of help for couples (Burnard, 1994). Since then, couples have increasingly turned to CRE for help with distress, although counseling has historically been their usual choice. However, the majority of the research with couples in CRE has been related to skill acquisition and has focused very little on relationship distress (Blanchard et al., 2007; Hawkins et al., 2008), and even less on individual distress. Further, couples with low- to moderate-income and diverse racial and ethnic backgrounds have been historically underrepresented in CRE research overall as well as in the small number of studies that have examined individual and relationship distress. Some efforts are currently underway through federally-funded initiatives to investigate if CRE is effective with the underrepresented populations (Hawkins & Ooms, 2010; Ooms & Wilson, 2004). However, federally-funded research has taken longer and been more difficult than expected (Bradbury & Lavner, 2012). Thus, although couples increasingly select CRE as a source of help for their relationships, the lack of sufficient research into individual and relationship distress persists. This gap in knowledge has made it difficult for us to make strong claims, akin to those of counseling, about (a) the couples presentation of individual and relationship distress upon selecting and joining CRE, (b) whether the two distress types are correlated and if there is a circular relationship between them such that one begets the other, (c) what affect CRE has at reducing

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individual or relationship distress, and (d) if CRE effective at reducing some levels of distress but not others (e.g., if there are cut-off individual and relationship distress scores that are more appropriate for counseling than CRE).

Therefore, this study sought to contribute to required research through examining the individual and relationship distress among 152 married couples ($n = 304$ individuals) that selected CRE as a source of help for their relationship. Using a correlational research design (Campbell & Stanley, 1963) framed within the social interdependence theory (Johnson & Johnson, 2005; Levine, 1935, 1948), this study examined the relationship between the two natural states of married partners' individual and relationship distress. The couples in this study had children and were from predominantly low- to moderate-income levels (94.7%, $n = 288$, $M = $44,230$, $SD = $28,785$) and diverse racial and ethnic backgrounds (65%, $n = 197$). The purpose of this study was to determine to what extent, if any, a circular relationship exists between individual and relationship distress among couples selecting CRE as a source of help for their relationship, as well as to measure levels of their presenting individual and relationship functioning, as captured by the Outcome Questionnaire 45.2 (OQ-45.2; Lambert, et al., 2004) and the Dyadic Adjustment Scale (DAS; Spanier, 1976), respectively. Forms of dyadic data analyses were used to investigate the directional relationships including the actor-partner interdependence model (APIM; Kenny et al., 2006) and multilevel modeling. Because a correlational research design was employed in this study, outcomes related to CRE effectiveness in reducing individual or relationship distress were not addressed.

Study Hypotheses

To achieve the purpose of this study, four hypotheses were developed. The first hypothesis proposed that the dyad members' individual distress would correlate with and predict (i.e., influence) the direction of each other's distress. The second hypothesis proposed that the dyad members' relationship adjustment or distress would correlate with and predict (i.e., influence) each other's levels of relationship adjustment or distress. The third hypothesis proposed that individual distress would influence the dynamic of the relationship as measured by its correlating with and predicting relationship distress. Hypothesis 3.1 (actor effect) proposed that the dyad members' individual distress would correlate with and predict their *personal* relationship distress. Hypothesis 3.2 (partner effect) proposed that the dyad members' individual distress would correlate with and predict their *partners'* relationship distress. Finally, the fourth hypothesis proposed that the dynamic of the relationship, as measured by the dyad members' relationship adjustment or distress, would correlate with and predict (i.e., influence) individual distress. Specifically, Hypothesis 4.1 (actor effect) proposed that dyad members' personal relationship distress would correlate with and predict their personal individual distress. Hypothesis 4.2 (partner effect) proposed that dyad members' personal relationship distress would correlate with and predict their partners' individual distress. Within this chapter, the findings of these tests are reviewed and discussed. Additionally, the limitations and strengths of this study are presented. Finally, the implications of the interpreted findings are discussed, such as the significance to professionals and suggested directions for future research.

Review of Study Findings

The results from the dyadic data analyses showed statistically significant actor and partner effects in all but one part of the fourth hypothesis. Personal individual distress predicted partner individual distress as well as personal and partner relationship distress. Similarly, personal relationship distress predicted partner relationship distress as well as personal individual distress, but did not predict partner individual distress. The cumulative results confirmed that overall hypothesis that a circular relationship between the individual and relationship distress of married couples selecting CRE exists—distress begets distress.

This study included underrepresented populations in CRE research of low-income and racially and ethnically diverse married couples. Thus, those participant factors that correlated with individual or relationship distress and each other were included, and final models were tested. There were statistically significant (a) correlations between personal and partner individual and relationship distress for husbands and wives, (b) main effect and interaction effects among the participant factors, and (c) actor and partner effects. Husbands' and wives' individual distress significantly influenced each other's individual distress, and their relationship distress influenced each other's relationship distress as well. Finally, husbands' and wives' individual distress influenced their and their partners' relationship distress as well as their relationship distress influencing their personal individual distress, but not their partners'. Some of the participant factors (i.e., demographic background) were significantly correlated with individual and relationship distress and significantly interacted with the actor and partner effects. Related to distress, this meant that certain part of the sample population were likely to experience

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more individual and relationship distress than others, such as women and those with low-income, among others. Related to the actor and partner effects, the significant interaction of participant factors indicated that the extent to which distress begets distress was stronger among women, those with low-income, those that are unemployed, and those that live together before marrying. Additional details related to main and interaction effects of participant factors are discussed in the next section.

Finally, the unexpected discovery of the *continuum of individual and relational functioning* was made during the correlation analyses. A continuum was found to exist for each dyad member that ranged from individual functioning to a combination of individual functioning and relational functioning to relational functioning. The process of the continua flows from intrapersonal individual functioning to interpersonal relational functioning where they meet in the middle at the *nexus of negotiation*. The nexus of negotiation is the center or heart of relational interaction where exchanges, communication, and decision making, among other interactions, take place.

Main and Interaction Effects on Distress

Among the participant factors included in the model that had effects on relationship distress, gender, income, and employment produced statistically significant main effect. Women scored significantly lower than men on the DAS on relationship distress. Couples who reported low-income status had significantly higher relationship distress than those that reported moderate- to upper-income. Men and women who were employed had lower scores on the DAS than those who were unemployed. These factors also produced statistically significant interaction

effects. Income and employment both moderated the effect of gender on relationship distress. Married women who reported unemployment and low-income levels were more likely to report higher levels of relationship distress than their husbands and than other married men and women that were employed and had moderate- to upper-levels of income. A comparison of the interaction effects suggested that between husbands and wives, unemployment and low-income were part of the reason that wives had significantly higher levels of distress than their husbands. Other participant factors, such as racial and ethnic backgrounds, education, and length of marriage, did not significantly correlate with or predict levels of relationship distress.

Participant factors also produced significant effects on individual distress. Gender and cohabitation as well as gender and income produced significant interaction effects. Among couples that cohabited before marrying, husbands reported score significantly more individual distress than their wives. However, among couples reporting low-income levels, wives had more individual stress than their husbands.

A summative comparison of the cumulative significant and non-significant main and interaction effects findings related to levels of individual and relationship distress showed an overall within-dyad result and an overall between-dyad result. Within couples, wives on average were likely to experience higher levels of relationship distress than their husbands, especially related to income and employment, whereas the difference between husbands' and wives' individual functioning was not significantly different. At the between-dyad level, married couples with low income on average experienced higher levels of relationship distress than couples with moderate- to upper-income levels.

Circular Model of Individual and Relational Functioning

When interpreting the findings of each hypothesis in this study individually, they show linear relationships between individual and relationship distress. The confirmed first hypothesis showed that personal individual functioning influenced partner individual functioning. The second hypothesis was also confirmed, and showed that personal relationship functioning influenced partner relationship functioning. The confirmed third hypothesis indicated that personal individual distress influenced personal and partner relationship distress. Finally, based on the partially confirmed fourth hypothesis, personal relationship distress influenced personal individual distress, but not partner individual distress.

However, when viewed as a whole, the findings the four hypotheses in this study fit together to cumulative results confirmed that overall hypothesis that a circular relationship between the individual and relationship distress of married couples selecting CRE exists— distress begets distress. As shown in Figure 9, the circular relationship among all paths forms the *circular model of individual and relationship functioning*. This circular model illustrates the connections, flow, and cycle among the many points at which personal and partner individual and relationship distress meet. The circular paths indicate that theoretically members' actions that would influence each other's individual and relational functioning can begin from any point of origin in the circular model.

The circular model illustrates how the findings of this study confirm the social interdependence theory as a roadmap for describing the circular and cyclical relationship between the individual and relationship distress. Generally, social interdependence states that the

actions of one member of a group (of two or more) influence the action of other group members and thus the dynamic of the group itself (Levine, 1935, 1948). Applied to the findings of this study and the circular model, the social interdependence theory would state that the actions related to individual and relational functioning of each dyad member influences the individual and relational functioning of the other member, by extension the actions influence the dynamic of the dyad (the relationship), which in turn influences the members' actions related to individual and relational functioning.

Consider an example of a married heterosexual couple in which a husband who is currently unemployed and with a low-income state who has being experiencing anxiety and depression to the point that they have impaired his functioning—individual distress. As the husband's individual psychological health decreases and his individual distress increases, which is likely compounded by his financial struggles as a result of unemployment and low income, his wife is predicted also to experience a decrease in her individual psychological health moving toward or into individual distress. The model also predicts that simultaneously the husband's individual distress also affects the dynamic of the relationship itself. As his individual distress increases, he and his wife's adjustment to the relationship decrease toward or into relationship distress. The husband's relationship distress predicts a further decrease in his wife's relationship adjustment and functioning, which influences a subsequently decrease in her individual psychological health. Here, the path of the circular relationship between individual and relationship distress recycles as described here, but from the starting point of the wife. It would seem that if the cycle were to continue and be left unresolved (e.g., due to lack of awareness,

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lack of attempts to change by one or both partners, lack of knowledge and skills to change) the circular relationship would create a spiral effect that intensifies the individual and relationship distress. Helpers with this conceptualization of the husband and wife as well as the dynamic of the relationship can make clinically-informed decisions about working with the couples.

Circular Model of Individual and Relational Functioning

Solid line** denotes *circular actor effect* (influencing personal distress)

Dashed line** denotes *circular partner effect* (influencing partner distress)

Dotted line** denotes *one-way partner effect*

** Line difference created to ease interpretation of illustration, and does not denote differences in strength of correlation, prediction, actor effect, or partner effect.

Figure 9: Circular Model of Individual and Relational Functioning among Couples in CRE

Continuum of Individual and Relational Functioning

A partial correlation was conducted, controlling for participant factors (e.g., age, income, ethnicity) to measure how related were the male and female partners' independent and relationship distress. Using a traditional bivariate analysis without controlling for participant factors through the partial correlation could have resulted in inflated associations (r; Kenny et al., 2006; Tabachnick & Fidell, 2007). All paths between personal and partner individual functioning and personal and partner relationship functioning had significant associations that range from small to strong. Among the within-dyad measurements, the highest correlation was the strong positive association between males' and females' relationship distress. All correlated paths lead to personal and partner relationship distress were reviewed more closely. For both males and females shared dyadic membership accounted for 70% of the variance each partner's relationship distress.

Although the primary purpose of this study was to test for the existence and extent of a circular relationship between individual and relationship distress, a closer inspection of the correlated data led to an unexpected discovery of a *continuum of individual and relational functioning* (CIRF) between intimate partners. Figure 10 shows a continuum for each dyad member (e.g., the actor and the partner) that ranges from the individual functioning to a combination of individual functioning and relational functioning to relational functioning. The process of the continua flows from intrapersonal individual functioning to interpersonal relational functioning where they meet in the middle at the *nexus of negotiation*, which is the center or heart of relational interaction, such as exchanges, communication, and decision making.

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The partial correlation analysis revealed that the relationship between actor and partner individual distress was the smallest association among all possible paths between individual and relationship distress ($r = .254$, $p < .001$). The intracorrelation (.06) showed that shared membership in the dyad accounted for only 6% of the variance. This is supported by the nature and process of individual functioning (i.e., individual psychological health), which occurs first and foremost intrapersonally (Ryff, 1989), which is the furthest point from full interpersonal interaction. Next, the correlation analysis showed Shared membership in the dyad strongly influenced the measured nonindependence of the *actor-actor dual functioning* (personal individual functioning ▸ personal relational functioning) for both men ($r = -.521$, $p < .001$, 27%) and women ($r = -.503$, $p < .001$, 25%). On the other hand, shared dyadic membership accounted for 11% − 13% of the measured nonindependence in *actor-partner dual functioning* (personal individual functioning ▸ partner relational functioning) for husbands to wives ($r = -.357$, $p < .001$) and wives to husbands ($r = -.334$, $p < .001$). This suggests that as dyad members are involved in interactions together, the influence the shared experiences have on their individual and relational functioning grows. Finally, when individuals move to the third level of CIRF, they reach full interpersonal interaction or the nexus of negotiation. The shared membership in the dyad accounted for 32% of the nonindependence of husbands' and wives' relational functioning ($r = .563$, $p < .001$). The closer the dyad members are to full relational functioning, the more their shared membership in the dyad explains the correlation as well as the levels of nonindependence found between their individual and relational functioning.

Continuum of Individual and Relational Functioning (CIRF)
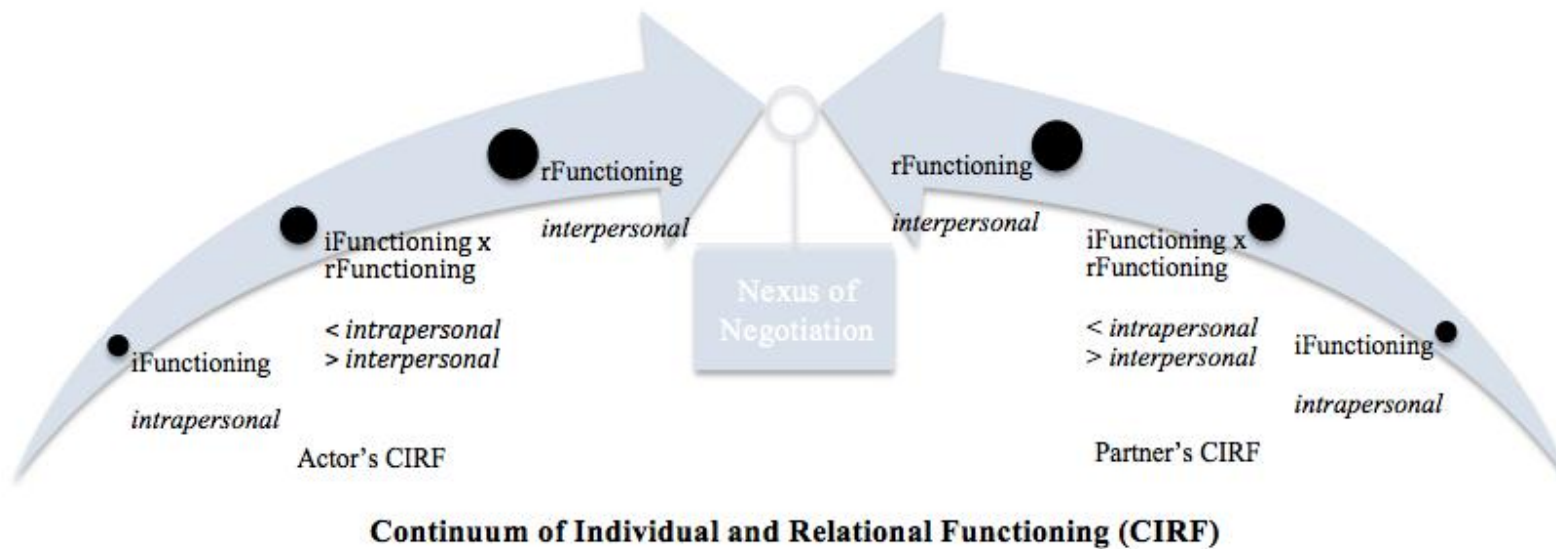
Figure 10. Continuum of Individual and Relational Functioning (CIRF)

Fundamental Interpersonal Relations Orientation (FIRO)
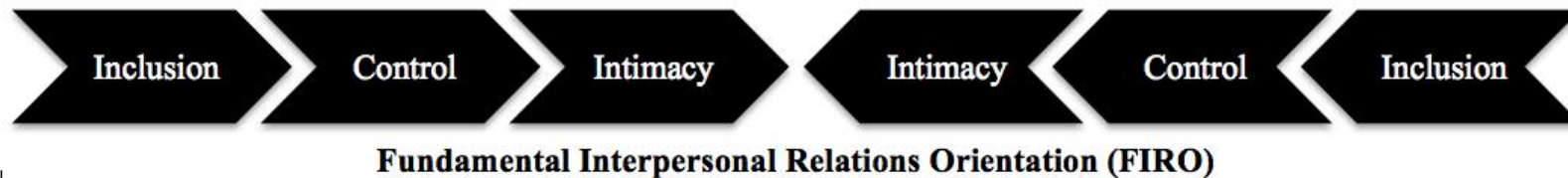
Figure 11. Fundamental Interpersonal Relations Orientation (FIRO)

Sources: Schutz, W. (1958). *FIRO: A three dimensional theory of interpersonal behavior*. New York: Holt, Rinehart, & Winston; Doherty, W. J., & Colangelo, N. (1984). The family FIRO model: A modest proposal for organizing family treatment. *Journal of Marital and Family Therapy, 10*(1), 19–29.

Fundamental Interpersonal Relations Orientation

The circular relationship between individual and relationship functioning (Figure 9) and the continuum of individual and relational functioning (CIRF; Figure 10) seem to flow in connection with the family version of Schutz's (1958) theory of interpersonal relations orientations or fundamental interpersonal relations orientation (FIRO; Shutz, 1958). A complete treatment of FIRO and its application to the circular model and CIRF is beyond the scope of this study. However, FIRO and the family adaptation of it are briefly reviewed in order to provide initial support for the suggestion of a theoretical fit.

FIRO was developed from clinical work with groups. The theory suggests the all individuals have the same three interpersonal needs of inclusion, control, and affection or intimacy. Inclusion refers to perception of place within the structure of the relationship (i.e., *in or out*). This is represented by the perception of the extent to which individuals include the other members and perception of the extent to which other members are inclusive. Control refers to the balance of power in the relationship. This if often represented by individuals' perception of their and their group members' levels of influence in the relationship (i.e., *top or bottom*). Affection refers to sending and receiving intimate exchanges (e.g., communication). FIRO suggests that individuals cannot progress from one stage the next without fulfilling the previous one. For example, individuals cannot influence decisions (control) if they are not included in the interaction (inclusion).

Interactions between dyads and family members are more intimate than those among memberships of other group types (e.g., counseling). Thus, the Family FIRO Model (Doherty &

Colangelo, 1984) was developed for applying the theory to couple and family work. Within the Family FIRO, inclusion is described the same as the initial FIRO (i.e., in or out), and has added subcategories of structure, connectedness and shared meaning. Control is also described similarly to the original theory (i.e., top or bottom), and has added to the perception of power balance the subcategories of dominance, reactivity, and collaboration. Finally, in the Family FIRO, affection is renamed *intimacy*. This stage represents mutual shared feelings, and refers to the perception of closeness that an individual feels in relation to the other dyad or family member (i.e., *close or far*).

FIRO Applied to CIRF

Related to the CIRF, the first level of functioning—individual functioning—occurs primarily intrapersonally. Individuals cannot meet their need to interpersonal interaction and belonging until they include the other dyad or family member, and the other dyad or family member includes them. At this first level, shared membership of the dyad had the least amount of influence on individual functioning ($r = .254$, $p < .001$, 6%). Once inclusion occurs, individuals move to the second level of the CIRF. This level is represented by a *dual functioning* of a decrease in exclusive intrapersonal or individual functioning and an increase in interpersonal or relational functioning. At this level, individuals begin to exchange resources that include both the individual and the relationship, and begin an attempt to influence the interpersonal interactions (e.g., exchanges, communication, decisions). Attempts at controlling the interactions are manifested by dominating, reacting, or collaborating. Shared membership in the dyad strongly influenced the measured nonindependence of what I have called the *actor-actor dual functioning*

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(personal individual functioning ▶ personal relational functioning) for both men ($r = -.521, p < .001$, 27%) and women ($r = -.503, p < .001$, 25%). On the other hand, shared dyadic membership accounted for 11% – 13% of the measured nonindependence in *actor-partner dual functioning* (personal individual functioning ▶ partner relational functioning) for husbands to wives ($r = -.357, p < .001$) and wives to husbands ($r = -.334, p < .001$).

Finally, when individuals move to the third level of CIRF, they reach full interpersonal interaction or what I have called the *nexus of negotiation*. It is through the interactions at this level and cumulative experiences leading up to it (i.e., CIRF levels 1 and 2) that determine the level of intimacy and closeness the individuals share—feeling close to or far from each other. The shared membership in the dyad accounted for 32% of the nonindependence of husbands' and wives' relational functioning ($r =.563, p < .001$). Figure 11 shows the flow of the Family FIRO in conjunction with the CIRF for both members of a dyad.

CIRF as Catalyst for Circular Relationship

As individual dyad members (e.g., husbands and wives), gradually decrease the intrapersonal processing at the individual functioning level, they also gradually increase their interpersonal interactions with the other member until they have reached the *nexus of negotiation* or full relational functioning (e.g., proceeded through FIRO stages). The theory of social interdependence suggests that individuals' actions influence the actions of other members of the dyad (or group). Thus, it would seem that as individuals proceed along their personal continua of individual and relational functioning, increasing from intrapersonal processing to interpersonal interaction that the opportunities for and extent of influencing each other also would increase.

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Therefore, conceptually, the continuum of individual and relationship functioning seems to be the catalyst for the circular relationship between individual and relationship functioning (e.g., distress). Once started, the circular relationship between the natural states of two dyad members' individual and relational functioning would suggest a creation of a perpetual feedback loop. The movement within the circular relationship or loop would also seem to ebb and flow with the level of interpersonal interaction individuals' allows via their continuum of individual and relationship functioning. The outcome of the nexus of negotiation—healthy or distressed individual and relational functioning—would seem partially dependent on the shared experiences within the dyad, and the level of which each meets their needs for inclusion, control, and intimacy.

Summary of Study Findings

Among relationship research, this study and its findings are unique. Prior to this study, no researchers had used the actor-partner interdependence model (APIM; Kenny et al., 2006) within a three-level hierarchical linear model to examine the correlation and predictive relationship among all possible paths of the two natural states of individual and relationship distress among married heterosexual couples from low-income and racially and ethnically diverse backgrounds. Only one other CRE study used the APIM to study the actor-partner effects among couples' individual and relationship distress (Burr, 2011). The previous study examined a one-way predictive path from individual distress to relationship distress (among other factors).

The findings in this study indicated that a circular relationship exists between individual and relationship distress among married heterosexual couples selecting CRE and who have children, low- to moderate-income levels, and racially and ethnically diverse backgrounds.

Additionally, the results revealed that that interpersonal interaction for each member of the dyad is facilitated by a personal continuum of individual and relational functioning. The members progress along their personal continua from intrapersonal individual functioning to individual and relational functioning to full relational functioning. Interpersonal interaction occurs within the nexus of negotiation, which is the heart of their interaction (e.g., exchanges, communication, decisions).

Comparison of Couple Distress Between this and other CRE Studies

External validity is the extent to which researchers generalize findings beyond the confines of their study relative to the characteristics of the sample population, procedures, settings, and other study conditions (Prohaska & Etkin, 2010). This study used archival data from a larger CRE study. The researchers from the larger study generally protected external validity through various methods, such as active and passive recruitment methods and random assignment, among others. However, there remains some risk to external validity. Although members of the couples were from racial and ethnically diverse backgrounds, the results from this study are limited to couples that are of heterosexual, married, have children, and have low- to moderate socioeconomic statuses. In order to generalize the findings of this study, it is important to see how the findings of this study compare with those of previous CRE studies that have examined individual and relationship distress. This comparison provides a context for generalizing, interpreting, and applying the findings of this study.

The majority of CRE studies have examined couples' acquisition of skills (e.g., communication, conflict resolution). Relationship skills have been linked to individual and

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relationship functioning (Blanchard et al., 2007). However, CRE research has lacked a sufficient examination of the relationship functioning (e.g., distress) of couples selecting CRE (Hawkins et al., 2008). Additionally, although counseling research has studied individual distress and has previously shown that a relationship exists between relationship and individual distress, the examination of individual distress among intimate partners' attending CRE is even sparser. Nevertheless, the few CRE studies that investigated individual distress of married partners (specifically with the OQ) and a collection of individual and meta-analytic studies that examined relationship distress (specifically with the DAS) were reviewed. In the remainder of this section, the collective findings of these previous CRE studies are presented and compared to the results of this study.

Although few CRE studies have examined individual and relationship distress among married couples with low-income levels (Hawkins et al., 2008), overall the findings from this current study were consistent with what previous CRE research has been conducting in the area of individual distress (Burr, 2011), but different than much of the research previously conducted on relationship distress (Cowan et al., in press; Hawkins & Ooms, 2010). On average, married participants in the previous studies reviewed and the current study did not report individual distress. However, couples in the current study reported higher mean levels of relationship distress than the previous studies reviewed. A comparison of studies' samples revealed that the participants in the previous studies reviewed were predominantly from moderate-income and Caucasian/Non-Hispanic backgrounds. However, the couples in the current study were from predominantly low- to moderate-income and racially and ethnically diverse backgrounds. The

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different samples could provide a possible reason for the difference in relationship distress findings between this and other CRE studies. Literature has noted that married couples with low-income levels face unique stressors that influence the quality of their relationship (Carlson et al., 2012; Young & Carlson, 2011). Stressors such as financial uncertainty, unemployment or underemployment, and lack of adequate or any insurance have contributed to having a low-income socioeconomic status be a predictor of relationship dissatisfaction (Adler-Baeder et al., 2010). Thus, it seems likely that couples that are from low-income backgrounds would have higher levels of distress than those couples from moderate- to upper-income levels. The comparisons of individual and relationship distress as well as actor-partner effects are discussed in more detail in the following subsections.

Individual Distress

Of the few CRE studies that examined individual distress, about 80% of the individuals sampled were from Caucasian/Non-Hispanic racial and ethnic backgrounds and with mostly moderate- to upper- incomes (e.g., Bradford, LaCoursiere, & Vail, 2010; Burr, 2011; Veldorale-Brogan, et al., 2010). Among these studies only two (Bradford et al., Veldorale-Brogran et al.) used the Outcome Questionnaire 10.2 (OQ10; Lambert et al., 1996). The OQ10 is a shorter version of the OQ 45.2 that was used in this study. The two versions of the OQ share similar reliability and validity findings, and differ slightly on the clinical cut-off score for individual distress. The clinical cut-off score for individual distress on the OQ10 ranged from 12 to 14 for possible clinical distress and 15 or higher denoting clinical distress, whereas the clinical cut-off

score for distress on the OQ 45.2 was a score of 63 and higher. I compared the individual distress of the previous studies to those of the current study by gender, ethnicity, and income.

Distress by Gender

Looking at the collective individual distress among samples in studies review, most participants did not report clinically significant symptoms. For example, in the studies that used the OQ10 (Bradford et al., 2010; Veldorale-Brogran et al., 2010), the authors reported mean scores for men at 5.6 ($SD = 3.0$) and for women at 6.9 ($SD = 2.9$). In the current study, women's mean scores on the OQ 45.2 were 52.99 ($SD = 21.44$) and men's were 47.16 ($SD = 20.84$). Thus, men and women overall in previous studies and the current study reported reductions in individual psychological health, but not to the level that it impaired functioning or caused distress.

Distress by Race and Ethnicity

In the previous CRE studies reviewed, about only 20% were from racially and ethnically diverse backgrounds. Among these participants, about 25% reported individual distress. Of the 80% of the samples that were from Caucasian/Non-Hispanic backgrounds, nearly one-third (32.7%) reported individual distress. In the current study, nearly 65% of the sample were from racially and ethnically diverse backgrounds; 22.8% ($n = 45$) reported individual distress. About 35% of the participants in the current study were from Caucasian/Non-Hispanic backgrounds, and about one-third (32.7%, $n = 35$) reported individual distress. Thus, the individual distress findings when compared by Caucasian/Non-Hispanic and racial and ethnic diversity were similar between the current study and the previous CRE studies reviewed.

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Distress by Income Level

In the previous CRE studies reviewed that had examined individual distress, distress data was not reported for specific income levels. This is likely due to the homogeneity of income levels among sample participants. Thus, the overall individual distress findings from previous studies would likely be used to describe distress by income for their samples—on average relatively healthy individual functioning and no individual distress—the findings in the current study when breaking down the distress by income level. In the current study, about 54% ($n =$ 164) of the sample met the criteria for low-income status, and 33% ($n = 53$) reported individual distress. Of the 46% ($n = 140$) of the participants in the current study that reported moderate- to upper-income status, 19.3% ($n = 27$) reported individual distress.

Thus, overall, it appears that the individual distress levels of the sample population in the current study are consistent with the findings of previous CRE studies that have examined individual distress. This similarity remains constant even when comparing individual distress by the participant factors of gender, racial and ethnic background, and income level. However, the comparison of relationship distress between the current study and the previous CRE studies reviewed netted different results.

Relationship Distress

In this current study, over half of the participants (56.9%, $n = 173$; $M = 41.73$, $SD =$ 11.33) reported relationship distress as measured by a clinical cut-off score of 44 or lower on the DAS. More women (34.2%, $n = 104$; $M = 38.84$, $SD = 10.93$) than men (22.7%, $n = 69$; $M =$ 44.63, $SD = 11.02$) were considered distressed at the beginning of their treatment in CRE. This

was consistent with at least one study where the collective mean for relationship distress was below the clinical cut-off score for relationship distress (DeMaria, 2005). However, this proved to be the exception. For example, a meta-analysis of 39 CRE studies (Reardon-Anderson et al., 2005) showed that cumulatively less than half (42%) of the participants reported clinically significant relationship distress. A recent article supports this cumulative finding with a summative report that the majority of couples attending CRE are satisfied with their relationships (Halford & Snyder, 2012). Thus, overall, the percentage of participants in this study that presented with relationship distress was higher than those in other CRE studies that have examined relationship adjustment or distress. Although it is not possible in this study to determine the exact reason why the relationship distress levels were higher as compared to these previous CRE studies, the socioeconomic and racial and ethnic makeup of sample size could be part of the reason. Previous literature has shown that individuals and couples from certain populations, such as those with low socioeconomic status, face unique stressors that increase their risk for increased relationship distress. Thus, it would seem likely that, on average, participants representing high-risk populations would report relationship distress.

A comparison of income and ethnicity in this study with those of previous CRE studies that examined relationship distress found that the majority of samples consisted of 70% to 80% of couples from moderate- to upper-income households, with a mean annual income range of $55,000 – $65,000 (e.g., Bradford, et al., 2010; Reardon-Anderson et al., 2005). In this study, nearly 95% ($n =288$) of the sample reported low- to moderate-income levels, with 53.9% ($n = 164$) at the low-income threshold ($M = \$44,229.95$, $SD = \$28,284$). Related to racial and ethnic

backgrounds, 76% to 100% of the samples in previous CRE studies examining relationship

distress were from Caucasian/Non-Hispanic backgrounds (Hawkins et al., 2008; DeMaria, 2005;

Veldorale-Brogran et al., 2011), whereas in this study, nearly 65% ($n = 197$) consisted of

participants from racially and ethnically diverse backgrounds. The previous CRE studies

reviewed had not provided relationship distress data by income or ethnicity categories. This may

not have been necessary because of the majority of samples being of one category type (i.e.,

moderate-income, Caucasian/Non-Hispanic). In this study, of those that reported low-income

levels, 59.1% ($n = 97$) reported relationship distress, and 50.3% ($n = 99$) of the racially and

ethnically diverse subgroup in this study reported relationship distress.

A comparison of this nature is based on observation, and did not involve analyzing data

from multiple studies to determine if significant differences existed between samples. Although

this comparison is inconclusive, the information observed, specifically amongst the differences

in the findings that participants in this study with low-income and from racially and ethnically

diverse backgrounds reported more relationship distress, has two ramifications. First, this

comparison of distress levels also points to treatment considerations for professionals providing

help to couples, such as recruitment, assessment, dosage, and training. Second, the comparison

underscores the importance of intentionally including and examining historically underserved

populations in CRE research in order to more completely describe relationship distress among

couples from numerous populations that attend CRE. The need for this research has been

highlighted in recent CRE literature (Oom & Wilson, 2004; Hawkins & Ooms, 2010), but has

taken longer and been more challenging than expected (Bradbury & Lavner, 2012). These

professional considerations are discussed later in this chapter.

Actor-Partner Effects on Distress

Dyadic data analysis was developed in the 1980s to study the influence that members of

groups of two or more individuals had on each other (Atkins, 2005). Dyadic data analysis has

gained momentum and popularity with the increasing amount of research being conducted with

couples as well as the development of procedures and models that make it easier to use (Kenny

et al., 2006; Tabachnick & Fidell, 2007). Many CRE studies that have measured relationship

distress have used between-within multivariate analysis of variance (i.e., repeated measures

MANOVA), a valid dyadic data analytic procedure, to examine the mean differences in distress

scores between and within dyads (DeMaria, 2005). However, only three CRE studies (Burr,

2011; Bradford et al., 2010; Veldorale et al., 2010) have used multilevel modeling or structural

equation modeling to test for a potential relationship between individual functioning or distress

and other factors, such as relationship distress. All three studies used the DAS (or RDAS;

shortened version of the DAS) and two of the three used the OQ10 (a shortened version of the

OQ-45.2). The other study used the Derogatis Stress Profile (DSP; Derogatis, 1987). Only one

of these (Burr, 2011) also used the actor-partner interdependence model (APIM; Kenny et al.,

2006). This study examined the predictive relationship between individual distress and attitudes

toward CRE, but not between individual distress and relationship or any of the other predictive

relationships examined in this study.

In the remaining two studies, each partners' individual functioning was assessed as a predictor on their personal relationship functioning or adjustment. Both studies found that participants' individual distress influenced their personal relationship distress. Specifically, as their scores on the OQ increased by one point toward individual distress, their personal scores on the DAS were predicted to decrease between .018 (Veldorale et al., 2010) and .158 (Bradford et al., 2010) toward relationship distress. The significant findings of hypothesis 3.1 in this study are consistent with the findings from the previously reviewed CRE studies—as the OQ scores of married men and women increase by one point, their personal DAS scores are predicted to decrease by .22 toward relationship distress.

Neither of the previously reviewed studies examined the main or interaction effect that participant factors may have had on individual or relationship distress or on the predictive relationship they discovered that individual distress had on relationship distress. Additionally, these studies did not examine the other predictive pathways investigated in this study. Although the findings in this study are unique to CRE, there is support in research from counseling and other fields. For example, social psychology has extensively researched dyadic and group interaction and found that a predictive relationship exists between relationship distress and individual distress (Johnson & Johnson, 2005). After CRE research, the next closest comparison for the findings of this study may lie in counseling literature. The actor-partner findings of this study are generally consistent with the results in counseling research with couples that a circular relationship exists between individual and relationship distress. This study also found that married men's and women's individual distress significantly influence each other's individual

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distress, and their personal relationship distress significantly influences each other's relationship distress. The discovery in counseling research of a circular relationship between individual and relationship distress had practical significance for counselors and other psychotherapists working with couples such as changes in conceptualization of couple problems and suggested changes to treatment interventions for couples (Lebow et al., 2012). Thus, it is expected that the confirmatory discovery of a circular relationship between individual and relationship distress in this study among married couples from low- to moderate-income levels and diverse racial and ethnic backgrounds—that distress begets distress—will have practical significance for professional helpers and scholars, such as CRE providers, counselors, and counselor educators, among others.

Limitations and Strengths

One aspect of the study with both strengths and weaknesses is its design. Correlational research looks at the relationship between "two natural states" (Campbell & Stanley, 1963, p. 64). However, this design type does not allow for examining differences between or the influence of interventions or treatments on the variables of interest, as would a study using an experimental research design, the gold standard of research designs. Nevertheless, a correlational research design was an appropriate fit for this study. Framed in the theory of social interdependence, this study tested for the existence and extent of a predictive relationship between the two natural states of married men and women—their individual and relationship functioning prior to any intervention. Correlational research design is inexpensive and allows researchers to conduct tests of large datasets with the potential of finding relationships among the

variables not previously discovered. This process can serve as a guide for developing research foci and questions, after comparing the findings with the literature, before conducting more extensive and expensive studies related to the variables.

This study is perhaps the first study of its kind to use dyadic data analysis, specifically the actor-partner interdependence model through hierarchical linear modeling, to examine the predictive relationship between (a) the individual distress levels of married partners, (b) the influence of their individual distress on their personal relationship distress, (c) the influence of their relationship distress on each other's levels of relationship distress, and (d) the influence of their personal relationship distress on their personal and partners' individual distress. Three other CRE studies have used multilevel modeling or structural equation modeling to study the influence of married men's and women's individual distress on their partners' relationship distress, which this study replicated. Thus, there are virtually no other studies for comparison. On the other hand, the unique premise of the this study, namely to investigate the existence of a circular relationship between the individual and relationship distress among couples in CRE, had been conducted in counseling, psychology, and social psychology literature (Johnson & Johnson, 2005; Whisman & Uebelacker, 2006), but not in studies of CRE and not with an economically disadvantaged and diverse population. Thus, this study and its statistically significant findings provide new information and professional significance for CRE providers and researchers as well as counselors and those that train them.

Researchers commonly have used various forms of dyadic data analysis to examine data from couples that have selected CRE as a source of help for their relationships, including

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individual and relationship distress. These analyses have included repeated measures of multivariate analysis of variance as well as other selected analyses from the family of multilevel modeling approaches, such as hierarchical linear modeling and structural equation modeling. One other CRE study has used the actor-partner interdependence model (APIM; Kenny et al., 2006) in conjunction with multilevel modeling (Burr, 2011) to examine couples' individual and relationship distress. Further, no other CRE study has used the APIM with hierarchical linear modeling to study individual and relationship distress. This presents an initial limitation because there is only one study with which to compare research design and analysis. However, multilevel modeling was developed specifically to deal with the unique challenges presented by dyadic data (e.g., nonindependence) and is gaining popularity and use among relationship researchers (Atkins, 2005; Tabachnick & Fidell, 2007). Thus, with more researchers likely to use multilevel modeling and structural equation modeling to study differences between couples' individual and relationship distress or the predictive relationship between distress types of one partner or another, this study has provided an example of how researchers can add the APIM to multilevel modeling in order to study the influence of men's and women's distress on their and their partners' distress at the same time in one analysis.

Additionally, researchers studying CRE populations and programs can use the current study as an example and catalyst for examining the predictive relationships between individual and relationship distress and other variables, such as outcome measures or participant and program factors. For example, researchers could use the APIM within a three-level hierarchical linear model to investigate the influence of partners' marital expectations on their and their

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partners' individual or relationship functioning. Another possibility is including the influence of CRE or counseling staff on outcomes. For example, counselor educators and other social science scholars can use the APIM within a four-level hierarchical linear model to study the predictive relationships between the individual functioning of supervisors on supervisees, and supervisees on individuals or couples. In addition to the study in this final example providing additional outcome information related to the functioning of individuals and couples that select CRE or counseling, it would provide important insights into the characteristics of supervisors and supervisees, their supervisor-supervisee relationship, and how both are related to client outcomes, which would be of particular professional significance to facilitators- and counselors-in-training as well as for administrators, educators, and trainers, such as counselor educators.

Finally, the sample included in this study presents a limitation. The data in the current study were previously collected from a larger study with low-income, married couples. Although the sample was ethnically diverse, it lacked diversity related to socio-economic status as well as relationship type and household status. The participants were married heterosexual couples living together with children and with low- to moderate-income socioeconomic status. This limits the generalizability of the findings in this study. Yet, the new information found in this study provides future research opportunities and the sample is perhaps more typical of the individuals now entering federally funded CRE programs than previous samples. Scholars can conduct approximate replication studies, with correlational, experimental, or quasi-experimental research designs, to examine the individual and relationship distress among additional populations not

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represented in this study, such as same-sex couples, unmarried couples, and couples without children, among others.

Thinking about future CRE research examining individual and relationship distress, a strong study would include an experimental research design that randomly assigns couples to an intervention or a control group, and then assesses outcomes of interest before the intervention, immediately after the intervention, and a longer period of time after the intervention (e.g., six months, one year). For example, researchers could use an experimental research design to randomly assign unmarried couples that are either cohabiting or not cohabiting to either a treatment group (i.e., CRE) or a control group, and then compare changes in individual and relationship distress of both groups by CRE and control as well as participant factors, program factors, and other assessment measures (e.g., marital expectations). Like the findings in this study, it is expected that future research into the circular relationship between the individual and relationship distress of CRE participants will have great significance for professionals and researchers seeking to understand and help couples and their families.

Implications

Counseling research has found that the majority of couples attending counseling are experiencing some level of relationship distress (Carr, 2011). Additionally, among couples presenting with relationship distress, one or both partners also present with individual distress (Whisman & Uebelacker, 2006). The lack of CRE research on the topics of individual and relationship distress has prevented us from making such specific and strong claims about couples attending CRE. However, a recent summative assessment of individual and meta-analytic CRE

studies posited that the majority of couples attend CRE are satisfied with their relationship or do not report relationship distress (Halford & Snyder, 2012). A comparison of the individual and relationship distress levels of the participants in this study with the samples of other CRE studies revealed that couples in this study reported higher levels of relationship distress, and that the variations may stem from the differences in sample populations (i.e., income level and racial and ethnic background). The dyadic data analyses conducted in this study revealed statistically significant results confirming that on average married men's and women's individual distress influence their and their and their partners' relationship distress, and thus the dynamic of the relationship, which in turn influences their personal individual distress.

The confirmation of a circular relationship between individual and relationship distress as well as differences found in distress levels based on participant factors (e.g., gender, income, employment) are professionally significant for various helpers and researchers of couples. The professionals for which this study is likely most significant are: (a) counselors; (b) CRE developers, staff, and facilitators; (c) those educating facilitators- and counselors-in-training, such as counselor educators; and (c) researcher in fields such as counselor education, social work, psychology, and social psychology, among others. Issues of significance include: (a) serving and researching underrepresented populations, (b) applying the circular model of individual and relationship distress to conceptualize individual and relationship functioning, (c) determining facilitator fit when serving distressed couples in CRE, (d) considering if counseling or CRE may each be more appropriately suited for couples based on their distress levels, and (e) the importance of consistent research in these areas moving forward.

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Recruiting Underrepresented Populations

The majority of the sample in this study consisted of couples from diverse racial and ethnic backgrounds (64.8%, $n = 197$). The couples predominantly reported low to moderate socioeconomic status (94.7%, $n = 288$), with over half of the sample having reported a low socioeconomic status (53.9%, $n = 164$). Couples with racial and ethnic backgrounds as well as those with low to moderate socioeconomic status have been historically underrepresented in CRE programs and research (Ooms & Wilson, 2004). Although efforts are currently underway to study CRE with underrepresented populations, primarily through federally-funded programs, few studies have yet been published with predominantly underrepresented samples (Hawkins & Ooms, 2010). However, recent literature has indicated that these projects have taken longer than expected to find the answer and that the task has proven more difficult than initially expected, citing recruitment challenges as one of the reasons (Bradbury & Lavner, 2012). Thus, although addressing the wide array of difficulties, from project planning to implementation, from funding to research issues, it is beyond the scope of this study and this discussion. A brief discussion on recruitment and research related to the underrepresented populations is warranted.

A comprehensive framework for planning and implementing CRE programs was published that included considerations for program populations and recruitment (Hawkins et al., 2004). Suggested considerations included geography, culture, community partners, and cost. Programs should consider holding CRE workshops in neighborhoods or geographic areas close to the intended population, which reduces the need for costly gas expense, allows for the use of public transportation (if available), and increases the likelihood of retention. Building

relationships with organizations that intended participants already know and trust can provide for workshop space and referral sources, both to and from the CRE program. Knowing and understanding the racially and ethnically diverse cultures (as well as languages) of the intended population is important. This knowledge can be practically applied in several ways, including through staff interactions, marketing, referrals, community partners, and CRE curriculum selection (e.g., type, language, dosage), among others. Providing the services at no or reduced cost or providing a financial incentive for joining and participating may help with recruitment as well as retention. Since the publication of this comprehensive framework, numerous articles have highlighted the mixed success with recruiting underrepresented populations, reporting continued challenges. However, some programs have had success with applying concepts from the comprehensive framework as well as offering important insights into the needs and interests of couples from racially and ethnically diverse backgrounds or sharing their successful strategies such as offering free child care and food (Carlson et al., 2012; Ooms & Wilson, 2004; Snyder, Dunbar, & Larson, 2010).

Although research to study low-income and racially and ethnically diverse populations is currently underway, the current lack of sufficient research has resulted in few findings of generalizable successful strategies related to recruitment. Thus, recruiting individuals and couples from these populations that are underrepresented in CRE research continues be a challenge for many privately- and federally-funded projects (Bradury & Lavner, 2012). A few recent studies hold great promise for helping program staff, clinicians, and researchers better understand the populations that may attend CRE and their motivations (Hawkins, Stanley,

Blanchard, & Albright, 2010; Morris, McMillan, Duncan, & Larson, 2011; Munyon, Daire, Soto, & Carlson, 2011; Snyder et al., 2010). I have suggested a three-fold process that may help in identifying additional successful recruitment strategies. First, privately- and federally-funded projects continue (or begin) to focus recruiting couples from underrepresented populations to their CRE programs as well as adding assessment and evaluation to their program models (or continue with these practices if already started). Second, researchers should consider intentionally conducting in-depth examinations of participant factors and program factors related to individuals and couples selecting and participating in CRE programs. Third, program staff and research scholars continue to share, present, or publish what has worked and has not worked in recruiting these populations. The efforts of staff and researchers in each part of the process complement each other's efforts in the other parts, thus promoting a cycle of practice, research, and learning that may help find successful strategies for recruiting these populations.

Researching Underrepresented Populations

The significant main and interaction effects that participant factors had on individual and relationship distress as well as actor and partner effects underscore the need for including participant factors (as well as program factors) in future examination of distress among couples seeking help for their relationships. Specifically, there is some evidence in literature the spillover effect may partially account for distress that individuals in this study reported. Generally, previous research highlights the benefits of including participant and program factors in relationship research as means to gaining a deeper and richer understanding of the study findings.

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Spillover Effect

The previous summative comparison of the cumulative significant and non-significant main and interaction effects findings showed that wives on average were likely to experience higher levels of relationship distress than their husbands, especially related to income and employment, whereas the difference between husbands' and wives' individual functioning was not significantly different. At the between-dyad level, married couples with low income on average experienced higher levels of relationship distress than couples with moderate- to upper-income levels. Literature points to the spillover effect as one plausible explanation for the links of gender, income, and employment in this study the participants' reported distress.

The spillover effect is the extent to which individuals' participation in one system influences their participation in another system (Small & Riley, 1990). Within research, spillover is one the most significant links between family and work functioning. For example, a large study of work and family stress among 2,871 individuals nationally found that negative work-to-family spillover was significantly associated with relationship distress, and relationship distress was significantly associated with negative family-to-work spillover (Grzywacz, Almeida, & McDonald, 2002). When individuals had a negative work experience, there was a 63% chance of that they would have negative relationship interactions (i.e., couple, family) by the next day. Similarly, the odds that individuals would have negative work experiences increased by 74% when they were within one day of having negative relationship interactions. Like this study, few of the participant factors in the spillover study correlated or produced significant main or interaction effect with the tested outcomes. In the spillover study, this indicated that on average

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the likelihood that individuals would experience negative work-to-family spillover, as well as family-to-work spillover, was relatively the same regardless of dyadic or background or characteristics. However, gender did moderated spillover effects, indicating that women were more likely to report negative work-to-family spillover or report negative relationship interactions following negative work experiences.

The sample in this study bore some similarities to the sample of the spillover study. This lends some credibility for generalizing the findings of spillover study to the participants in this study. In the spillover study, 70% were married (100% in this study), 50% had children under that age of 18 years living at home (99% in this study with 1% pregnant with first child), the majority had earned up to a high school diploma or GED equivalent (66.2% in this study), and the mean family income was $45,000 ($44,229.95 in this study). Additionally, there were some similarities between this study and the spillover study related to the influence of gender on the outcome variable. In this study, the findings indicated that women were more likely to report relationship distress. As previously mentioned, in the spillover study, women were more likely to report negative spillover. This study did not examine spillover effect. However, the statistically significant findings in the aforementioned large national employment and family study, the significant influence that gender had on distress in both studies, the significant influence that income and employment had on distress in this study, and the similarities between the samples of both studies suggest that spillover (e.g., negative work-to-family) may account for some of the variance in the distress reported by the participants in this study. Thus, examining the correlation and predictive relationships between family system functioning and work system functioning

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(e.g., negative and positive spillover effects) among couples selecting CRE, as well as those selecting counseling, warrant consideration by professional helpers and researchers.

Participant and Program Factors

The results of applying the actor-partner interdependence model (APIM) in this study through a three-level hierarchical model analysis showed that the participant factors significantly influenced both the levels of individual and relationship distress that married men and women experienced and the actor and partner effects. For example, tests of the interactions between participant factors and actor and partner effects revealed that the extent to which married men and women influenced their or their partners' distress were stronger for some parts of the population, such as women, those with low socioeconomic status, and those currently unemployed. These findings underscore the importance of considering multiple aspects of individuals and relationships within numerous professional settings, such as clinical (e.g., community mental health, private practice, university counseling centers), education, CRE programs, and research, as well as the consequences for ignoring them.

Clinically, professional helpers, such as licensed counselors, social workers, and psychologists, are expected to consider multiple aspects of the individual and relationship experience when considering diagnosis and treatment (Young, 2012). Counselor educators and other faculty in higher education train counselors-in-training that failure to considering multiple aspects of the human experience is clinically unethical as it may result in misdiagnosis, incorrect treatment, and deleterious effect for clients (CACREP, 2009).

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CRE programs should actively and consistently collect and evaluate data related to participant factors (i.e., demographic information, participation levels) and program factors (e.g., staff phone calls and interventions with participants, curriculum dosage expected vs. actually received, facilitator) (Carlson et al., 2012; Morris et al., 2011; Pappas-DeLuca, 2006). Within CRE programs, failure to consider the multiple aspects of the individual and couple experience can lead to errors in programmatic areas, such as screening and dosage (reviewed here), as well as evaluation and research (reviewed within research area next). For example, related to dosage, participant individual and relationship factors (e.g., gender, racial and ethnic background, education level, language, spiritual and religious background) when considered collectively and alongside program factors (e.g., geographic location, staff) influence the decision of CRE dosage for the intended population (Hawkins, Carroll, Doherty, & Willoughby, 2004). When recruiting couples for CRE, failure to screen couples, such as including interviews and assessments that identify and measure participant factors (e.g., individual distress, relationship distress) can lead to CRE program staff missing important information that might indicate that reported conflict may actually be domestic violence (Carlson & Jones, 2010), in which case safety considerations for the victims as well as potential referrals to domestic violence shelters would be more appropriate than admitting the couple to the CRE program.

Researchers are encouraged to include examination of participant and program factors in their evaluation of CRE programs and studies of outcomes related to CRE participants (Halford, O'Donnell, Lizzio, & Wilson, 2006). Failure to examine the main and interaction effects among participant factors on program outcomes measures, including the study of actor and partner

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effects, may result in counselor educators and other researchers committing Type II errors—finding non-significance, when the findings are actually significant (West et al., 2008). Although this has rarely been done in CRE studies, recent research may indicate the start of consistent inclusion of participant and programs factors in CRE research (Hawkins et al., 2012; Morris et al., 2011; Munyon et al., 2011; Snyder et al., 2010).

Researchers have increasingly studied other personal characteristics and behaviors of couples in CRE, such as marital expectations, financial stress, readiness for commitment and attitude toward CRE, among others, and found important links with relationship functioning (Burr, 2011; Bradford et al., 2010; Veldorale-Brogan et al., 2010). For example, among couples attending and completing CRE, those whose relationship expectations were farther apart (or differed more significantly from each other) had lower levels of relationship functioning and higher levels of relationship distress (Dixon, Gordon, Frousakis, & Schumm, 2012). Although the study of relationship expectations within CRE research only began recently, these findings are consistent with non-CRE research that also found a link between couples' expectations and distress (Ngizimbi, 2009; Sabatelli & Pearce, 1986). These findings inspire additional research efforts that hold promise for discovering and confirming information about the individual and relationship functioning of couples selecting CRE.

The findings of significant main and interaction effects between distress and (a) participant factors, in this and other recent CRE studies, (b) programs factors, and (c) other participant characteristics and behaviors magnify the complexity of the human experience, which is compounded when two individuals are in an intimate relationship. The findings emphasize the

importance of analyzing each participant factor as well as program factor independent of the others as well as considering the effect of their interactions in order to better understand how multiple aspects of the participants' backgrounds affect distress. Thus, by considering individual and relationship participant and program factors in CRE research, clinicians, CRE providers, and educators would have more complete information with which to make important data-driven and clinically-informed decisions related to recruitment, treatment dosage, and referrals with couples seeking help for their relationships.

Conceptualizing Individuals and Couples

When couples select counseling as a source of help, professional helpers, such as licensed counselors, social workers, and psychologists, meet with them to build rapport and conduct interviews, observations, and assessments in an effort to conceptualize their functioning and determine their needs prior to beginning treatment (Young, 2012). Conceptualization and assessment is repeated throughout the therapeutic relationship, formally or informally, as a way to determine treatment interventions and dosage, progress, and referral or termination (Long & Young, 2007). When couples seek help through CRE, via active recruitment (i.e., staff recruiting couples) or passive recruitment (couples' self-selection) (Carlson et al., 2012; Pappas-DeLuca et al., 2006), helpers also typically meet with them to begin building rapport, assess their current needs, provide referrals, and initiate services (Carlson et al., 2012). Collectively, CRE providers perform this level of assessment and conceptualization inconsistently, and range from some providers employing scheduled and manualized screening and assessment methods akin to those of counselor to others admitting couples to CRE without formal assessment (Blanchard et al.,

2007). Assessment and conceptualization of couple functioning is a required, expected, and ongoing process in counseling (CACREP, 2009; Young, 2012), and is strongly suggested as part of providing CRE (Hawkins, et al., 2008).

Research related to the individual and relationship distress of couples attending counseling has led to suggested and tested treatment changes for couples in distress. For example, a long-standing practice by many counselors and other helpers when treating couples in which one of the partners is abusing substances (e.g., alcohol, drugs) has been to treat the individual with the substance abuse problem first. Once the substance abuse no longer impaired individual functioning, treatment could then be focused on the couple as a unit. However, recent research has shown that when the same couple from the example is distressed, the prognosis for the partner with substance abuse achieving optimal treatment outcome is poor, and relapse following treatment is more likely (Fals-Stewart, O'Farrell, Birchler, & Lam, 2009; Whisman, 2001). Subsequently, researchers studied conceptualizing and treating couples, like the one from the example, as a unit. For example, with both partners attending together as a couple, professional helpers worked with the individual whose substance abuse had impaired functioning, while also working with the couples to identify and address areas of negative interactions as well as assigning interventions to support improvement made in individual and relationship functioning (Fals-Stewart, Birchler, & Kelley, 2006; Fals-Stewart & Lam, 2008). Follow up into this approach of treatment couples as a unit from the start found improvements in relationship functioning, which in turn supported improvements achieved in individual

functioning by the partner struggling with substance abuse, and showed a decrease in the chance of relapsing.

While researchers continue to study the individual and relationship distress of couples in counseling, they have also suggested that professional helpers consider conceptualizing and treating couples with individual and relationship distress as a couple when possible and appropriate (Fals-Stewart, et al., 2006; Whisman & Uebelacker, 2003). The *circular model of individual and relational functioning* as well as the *continuum of individual and relational functioning* presented in this study requires additional examination in subsequent CRE studies and other relationship research. However, the findings of previous research (Doherty & Colangelo, 1984; Whisman & Uebelacker, 2006) support utilizing the circular model and the continuum as tools professional helpers use to conduct initial and ongoing assessment and conceptualization of individual and relationship functioning (see Figures 9 and 10).

Examining specific starting points for functioning (e.g., distress) was beyond the focus of this study. However, individual and relationship distress as previously defined and described in this study can help provide an example of how the circular model might be applied in conceptualizing individual and relationship distress among couples that have selected CRE as a source of help for their relationship. Consider an example of a married heterosexual couple in which a husband who is currently unemployed and with a low-income state who has being experiencing anxiety and depression to the point that they have impaired his functioning—individual distress. As the husband's individual psychological health decreases and his individual distress increases, which is likely compounded by his financial struggles as a result of

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unemployment and low income, his wife is predicted also to experience a decrease in her individual psychological health moving toward or into individual distress. The model also predicts that simultaneously the husband's individual distress also affects the dynamic of the relationship itself. As his individual distress increases, he and his wife's adjustment to the relationship decrease toward or into relationship distress. The husband's relationship distress predicts a further decrease in his wife's relationship adjustment and functioning, which influences a subsequently decrease in her individual psychological health. Here, the path of the circular relationship between individual and relationship distress recycles as described here, but from the starting point of the wife. It would seem that if the cycle were to continue and be left unresolved (e.g., due to lack of awareness, lack of attempts to change by one or both partners, lack of knowledge and skills to change) the circular relationship would create a spiral effect that intensifies the individual and relationship distress. Helpers with this conceptualization of the husband and wife as well as the dynamic of the relationship can make clinically-informed decisions about working with the couples.

The majority of couples attending counseling are distressed (Whisman & Uebelacker, 2006; Carr, 2011), thus the majority of counseling research with couples has focused on individual and relationship distress. Most of CRE research to date has examined relationship adjustment or functioning and has focused on relationship distress, including this current study, providing support and examples for assessing and conceptualizing couples' individual and relationship functioning from the point of distress. Historically, CRE research has lacked sufficient research on relationship distress to claim strongly to what extent couples that attended

CRE were distressed. However, a recent article has posited that most couples that attend CRE are generally satisfied with their relationship (Halford & Snyder, 2012). While additional research is required to determine is this finding is strongly generalizable to couples from numerous populations (e.g., low-income, racially and ethnically diverse), some researchers have recently suggested assessing and conceptualizing couples selecting CRE from a point of individual and relationship functioning rather than distress.

The circular relationship found and discussed in this study initially depicts distress begetting distress. However, the directions of the statistically significant findings indicate that the cycle can be viewed from the standpoint that healthy functioning begets health functioning. For example, in the results related to hypothesis three in the current study, the significant results indicated that husbands' and wives' individual distress significantly influenced their and their partners' relationship distress. The negative actor and partner effects mean that as the score of one measurement moves in one direction, the score of the other measurement is predicted to move in the other direction. Thus, according to the initial interpretation, as husbands' and wives' scores on the OQ-45.2 increase toward individual distress (indicated by scores of 63 or higher), their and their partners' scores on the DAS are predicted to decrease toward relationship distress (indicated by scores of 44 or lower). By reversing the direction of the OQ-45.2 scores, we would see that as husband's and wives' scores on the OQ-45.2 decrease toward increased psychological health, their and their partner's scores on the DAS would be predicted to increase toward increased relationship adjustment and healthy relationship functioning. Therefore, we can also interpret the circular relationship as follows: As individual psychological health increases,

healthy relationship functioning (or relationship adjustment) increases—healthy functioning begets healthy functioning.

CRE research as a whole has not suggested assessing couples from one point of view or the other. I presented this information for CRE providers, counselors, and other helpers to be aware of these viewpoints in order to make their own decision as to how to proceed in assessing and conceptualizing individuals and couples. This is consistent with counselors' approach to assessment and conceptualization. Although more than 400 theories of counseling exist (Consoli & Jester, 2005), counselors ultimately conceptualize individuals, couples, and families from theoretical viewpoints that match their personal worldviews (Halbur & Halbur, 2010). Thus, the point from which helpers view individual and relationship functioning remains one of personal selection. Yet, from whichever viewpoint—healthy functioning or distress—the goal remains to the same. Helpers should assess and conceptualize the individuals' and couples' individual and relationship status and needs in order to make data-driven and clinically-informed decisions about interventions, such as determining facilitator fit, whether some treatment interventions are better or more appropriate for certain couples, and whether to serve couples with individual distress as well as relationship distress as individuals first or as couples as a unit from the start.

Facilitator Fit

In order to work with individuals, couples, families, and groups in a therapeutic relationship and setting, professional helpers, such as licensed counselors, must provide proof of meeting and maintaining certain initial and ongoing education and training requirements, which are typically formally established and universally accepted in each professional field. These

standards are set, revised, and enforced by governing bodies, such as states' legislatures and credentialing organizations (e.g., CACREP, 2009). Some counselors also provide CRE to groups of individual and couples. However, the majority of CRE facilitators are paraprofessionals or individuals and couples seeking to help others enhance their relationships, who are not required to be licensed or certified. Most facilitators are prepared to provide CRE curricula through previous education and experience as well as formal training required by the curricula developers or through curricula considered to be self-training, teach-out-of-the-box material (DeMaria, 2005).

Although no formal required standards for CRE facilitators exists, a study of CRE programs found that certain standards and characteristics were typically universal among the study sample of CRE facilitators, when considering background, training, and workshop schedule and type (Simons & Harris, 1999). These standards and characteristics included gender, educational level, years of experience, nature of employment or role within the CRE organization, type of CRE program, and location of CRE program. Additionally, the National Council on Family Relations (2011) developed a formal Family Life Educator Certification (CFLE) as an option for facilitators and other CRE provider staff. Candidates must meet minimum criteria that include: (a) earning a Bachelor's degree from an accredited university, (b) completing 1,600 to 4,800 hours of experience in providing CRE (lower range of hours for candidates with higher levels of education), (3) completing an application process, and 4) passing a family life education examination. The CFLE designation provides facilitators with

credentials that CRE administrators and staff can use as a baseline of expected background and skills when selecting, training, and assigning facilitators.

The findings of this study may supply CRE providers with an additional assessment tool when scheduling workshops and assigning couples to them. Consider if administrative and clinical staff in CRE programs had determined that couples with higher levels of individual and relationship distress might require a facilitator with specific experience or skills. The CRE staff could utilize the circular model presented in this study to conceptualize couples' individual and relationship distress as well as consider facilitator background and skills (e.g., education, training, experience) in an effort to determine an appropriate *facilitator fit* for couples when assigning them to CRE workshops to learn skills together in a group format. The point of assessment and decision related to facilitator fit may also come from the facilitators themselves, which would be consistent with the expectation that counselors self-regulate who they serve, based partially on having appropriate skills and competency to do so (CACREP, 2009). Although there is no universally required training, licensure or certification in order to provide CRE, applying knowledge about facilitators' backgrounds and skills (Simons & Harris, 1999; National Council on Family Relations, 2011) as well as findings from this study may provide some guidance for CRE providers and facilitators to determine specific facilitator fit when assigning couples to workshops.

Counseling and CRE: Screening and Treatment Considerations

Since CRE reemerged in the 1980s as a consistently available additional source of help for couples, CRE providers have recruited and accepted couples (couples that self-select) are

both distressed and non-distressed. Research studying couples selecting CRE has primarily examined their relationship functioning from the viewpoint of distress, including this study. As more research related to couples relationship functioning and distress continues to emerge, a trend in the findings suggests that most couples selecting CRE may be generally satisfied with their relationships. Although CRE research of this area has inadequately included couples from low-income and racially and ethnically diverse backgrounds, this may begin to explain why the study of the CRE effect on participant outcomes (including distress) have been mixed; couples generally satisfied with their relationships are likely to show less dramatic improvements (Hawkins et al., 2008). Further, recent studies have approached the examination of couples in CRE from a strength-based viewpoint of health relationship functioning rather than distress (Bradford et al., 2010; Veldorale-Brogan et al., 2010). Following these trending findings and shifts in theoretical perspectives, recent literature has suggested a potential dichotomizing of couples that seek help (Lebow et al., 2012). The first population are those couples with distress levels severe enough that the couples are approaching or have arrived at the crossroads of divorce (Hawkins & Fackrell, 2011) and exhibit or report (e.g., interview, psychometric assessment) behavior associate with high risk of divorce (Gottman & Notarius, 2000). The second population would consist of all other couples, including those that are and seek help to enhance their relationships with which they are already generally satisfied. Finally, recent research has found that a circular relationship between individual and relationship functioning exists among couples in counseling (Whisman & Uebelacker, 2003), which has been confirmed by this study to exist among a sample of couples that selected CRE.

The recent suggestion of dichotomizing couples seeking help has inspired the question: Would certain couples benefit more from counseling over CRE and vice versa? Some scholars have suggested that this indeed may be the case (Lebow et al., 2012). This will likely depend on if recent research that has posited that most couples attending CRE are generally satisfied with their relationships (Halford & Snyder, 2012) bears the test of additional distress research over time with diverse samples representative of all couples. If indeed this recent speculation is true, then it would seem that these couples would want to enhance already generally satisfying relationships. They would not require the same in-depth analysis, introspection, and treatment interventions as would couples that are significantly distressed. Thus, generally satisfied couples are more likely to be ready to learn and practice skills soon after starting services. Additionally, generally satisfied couples are likely to produce achievements toward their goals shorter periods of time, and not require months of treatment intervention as would couples with significant distress. Finally, significantly distressed couples are likely to require the services of professional helpers, such as licensed counselors, social workers, and psychologists, whereas couples generally satisfied with their relationships would not seem to require this level of help. Early findings in CRE research have shown that these more satisfied couples do seem to benefit from acquiring the desired relationship skills and knowledge from trained professionals facilitating psychoeducational groups (DeMaria, 2005; Hawkins et al., 2008; Halford & Snyder, 2012). Therefore, it would seem that the goals, interventions, and format of CRE would fit the level of functioning, needs, and goals of couples that are generally satisfied with their relationships. Time and costs are two additional considerations in exploring of the question of treatment fit couples

based on assessed functioning. CRE is shorter and costs less than traditional couples counseling. If couples that are generally satisfied with their relationship do not require the more lengthy and more intensive services of a professional counselor, then they would likely be able to produce achievements toward their goals in CRE, while saving time and money. When couples in CRE are found to be functioning as a significantly lower level than originally assessed, CRE providers and facilitators can make referrals to community resources such as couples counselor. Similarly, when counselors identify couples that are generally satisfied with their relationships, they could consider referring them to community resources that offer CRE, or offer CRE groups as part of their community mental health or private practice. Building and maintaining relationships with community partners that offer counseling and CRE services, respectively, would help both CRE providers and counselor provide couples with timely service once determining an appropriate treatment fit. The suggested changes in the current study and previous counseling and CRE studies require changing how we assess and conceptualize individual and couple functioning, as previously discussed earlier in this chapter.

Additionally, research that found success in treating the couple together when they present with relationship and individual distress (Fals-Stewart et al., 2009) and the recent findings of the circular relationship between individual and relationship distress has inspired the question: When couples present with both individual and relationship distress, do we serve the partner(s) with individual distress separately first before treating the couple, or treat the couples as a unit from the start, addressing individual and relationship functioning together? As counselors and CRE providers become aware of these recent shifts and suggestions, they are

likely to consider potential implications for their work with individuals and couples. It would seem that clinicians and CRE providers considering these questions are likely to face them most often during screening or intake.

Screening Considerations

Screening is a typical and expected part of both counseling and CRE, and are somewhat similar to the triage system that medical settings employ. Medical professionals triage to determine which interventions patients' need based a number of factors, such as the nature, severity, and immediacy of the need, among others. Counseling and CRE providers typically screen to determining eligibility and appropriate fit for services based on a number of factors, such as services offered; the needs of those seeking help; and the skills and competencies of the providers, among others (Young, 2012; Carlson et al., 2012). In counseling settings, and to a larger extent in CRE programs, screening and intake interviews are conducted with the expectation that if those seeking help meet the requirements, they will be accepted for services. In cases where helpers lack the skills and competency to adequately treat those seeking their assistance or those seeking help are facing a mental or medical emergency, helpers are expected to make appropriate referral or call for emergency services (e.g., 911). With these practices already in place, counselors and CRE providers may consider adapting their screening and intake processes to triage couples in distress. For example, CRE providers could assess couples individual and relationship distress, and refer those with levels of distress that are indicative of approaching or being at the crossroads of divorce (dichotomized couple population #1) to counseling, and provide CRE to all others (dichotomized couple population #2). Similarly,

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counselors could assess couples individual and relationship distress, and refer those in

dichotomized couple population #2 to CRE, and work with those highly distressed couples in

dichotomized population #1.

Treatment Considerations

When couples seek help presenting with relationship distress, one or both partners is

likely to also be experiencing individual distress (Whisman & Uebelacker, 2006). Scholars have

recently posited that helpers consider treating the couples as a unit when they present with both

relationship and individual distress, or when an individual seeking help presents with both types

of distress. Recent research has found success with this approach (Fals-Stewart et al., 2009). The

most common treatment considerations suggested have involved the use of integrative

approaches to working with couples. Examples of integrative approaches include integrative

behavioral couple therapy (IBCT; Christensen et al., 2006; Christensen, Atkins, Berns, Wheeler,

Baucom, & Simpson, 2004), emotion-focused therapy (EFT; Johnson, 2008), insight-oriented

couple therapy (IOCT; Snyder, Baucom, & Gordon, 2008), behavior couple therapy (BCT; Fals-

Stewart et al., 2006; Fals-Stewart et al., 2009), and the integrative model for couple counseling

(Long & Burnett, 2005; Long & Young, 2007). Some of these approaches have been the subject

of extensive research and others have shown promising results integrative. Researchers can test

the effectiveness of these, or other integrative approaches, in treating the circular relationship

between couples' individual and relationship distress. For example, counselors and research

could work together to study the process of *circularity* utilized in the integrative model for

couple counseling (Long & Burnett, 2005). Circularity is the ongoing process of assessment,

treatment planning, and treatment interventions based on the interactions of the couple in therapy (Landis & Young, 1994). Researchers could help counselors identify and measure the circular relationship of individual and relationship distress among couples they serve, and then examine the effectiveness of counselors' use of circularity in treating individual and relationship distress when implementing the integrative model.

Considerations like this would require that counselors and other helpers assess the individual and relationship distress of individuals and couples (and perhaps families) seeking treatment and alter the way they conceptualize individual and relationship distress, as previously discussed. Treating the couples as a unit is a departure from a common counseling practice to treat the partner with the individual distress alone first, and then treat the couple for their relationship problems. Changing the mindset of treating the couples as a unit may be a shorter leap for those already treating couples than those treatment exclusively individuals, however it is likely to be difficult for some counselors and psychotherapists.

For example, consider an individual seeking help for a diagnosed case of depression and anxiety who also reports problems with relationship functioning (e.g., decreased intimacy, increased conflict, decreased sexual activity and satisfaction). Traditionally, a counselor interviewing this individual is likely to treat him or her in a one-on-one therapeutic setting or potentially a group counseling format. A traditional approach to working with this client would likely not have been couples counseling. However, consider the predicted path of decreased functioning and distress depicted by the circular model of individual and relationship distress. When one partner is diagnosed with depression and anxiety, the other partner is predicted to also

experience a reduction in individual psychological health. Depending of the persistence of the reduced individual psychological health and the length of time without resolution, the other non-diagnosed partner could also reach a level of individual distress. The individual distress experienced by the partner with depression and anxiety will influence the dynamic of the relationship as well. Specifically, both partners are predicted to experience reduced relationship adjustment and functioning, which may develop into significant relationship distress, depending on the persistence and length of time without resolution. This cycle is compounded when both partners experience individual distress, and is likely to continue in a downward spiral into deeper distress, both individually and relationally. Now consider the findings of counseling research that have strongly demonstrated that when relationship distress is present, individuals who are distressed are likely to have a more difficult time coping with and resolving their personal psychological problems, more likely to develop suicidal ideations, and are more likely to relapse or deal with similar problems in the future (Whisman & Uebelacker, 2003).

Recent findings have suggested that the way we have conceptualized the individual and relationship distress couples that select counseling as well as those that select CRE may be incorrect. While this requires additional research, it also requires that we consider reframing and refocusing the way we assess and conceptualize individual and couple distress as well some of our approaches to practice and research. On the other hand, too few of research findings exist for us make strong claims that would likely cause immediate paradigm shifts relative to (a) dichotomizing couple populations based on distress (i.e., those distressed and at risk of divorce, all other couples), (b) screening and treating couples the dichotomization of their distress levels,

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and (c) screening and treating couples as a unit from the start when both relationship and individual distress are present (e.g., being sensitive to the complexities of individual and how they influence, compound, and predict relationship distress). Nevertheless, these findings, claims, and suggestions pose important questions to how we conceptualize and choose to work with individuals and couples. Practitioners, educators, and researchers can answer these questions through working together. Thus, these issues warrant careful consideration by clinicians and CRE providers, counseling and CRE educators, and researchers, such as counselor educators and couple and family scholars.

Counselor Education: Training Future Helpers

Counseling is a "professional relationship that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals" (Gladding, Tarvydas, Mascari, & Kaplan, 2010). Educating individuals seeking to learn the art of helping is largely the responsibility of counselor educators (CACREP, 2009; Young, 2012). The findings of this study have implications for counselor educators. Reviewing the role of counselor educators and scope of their work will provide a practical context for applying the professional implications.

Counselor educators are Ph.D.-level faculty of higher education institutions. They typically conduct research, educate counselors (i.e., Master's students) and counselor educators (i.e., doctoral students), and perform professional service. The *education* that counselor educators facilitate encompasses classroom teaching, field training (e.g., practicum and internship), evaluation, and supervision (CACREP, 2009).

For Master-level counselors-in-training, counselor educators facilitate learning of professional identity and professional practice. Professional practice includes generally applicable research, theories, and therapeutic skills as well as training related to specialty areas. The specialty areas include (a) addiction counseling; (b) career counseling; (c) clinical mental health counseling; (d) marriage, couple, and family counseling; (e) school counseling; and (f) student affairs and college counseling.

For Doctoral-level counselor educators-in-training, counselor educators also facilitate learning of professional identity and professional practice. Professional identify for a counselor educator consists of assuming the roles researcher, teacher, and servant leader (i.e., leadership and advocacy). Thus, professional practice training that counselor educators provide to doctoral students includes (a) research and scholarship; (b) teaching; (c) counseling; (d) supervision; and (e) leadership and advocacy.

Counselor educators can apply the findings of this study for both counselors- and counselor educators-in-training. A thorough review of specific application opportunities, anticipated steps, and related research and evaluation methods is beyond the scope of this study. Thus, a brief review of two areas of practical application is presented here: conceptualization and researching the couples as a unit. Additional examples of how counselor educators can apply the findings of this study are included in the individual sections of this chapter.

Since the discovery of the circular relationship of individual and relationship distress in counseling, researchers have suggested considering treating couples as a unit when they present with individual and relationship distress. Relationship researchers have also begun to examine

treatment interventions that work with the couple as a unit from the start, with some promising results (Fals-Stewart et al., 2009). Within classroom teaching, counselor educators can review the findings of previous counseling research and this study related to the circular relationship between individual and relationship distress as well as the continuum of individual and relational functioning. Comparing the findings of these studies with the current counseling practices when couples present with both distresses, can help counselors and counselor educators-in-training consider how they conceptualize individual and relational functioning. For example, counselor educators can provide students with opportunities in the classroom as well as field-experience settings (e.g., practicum) to practice applying the circular model as well as the continuum to conceptualizing, assessing, and screening individuals and couples.

In the early 1900s, psychiatrists began to include partners in the treatment of their individual patience (Messer & Gurman, 2011). However, they still viewed them as two individuals and not a couple. Not until 1970 did family counseling as a profession begin viewing the couple as a unit that was at the center of the family (Ackerman, 1970). This was as catalyst for the advent of couples counseling, which eventually became its own specialty. As researchers examined couples in their studies, they used traditional statistical analyses. Traditional analytical methods were initially created for investigating individual-level data. Thus, standard statistics assume that each datum is unique based on the individuals in the study being unique. However, scholars became aware of the data related to individuals in dyads were not always unique. The data were actually influenced by the experiences the individuals shared as an extension of being part of the same dyad. Thus, the data from individuals in dyads were often not independent, but

more often they were *nonindependent.* Therefore, in the 1980s, researchers developed various advanced statistical methods, such as multilevel modeling, to measure and account for this nonindependence found in dyadic and group data (Tabachnick & Fidell, 2007).

Numerous advancements have been made in the area of dyadic data analysis since the 1980s. For example, the development of the actor-partner independence model (APIM; Kenny et al., 2006) has allowed researchers to account for nonindependence as well as examine the predictive relationships among various characteristics of dyadic partners. However, confusion exists among counselors and researchers related about how to conceptualize, prepare, and analyze dyadic data. As a result, over the last decade, researchers, predominantly in the area of psychology, have provided researchers with practical methods for appropriately collecting, treatment, and examining dyadic data (Atkins, 2005; Kenny et al., 2006; West et al., 2008). Counselor education literature has little published material to guide counselor educators and counselor educators-in-training in approaches to analyzing dyadic data. Further, there is no counselor education literature to guide counselors-in-training in understanding the implications of dyadic data and how it relates to the conceptualization, assessment, and treatment of individuals and couples. Counselor educators can discuss conceptualizing and researching dyads as a unit within the context of the history of couple and family work. Within the classroom, they can include in the syllabus scholarly articles that have examined dyadic data, and promote discussions among counselors- and counselor educators-in-training about the implication of the study methods, analyses, and findings to their future counseling, research, and teaching. Specifically for counselor educators-in-training, counselor educators can add modules related to

dyadic data to their advanced multivariate statistic courses. Additionally, counselor educators can host special seminars outside of the traditional classroom setting for students and faculty to learn more about dyadic data conceptually, clinically, and statistically.

As counselors- and counselor educators-in-training assume their professional identities and learn their areas of professional practice, they are introduced to working with individuals, couples, families, and groups. The findings of this study, as well as previous research in the counseling field, have shown that a circular relationship exists between individual and relationship distress. This study also found that each member of a dyad interacts along a personal continuum of individual and relational functioning. These collective findings challenge the way that professional helpers currently conceptualize individual and relational functioning. The classroom teaching, field training (e.g., practicum and internship), evaluation, and supervision that counselors- and counselor-in-training receive is largely the responsibility of counselor educators (CACREP, 2009). Therefore, counselor educators have the opportunity and methods to apply the findings of this study to their research, teaching, and service as they strive to educate counselors- and counselor educators-in-training in the art and science of helping and research.

Theoretical Framing of Future Research

Researchers will continue to study the intimate relationship between two individuals, venturing to better understand what role the circular relationship between individual and relationship functioning has when couples fulfill their wishes, hopes, and dreams of a long-lasting, mutually pleasurable relationships and when couples end their relationships after reaching the crossroads of divorce. Researchers use theories to frame the purpose and hypotheses

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of studies as well as to explain what they observed in the laboratory and what is occurring among the population at large. Theories are found in literature from numerous fields including, but not limited to, business, law, education, engineering, and behavioral and social science (Creswell, 2009). A theory is "a set of interrelated constructs (variables), definitions, and propositions that presents a systematic view of phenomena by specifying relations among variables, with the purpose of explaining natural phenomena" (Kerlinger, as cited in Creswell, 2009, p. 51). Metaphorically, theories provide road maps that help researchers, teachers, practitioners, students, and readers navigate existing and new information and phenomena. Thus, framing research within the context of a theory is an important part of the preparation, publishing, and presenting of studies, and should be applied consistently.

Relationship researchers have studied CRE from within different theoretical frameworks. An extensive review of theories use to frame relationship research is beyond the scope of this study. However, the more widely used and emerging theories are briefly mentioned here as examples of how individual and relationship functioning has been and can be framed within relationship research.

Social Exchange Theory

Researchers have most used the social exchange theory to frame their studies of intimate relationships (Karney & Bradbury, 1995). Social exchange theory was developed from the seminal work related to exchange and power in social life (Blau, 1964). Blau (1989) revealed that the original title and concept behind his groundbreaking work (1964) related to reciprocity and imbalance. Blau and subsequent social exchange theorists (Emerson, 1976) posited that

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when two or more individuals in the same group (including dyads) exchange verbal and nonverbal resources (e.g., information, actions, words). Individuals in the group receiving the resources evaluate them as either a reward or a cost (Emerson, 1976). When one member of a group initiates behaviors, emotions, or words to another member of a group, the other member immediately reacts or reciprocates with their resources (verbally or nonverbally), and sometimes without the initiating member being aware. When the exchanges and reciprocations of resources do not match expectations, an imbalance can be created, which can influence subsequent social exchanges.

Levinger (1965) was the first to apply social exchange theory to intimate relationships. Other family theorists and social scientists soon followed with groundbreaking research when they applied social exchange theory to relationships, including married couples (e.g., Lazarus, 1968; Walster et al., 1976; Huesmann & Levinger, 1976; Levinger & Huesman, 1980; Sabatelli, 1984; Stuart, 1969). Within dyads, scholars depicted the exchanged resources as words, emotions, and actions. Partners evaluated or valued the resources exchanged as pleasurable (a reward) or painful (a cost). Partners' pleasurable or painful interactions have been associated with individual distress and relationship satisfaction (e.g., Gordon, 1990; Lazarus, 1968; Markman, 1978; Stuart, 1969).

Social Interdependence Theory

Social interdependence theory was developed based on observations of individuals in group therapy (Levine, 1935, 1948). The theory states that in groups of two or more people (e.g., dyads), each individual's actions (e.g., behaviors, emotions, verbal and nonverbal

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communication) influence the actions of the other members, and by extension the dynamic of the group itself, which in turn influences the actions of the group members. Researchers have recently begun framing CRE research within this theory (Vendorale-Brogan et al., 2010). Social interdependence theory framed the purpose and hypotheses of this study. Social interdependence helps researchers and professional helpers, as well as those that educate them, to navigate and conceptualize the findings of a circular relationship between individual and relationship functioning in this study as well as research in counseling and other fields. Thus, it is likely that some relationship researchers will also frame their future examinations of the relationship between these distresses within the theory of social interdependence.

Ecological Systems Theory

The ecological systems theory suggests that interactions that individuals experience within various contexts and environment throughout their lives, especially in childhood, shape development throughout the life span (Bronfrenbrenner, 1979, 1989). Individuals' characteristics, such as personalities, hopes, fears, beliefs, expectations, among others, are influenced by their interactions with different systems. Similarly, these systems can be influenced by individuals' interaction with them, such as relationships and families (Bronfrenbrenner, 1991). The paths of influence traced within the ecological system theory bear some similarity to the social interdependence theory. Evidence of these interaction effects has been identified in studies of intimate relationships, including among couples selecting CRE (Burr, 2011;). For example, environments depicted as financially unstable and unpredictable have been linked to individual distress (Prause, Dooley, & Huh, 2009). Individual distress has

been correlated with married and unmarried partners' decisions to attend or not attend CRE (Burr, 2011). Thus, as researchers move forward to study the relationship between individual and relationship distress, the ecological systems theory would likely be to frame the hypotheses and findings related to examining the influence of internal (e.g., anxiety, depression, stress) and external (e.g., family, religion, income, employment) participant factors on personal and partner distress.

Dyadic Power Theory

Dyadic power theory (DPT) is emerging as a promising road map to help researchers and helpers navigate interactions within intimate relationships (Dunbar, 2004). Drawing from the tenets of previous theories, such as social exchange theory and normative resource theory, DPT emphasizes the influence that power has among the natural communication interactions occurring within dyadic relationships. In the context of DPT, power refers to the abilities of dyad members' (e.g., couples, siblings, supervisor-supervisee) to influence each other's behavior. Conversely, dominance refers to assertive actions intended to controlling the conversation or decision. DPT was recently tested in a study of communication and decision making with dyads (Dunbar & Abra, 2010). Dyad members that perceived that there was unequal power in the relationship, and that they had lower levels of power than the other member (i.e., unequal-low power), exhibited little dominant (i.e., assertive) behavior. This was because members perceiving themselves as having unequal-low power thought they could not contribute to or influence the conversation as much the other member. Dyad members with perceived unequal-high power also rarely exhibited dominant behavior. Members with unequal-high power considered themselves

as being able to influence the other member and the decision, and thus it was unnecessary to assert or establish power through dominance. Other the other hand, dyad members that perceived that each held equal power in the relationship, exhibited more assertive actions (i.e., dominance) as a way of establishing more power (i.e., influence) over the outcome of the conversation or decision. Furthermore, the results indicated that a curvilinear relationship existed between power and dominance. For example, in dyads with unequal power individuals with unequal-low power do exhibit dominant behavior, which might result in less conflict between the members. However, over time as this behavior persists, members with unequal-low power are more likely to experience relationship dissatisfaction and distress than dyads with equal power.

Although dyad members with unequal-power (unequal-low or unequal-high) are less likely to assert dominance, they are likely to occasionally leak their suppressed behavior, especially under pressure (Dunbar & Abra, 2010). This leak may be verbal or nonverbal, and could even manifest itself in intimate partner violence. Counselors, CRE providers, and other helpers commonly denote the discovery (i.e., client disclosure) of physical violence in an intimate relationship as power and control (Johnson, 2006) regardless of origin, frequency, or severity. Over the past nearly two decades, literature has increasingly shown that there is not one set of conditions that leads to violence or one relational outcome (i.e., power and control), but rather there are different types and levels (Archer, 2000). Furthermore, researchers (Carlson & Jones, 2010) recently posited that a cumulative and integrated review of evidence-based types of intimate partner violence (i.e., typologies) indicated that intimate partner violence seems to occur along on a continuum of conflict and control.

DPT and the continuum of conflict and control pose professional significance for all helpers working with couples and families. DPT has extended the scope of existing theories (e.g., social exchange, normative theories) and has evolved into a promising roadmap to guide professional helpers and researchers efforts to assess, test, and understand how dyad members interact during communication and conflict. Among the skills measured and tracked within CRE skill-acquisition studies, communication and conflict resolution are the two that researchers have examined most frequently. Looking forward, DPT may be a fitting framework from which to examine relationships among power, dominance, communication, conflict, control, individual functioning, and relationship functioning among couples seeking help though CRE and counseling, including studies testing the continuum of conflict and control.

Summary

Couples experiencing relationship distress and dissatisfaction often require help to resolve their current crises and learn skills to enhance their relationship. Two commonly utilized sources of help are counseling and CRE. Although both interventions are aimed at helping couples enhance their relationships, there are difference in their format and techniques. Counseling is a "professional relationship that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals" (Gladding, Tarvydas, Mascari, & Kaplan, 2010). Couples counseling is a specific form of counseling that occurs in a conjoint session with one or more counselors in a private, professional setting. Counselors focus on using therapeutic skills and interventions to reduce relationship distress and improving behavioral, cognitive, familial, and emotional aspects of the relationship (e.g., Carr, 2011;

Christensen, Atkins, Baucom & Yi, 2010; Christensen, Atkins, Yi, Baucom & George, 2006;

Long & Young, 2007). Although couples counseling can be brief (e.g., six weeks), it may also

last for many months.

CRE is distinctly different from counseling. CRE is "education for couples in committed

relationships, which includes couples who are married or planning to marry and couples who

cohabit in committed relationships" (Halford, 2004, p. 559). Facilitators offer CRE as an

educational, skill-based prevention and intervention to multiple individuals and couples

simultaneously in a group format (Larson, 2004). CRE often occurs by way of a time-limited,

prescribed curriculum (e.g., 12 hours, four weeks) such as Prevention Relationship Enhancement

Program (PREP; Markman, Floyd, & Stanley, 1988). Parents, professionals, and

paraprofessionals, facilitate CRE in community-based, faith-based, educational, healthcare, and

corporate institutions (Hawkins, Carroll, Doherty, & Willoughby, 2004). Although many CRE

facilitators do not hold a position-specific certification or license, such as the Certification in

Family Life Education (CFLE; National Council on Family Relations, 2011), curriculum

developers expect them to meet a set of standards related to professionalism, facilitator skills,

and ability to use technology (Simons & Harris, 1999). Additionally, facilitators do not provide

private interventions with individuals or couples as part of CRE (DeMaria, 2005); it is entirely a

group procedure.

Although CRE has a long history, counseling has a more extensive, and consistent,

history of research on relationship and individual distress (e.g., levels; correlations; treatment

interventions, dosage, and outcomes). Counseling research has made important discoveries

related to individual and relationship distress. For example, most couples attending counseling experience distress. Commonly when couples report relationship distress, one or more of the partner is also experiencing individual distress Further, the presence of relationship distress makes overcoming individual distress and maintaining psychological health more difficult and less likely. Counseling research has also found that there is a circular relationship between individual and relationship distress, that distress begets distress. Finally, scholars subsequently suggested changes in screening, intervention type, and dosage has led to discovery of models and approaches that help couples produce achievable outcomes. These findings, along with previous research in counseling, have resulted in more than 80% of couples that attend counseling experiencing some relief and reduction in relationship distress.

CRE research, which started in the about 1980s, has focused predominantly on skills acquisition, such as communication and conflict resolution. Thus, there is little research on individual and relationship distress of CRE couple populations. Additionally, CRE research overall, and the studies that have examined individual and relationship distress, have been conducted predominantly with Caucasian couples with moderate- to upper-income levels. This has limited the generalizability of the findings, which may not be entirely applicable to couples that are being treated in large numbers in federally funded programs. In the last decade the government has allocated more than $250 million to study CRE with the underrepresented populations of individual and couples from low- to moderate-income and racially and ethnically diverse background. Although some of these efforts have concluded, and others are still underway, recent literature examining and summarizing this work have found that the efforts

have taken longer and have proven more difficult than expected (Bradbury & Lavner, 2012). Some progress has been made, with numerous peer-reviewed published articles related CRE appearing each year. However, the continued lack of sufficient research related to individual and relationship distress has made it difficult for us to make strong conclusions, akin to those of counseling research, about levels of distress among couples selecting CRE, any relationship between individual and relationship distress, and CRE effectiveness in reducing individual and relationship distress.

Therefore, the current study sought to examine levels of individual and relationship distress in a sample of married couples with predominantly low- to moderate-income levels and diverse racial and ethnic backgrounds. This study used a correlational research design framed in the theory of social interdependence to examine the existence and extent of a circular relationship between the individual and relationship distress of couples selecting CRE as a source of help for their relationships. Multiple dyadic analytic approaches were used, including the actor-partner interdependence model (APIM; Kenny et al., 2006) within two three-level hierarchical linear models. Some results were statistically significant, confirming all hypotheses except one. This study found that a circular relationship does exist between husbands' and wives' individual and relationship distress regardless of participant factors, such as income status or racial and ethnic background. However, the results also showed that extent to which husband's and wives' influence their personal and partners' distress (e.g., individual distress influencing personal and partner relationship distress) is moderated and made stronger for certain

couple populations based on the participant factors of cohabitation history, gender, ethnicity, income, and employment.

There were some limitations and strengths in this study. The use of a correlational research design allowed for the investigation of the "two natural states" (Campbell & Stanley, 1963, p. 64) of couples' individual and relationship distress that existed at the time they selected CRE as a source of help for their relationships. However, the design did not allow for the examination of differences in distress outcome measure based on a CRE intervention. Thus, I could not look at the interaction or differences between distresses over time. The sample of this study was selected from archival data of a larger CRE study, and consisted of married heterosexual couples who had children and who were predominantly from low-income and racially and ethnically diverse background. This sample limits the generalizability of the findings from this study. However, the sample meets represents an important population of couples underrepresented in CRE research and currently being treated in federal programs. Additionally, this study has provided examples of approximate replication studies that researchers can conduct with those populations not represented in this study (e.g., same-sex couples, unmarried cohabiting couples, couples without children). Finally, utilizing dyadic data analysis (Kenny et al., 2006; Tabachnick & Fidell, 2007), including the actor-partner interdependence model (APIM; Kenny et al., 2006) and hierarchical linear modeling, strengthened this study. Multilevel modeling, such as hierarchical linear modeling, was developed specifically to account for the nonindependence of dyadic and group data (Tabachnick & Fidell, 2007). Additionally, This study represents the first study to utilize the APIM and hierarchical linear modeling to

investigate the individual and relationship distress of couples that selected CRE as source of help for their relationships, and is the first study to examine the existence and extent of a circular relationship between their and their partners' distress.

Despite the limitations of this study, the statistically significant results are of potential professional significance to help those working with couples make data-driven and clinically-informed decision. The professionals most affects by this study include CRE funders and providers (administrators, staff, facilitators); licensed professional, including counselors, social workers, and psychologist; (c) those professional that educate the facilitators- and counselors-in-training as well as research couples and families, such as counselor educators, social workers, psychologists, and social psychologists. CRE providers should continue to (or begin to) recruit populations historically underrepresented in CRE research (e.g., low-income, racially and ethnically diverse), collect participant and program factor data, and assess for individual and relationship distress (among other areas, such as marital expectations) before and after providing CRE to couples. CRE providers and researchers should continue to (or being to) work together examining and disseminating their data. The circular model depicting the relationship between individual and relationship distress in which distress begets distress, may provide an additional tool to help professional helper assess and conceptualize individuals and couples functioning when they seek help. Research has suggested that there may be two types of couples seeking help: those distress to point of reaching the crossroads of divorce and all the other couples, including those seeking to enhance relationship with which they are generally already satisfied. Subsequently, some scholars have suggested that perhaps certain interventions (e.g., counseling

and CRE) are more appropriate for certain couples. As practitioners and researchers continue to study this potential dichotomization of couples based on distress, helpers may consider using the aforementioned conceptualization function of the circular model to assist them in making data-driven and clinically informed decisions, such as treating the couple as a unit when they present with relationship and individual distress, or whether counseling or CRE would be a more appropriate intervention for a couples.

The findings in this study and other CRE and counseling studies related to couples' individual and relationship distress have provided important insight into the complex of the human experience, which is compounded when to individuals are involved in an intimate relationship in which each partner's actions influence themselves and each other. Too few of these research findings exist, including the ones discovered in this study, for us make strong claims that would likely cause immediate paradigm shifts. Nevertheless, some research is currently underway understand what do these collective and cumulative findings mean for our work with individuals, couples and their family, both in the short-term and long-term. These findings, claims, and suggestions pose important questions to how we conceptualize and choose to work with individuals and couples, which can be answered in time through practitioners, educators, and researchers working together. Thus, these issues warrant careful consideration by clinicians and CRE providers, counseling and CRE educators, and researchers, such as counselor educators and couple and family scholars.

Conclusion

Every individual experiences periodic reductions in personal psychological health (e.g., stress, anxiety). Prolonged, repetitive, and unresolved reductions in psychological health can lead to *individual distress*. Similarly, every couple in an intimate relationship experiences periodic negative interactions that result in disagreement and disappointment. Characteristics such as respect, commitment, and forgiveness as well as communication skills can help couples resolve these differences, adjust to the relationship, and achieve relationship satisfaction (Bradbury, Fincham, & Beach, 2000). However, prolonged or repetitive as well as unresolved negative interactions lead to feelings of dissatisfaction and disillusionment with the relationship (Gottman & Notarius, 2000), and ultimately *relationship distress*. Couples unable to resolve their relationship distress often require professional help, and historically, have turned to counseling and more recently to couple and relationship education (CRE).

Social psychology and counseling researchers has discovered a circular relationship between relationship distress and individual distress in intimate relationships (Johnson & Johnson, 2005; Whisman & Uebelacker, 2006)—with one begetting the other. Questions and suggestions have been posed about how this might influence our work with couples, such as whether to work with the couple as a unit when couples present with relationship and individual distress (as opposed to working the partners with individual distress alone first) and whether certain couples, according to levels of distress, may benefit from certain interventions (e.g., counselor or CRE) more than others. Research in counseling in currently underway to help answer these and other questions and to test new or revised areas of practice. Although

counseling researchers have yet to answer these questions, historically 80% of couples attending couples have experienced some relief, such as reduction in distress.

Research related to CRE, however, has historically lacked sufficient findings related to individual and relationship distress under distress in couples who select CRE as source of help to level to which it is understood in couples who select counseling or to the extent that we can make strong conclusions akin to those of counseling research. Progress is being made in CRE research, however, with studies area currently underway with both traditional populations as well as historically underrepresented populations (e.g., low-income, racially and ethnically diverse population). CRE studies continue to examine skills acquisition and more studies are beginning to focus couples' relationship functioning and distress. This study confirmed that a circular relationship exists between the individual and relationship distress of married heterosexual couples who have children and are predominantly from low-income and racially and ethnically diverse backgrounds. The findings of this study have professional significance for clinicians and CRE providers, counseling and CRE educators, and researchers, such as counselor educators and couple and family scholars. The results highlight the need for additional focus in CRE research not only on relationship functioning and distress, but also individual functioning and distress, with a special focus on how the two distress types relate, to what extent do they influence each other among CRE populations, how do participant factors moderate distress interaction, and what affect does CRE have on individual and relationship functioning and distress overall as well as when couples in CRE are experience the circular cycle functioning begetting functioning or distress begetting distress.

Most of the public as well as professional helpers agree that most couples marry wishing, hoping, and dreaming of long-lasting and mutually pleasurable relationships (Munyon, 2012). However, two-thirds of couples experience relationship distress, with many couples experience decreased satisfaction within the first ten years of the their marriages (Bradbury, Fincham, & Beach, 2000). Although the majority of couples that marry do not envision mounting discord and divorce in their future, a new statistic has emerged; 50 percent of married couples divorce (Center for Disease Control and Prevention [CDC], 2010). Most often when couples reach the crossroads of divorce deciding whether to work on and keep their relationship or to end it (Hawkins & Fackrell, 2012), they have difficulty resolving their problems themselves require professional help. Couples most often select counseling and CRE as sources of help for their relationship. Although counseling research has found that the majority of couples attending counseling are distressed, and that 80% of couples attending counseling experience some relief such as reduction in relationship distress (Carr, 2011; Lebow et al., 2012), CRE research lacks sufficient findings related to couples' distress to make such strong conclusions about the state of couples when they select CRE and the extent to which CRE may help them reduce relationship distress and improve relationship functioning (Bradbury & Lavner, 2012; Hawkins et al., 2008). The deleterious effects of family fragmentation and divorce are wide spread affecting adults (e.g., finances, health) and children (e.g., adjustment, academics, health, social, intimate relationships) as well as the systems to which they belong, such as schools and businesses (e.g., absenteeism, presenteeism, productivity and profit losses) (Wilcox et al., 2011). Thus, counseling and CRE practitioners and researchers are strongly motivated to continue working to

with couples using current interventions to research new and revised approaches (Fals-Stewart et al., 2009; Whisman & Uebelacker, 2003) that might help prevent or reduce the couples' circularly-related individual and relationship distress (one begets the other) in order to find out what works to help couples achieve their wishes, hopes, and dreams of long-lasting and mutually pleasurable relationships (Munyon, 2012).

APPENDIX: IRB APPROVAL LETTER

Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**
FWA00000351, IRB00001138

To: **Andrew P Daire, Mark E Young, Matthew Munyon**

Date: **September 15, 2011**

Dear Researcher:

On 9/15/2011, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review:	Exempt Determination
Modification Type:	Protocol modification to confirm that data collected from this study will be used for purposes of dissertation research
Project Title:	OFA Together Project
Investigator:	Andrew P Daire
IRB Number:	SBE-10-06669
Funding Agency:	US Department of Health & Human Services

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Janice Turchin on 09/15/2011 11:46:37 AM EDT

IRB Coordinator

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