

MARITAL ADJUSTMENT AS A MEDIATING FACTOR BETWEEN SYMPTOM
DISTRESS AND THERAPEUTIC ALLIANCE FORMATION IN COUPLES
THERAPY

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THERAPY

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A Thesis

Submitted to

the Graduate Faculty of

Auburn University

in Partial Fulfillment of the

Requirements for the

Degree of

Master of Science

Auburn, Alabama
August 7, 2006

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Melissa Stephens, daughter of Mark and Karen Stephens, was born April 9, 1982 in Provo, Utah. Melissa graduated from Shawnee Mission South High School in Overland Park, Kansas in 2000. She attended Brigham Young University-Idaho for two years, then transferred to Brigham Young University in Provo, Utah, and graduated with a Bachelor of Science degree in Marriage Family and Human Development in April 2004. In August of 2004, she entered the Marriage and Family Therapy program at Auburn University and completed a Master of Science degree in Human Development and Family Studies in August 2006.

THESIS ABSTRACT

MARITAL ADJUSTMENT AS A MEDIATING FACTOR BETWEEN SYMPTOM DISTRESS AND THERAPEUTIC ALLIANCE FORMATION IN COUPLES THERAPY

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Master of Science, August 7, 2006
(B.S., Brigham Young University, 2004)

73 Typed Pages

Directed by Scott A. Ketring

Previous research on symptom distress and therapeutic alliance in conjoint treatment indicates that symptom distress does not impact the formation of alliance, rather, marital adjustment impacts alliance formation. Because symptom distress impacts alliance within individual therapy literature, this study investigated the possibility of marital adjustment as a mediating factor between symptom distress and therapeutic alliance formation in couple's therapy. From a sample of 95 cases of couples in committed relationships at Auburn University's Marriage and Family Therapy Center, this hypothesis was tested. Results indicated that male symptom distress mediated the relationship between male marital adjustment and male therapeutic alliance formation. Therefore, the findings contradicted previous literature on couple's symptom distress and adjustment which state that symptom distress is not influential in conjoint treatment.

ACKNOWLEDGMENTS

I would like to give a special thanks to my thesis chair, Dr. Scott Ketring, for the hours of time that he sacrificed in behalf of this project. I appreciate his compassion in undertaking this work during a stressful time, with many demands for his attention. I am also grateful for his heartfelt efforts to train students well and the wonderful example that he has been for me as a clinician. I want to thank Dr. Ellen Abell as well, for her encouragement as I began this project and the revisions that she provided. I also appreciate Dr. Thomas Smith for his insight and participation on my committee. Finally, I would like to extend sincere appreciation for my sister in law, Melissa Sue Stephens, for her revisions and support when I needed it the most. My family means so much to me and I am indebted to them for their influence throughout my graduate program and my life.

Style manual used: Publication Manual of the American Psychological Association, Fifth Edition.

Computer software used: Microsoft Word, SPSS

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INTRODUCTION

Therapists have an essential responsibility in securing a positive climate in therapy, which fosters alliance (Coady, 1993). The theoretical foundation of alliance is based on a humanistic view of therapy with core ingredients of empathy, warmth, and genuineness (Eckert, Abeles, & Graham, 1988; Horvath & Luborsky, 1993). Consequently, a positive alliance is maintained when therapists and clients establish a mutual collaboration grounded in trust, respect, and commitment within therapy (Dunkle & Friedlander, 1996; Hatcher, Barends, Hansell, & Gutfreund, 1995; Pinosof & Catherall, 1986). Building this relationship sets the stage for therapeutic change and successful outcome, regardless of the experience of the therapist or the therapeutic approach (Dunkle & Friedlander, 1996; Mamodhoussen, Wright, Tremblay, & Poitras-Wright, 2005; Salvio, Beutler, Word, & Engle, 1992; Thomas, Werner-Wilson, & Murphy, 2005). Therefore, researchers declare that a therapist's approach to specific interventions in therapy does not matter unless a strong alliance is established with the clients (Johnson, Wright, & Ketring, 2002; Knobloch-Fedders, et al., 2004; Pinosof, & Catherall, 1986; Raue, Castonguay, & Goldfried, 1993; Raue, Goldfried, & Barkham, 1997).

Because alliance is a common factor across therapy approaches, researchers have begun to focus on client contributions affecting the formation of therapeutic alliance (Coady, 1993). This study will focus on how client contributions, such as symptom distress (level of anxiety and depression), marital adjustment (level of relationship

distress), and gender influence alliance formation. Within individual therapy literature, studies demonstrate that the severity of individual symptoms at intake produce lower alliance scores. This indicates that when individuals have high levels of depression and anxiety it adversely impacts the formation of a therapeutic alliance (Eaton, Abeles, & Gutfreund, 1988; Raue, et al., 1993). As a result, the research on individual treatment suggests a negative relationship between symptom distress and therapy alliance.

Despite the relationship between symptom distress and therapy alliance in individual therapy, there is limited research which evaluates the contribution of symptom distress in couple's therapy. Instead, most literature on couple's therapy has focused on the impact of marital distress on alliance rather than the impact of the level of individual symptoms. The findings from the literature on couple's therapy that do account for symptomatology indicate that individual symptoms do not impact the formation of therapy alliance (Knobloch-Fedders, Pinsof, & Mann, 2004; Mamodhousen, Wright, Tremblay, & Poitras-Wright, 2005). Rather, marital adjustment was asserted to be a greater factor in determining couple's alliance scores (Garfield, 2006; Knobloch-Fedders et al, 2004; Madmodhousen et al., 2005). Therefore, findings regarding symptom distress as it relates to individual therapy might not translate to couple's therapy. This necessitates a greater understanding of the relationship between individual symptom distress and marital adjustment in couple's therapy.

A final client contribution was recognized by Symonds and Horvath (2004) in a review of literature, which asserts that it is more difficult to examine symptom distress and marital adjustment in couple's treatment. This is because there is an asymmetrical effect of gender, or differences between males and females who come to couple's

therapy. The studies that do take into account gender differences have focused primarily on splits in couple's alliance scores (Knobloch-Fedders et al, 2004; Madmodhousen et al., 2005). Nevertheless, one study evaluated how differences in symptom distress for males and females at intake influence outcomes (Isakson, Hawkins, Martinez, & Lambert, in press). In each case, these studies identified the male's symptoms and marital adjustment to be more strongly related to splits in therapy alliance or therapy outcomes than the female's symptoms and marital adjustment.

However, no studies have investigated the differences between male and female's symptoms and marital adjustment within conjoint treatment and how these contributions impact therapy alliance. This highlights the need for a greater focus on these client contributions to the formation of alliance (Bourgeois, Sabourin, & Wright, 1990; Brown & O'Leary, 2000; Garfield, 2004; Knobloch-Fedders et al, 2004; Madmodhousen et al., 2005).

In summary, there is literature providing evidence that symptom distress has a negative impact upon the therapy alliance formation within individual therapy. In contrast, the influence of individual's symptoms has not been demonstrated to impact therapeutic alliance in couple's therapy. Studies investigating the difference in males and female's symptom distress in couple's therapy in relation to differences in their marital adjustment or the impact that this difference has upon alliance formation is unprecedented. Therefore, it appears that initial conclusions have been drawn regarding symptomatology and marital adjustment within the couple's literature. Still, research thus far has only begun to investigate these client contributions to the formation of

therapy alliance. Consequently, this study is a preliminary analysis which may provide insight for clinicians and future research studies.

Since there is research relating an one's symptom distress to one's ability to form a productive alliance and research relating marital adjustment to improvements in alliance formation in couple's therapy, it is proposed that there is a negative relationship between male/female's individual symptom distress and therapy alliance in conjoint treatment. However, it is possible that the impact of male/female's individual symptomatology on alliance is mediated by their level of marital adjustment (See Figures 1 & 2). In addition, it is possible that the difference in symptom levels of males and females could impact marital adjustment and alliance scores (Figures 1 & 2). This study will also investigate whether the difference in male/female marital adjustment mediates the relationship between male/female symptom distress, the difference in distress, and the difference in alliance formation (See Figure 3). A greater understanding of these relationships will provide implications for how clinicians may approach differences within symptom distress and marital adjustment in conjoint treatment. It is also an appeal for further investigation into how these client contributions impact the formation of alliance.

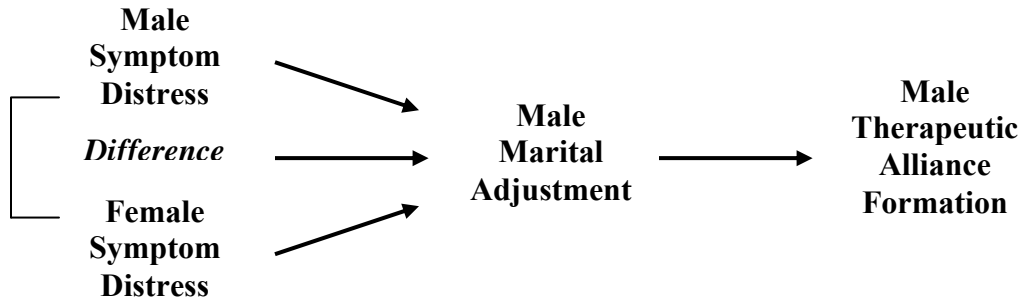


Figure I. Hypothesized Model 1: Male Marital Adjustment as a Mediating Factor between Male/Female Symptom Distress, Difference in Symptom Distress, and Male Therapeutic Alliance Formation

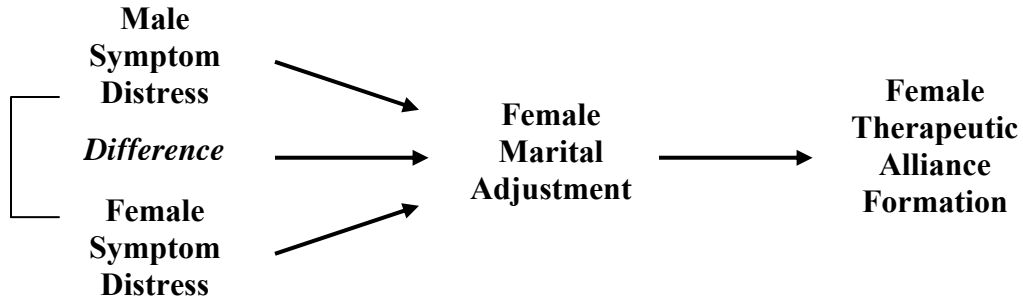


Figure II. Hypothesized Model 2: Female Marital Adjustment as a Mediating Factor between Male/Female Symptom Distress, Difference in Symptom Distress, and Female Therapeutic Alliance Formation

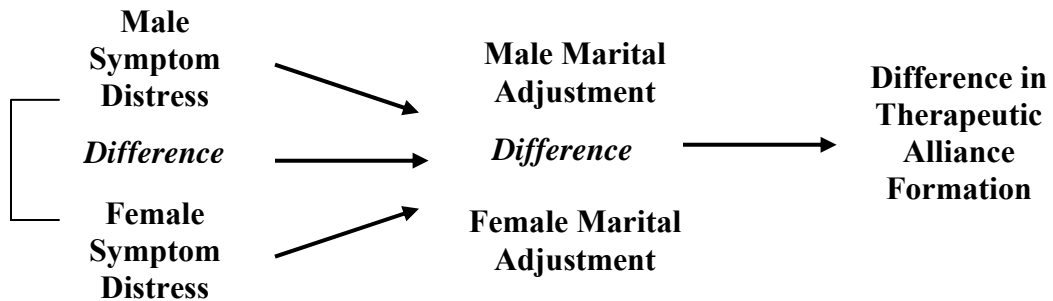


Figure III. Hypothesized Model 3: the Difference in Marital Adjustment as a Mediating Factor between Male/Female Symptom Distress, Difference in Symptom Distress, and Difference in Therapeutic Alliance Formation

REVIEW OF LITERATURE

In the past, concepts of alliance have been primarily confined within the individual therapy literature. Pinsof and Catherall (1986) were the first researchers who extended the principle of therapeutic alliance within a systemic perspective. Therefore, research on therapeutic alliance has received less attention and is only beginning to emerge in the marriage and family therapy field (Bourgeois et al., 1990; Coady, 1993; Garfield, 2004; Heatherington & Friedlander, 1990; Knobloch-Fedders et al., 2004; Pinsof, 1988; Symonds & Horvath, 2004). Because the majority of family therapists consider alliance to be an essential component of the therapeutic process, the purpose of this literature review is to examine client predictors which influence the formation of therapeutic alliance in couple's therapy. First, research will be presented on the impact of symptom distress upon therapy alliance in the individual literature. Then a discussion will follow which highlights the importance of marital adjustment in alliance formation for conjoint treatment. Afterwards, implications regarding the significance of gender differences in therapy alliance formation will be introduced. Finally, hypotheses will be presented which suggest that marital adjustment mediates the relationship between individual symptoms and therapy alliance.

Symptom Distress and the Formation of Alliance

To date, controversy arises over what client factors impact client's involvement in the therapeutic process. Research that has focused on client symptom distress levels often investigates its impact on therapy outcomes. There are only two known studies which examine how symptom distress impacts therapy alliance for individual therapy. Despite this small number of studies comparing symptom distress and therapy alliance, research still suggests that high symptom distress upon entering therapy adversely impacts the formation of a therapeutic alliance within individual treatment (Eaton et al., 1988; Raue, et al., 1993).

One of the first studies to accentuate the importance of symptom distress upon therapy alliance was conducted by Eaton et al (1988). Specifically, the study examined the impact of pretreatment symptomatology on therapeutic alliance within individual therapy. Data was utilized from the Michigan State University Psychotherapy Research Project at the MSU Psychological Clinic. The sample derived from all cases that resulted in termination at the clinic from 1978-1982. Out of 40 cases were formed three groups based on the number of sessions. Specifically, these include the high group (over 40 sessions), moderate group (20-40 sessions), and the low group (20 or less sessions). The final sample contained 12 cases in the long-length group, 15 in the medium, and 13 in the short group.

Pretreatment symptomatology was measured by the Hopkins Symptom Checklist (SCL-90R; Derogatis, 1977) and therapeutic alliance was assessed by the Therapeutic Alliance Rating Scale (TARS; Marziali, 1984). Therapeutic alliance ratings were also scored by two judges, one male and one female advanced graduate student. Training

consisted of reading the manual for the rating system, rating practice segments of therapy, and participating in meetings where they could discuss items and practice transcripts for the purpose of achieving consensus on definitions and rules of rating. Additionally, the judges participated in 16 hours of meetings during the 20 weeks of research ratings to discuss problems and prevent rater drift. Ratings of the alliance came from the first, middle, and final phases of therapy and they were combined and averaged across judges and cases within each separate treatment length group.

Findings for the study indicated that alliance was adversely impacted by client's pre-treatment symptom distress. Accordingly, lower positive and higher negative alliance was associated with higher pretreatment symptomatology. Higher symptomatology upon entering therapy was also equated with lower positive contribution and higher negative contribution to the alliance. This provides the inference that patients who report high symptoms have the most difficulty forming an alliance.

Similarly, Raue et al. (1993) looked at the principle of symptom distress and alliance within individual therapy, but the purpose was to conduct a comparative analysis of alliance formation within therapy approaches. The researchers selected 30 cognitive-behavioral and 30 psychodynamic-interpersonal therapists to identify therapists within their orientation to whom they would refer a friend or relative. Any therapist who received two or more nominations was invited to participate in the study. This resulted in a total of 31 therapists who participated in the research, including 18 self-appointed cognitive behavioral therapists as well as 13 psychodynamic-interpersonal therapists. There were 31 clients working with each therapist in an outpatient setting who were only included if they were between the ages of 20 and 55. The presenting problem was

restricted to anxiety and depression, but all clients taking psychoactive medication, possessing psychotic or borderline features, and presenting with problems associated with life stress were excluded from the study.

The researchers assessed the level of symptomatology and level of functioning with the Global Severity Index of the Symptom Checklist (SCL-90; Derogatis, Lipman, Rickets, Uhlenhuth, & Covi, 1974) and the Global Assessment of Functioning Scale (Endicott, Spitzer, Fleiss, & Cohen, 1976), respectively. After this, they determined how the levels of symptom distress and functioning were related to alliance ratings within the different therapeutic orientations, utilizing the Working Alliance Inventory (WAI-O, Bordin, 1979). Each therapist chose a single session from the middle course of therapy based on the therapist's perception of a large amount of therapeutic change in the session. In order to meet significance criteria, the primary issue that was dealt with in the session had to reflect a theme that was central to the client's problem. In addition, the therapist had to notice an impact on the client within the session and in subsequent sessions.

Because of this procedure, a concern or potential flaw could be that the researchers measured alliance after the session designated by the therapist as significant. Nevertheless, the results indicated that a negative correlation was obtained between symptomatology and the total alliance scores for each participant. This suggests that clients with higher symptom distress scores received lower alliance scores during a "significant" session.

In summary, both of these studies provide evidence that there is a negative relationship between symptom distress and the formation of therapeutic alliance. However, these were studies based on individual therapy, which does not take into

account the influence that marital distress may have on the formation of therapy alliance. A systemic perspective of alliance has only recently been investigated in the literature (Bourgeois, et al., 1990; Symonds & Horvath, 2004). Therefore, uncertainty remains in regard to whether psychiatric distress influences alliance in couple's therapy because individuals' symptoms are a factor which influences marital distress.

Marital Adjustment and the Formation of Alliance

The few couple's therapy studies that incorporate individual symptoms do not support the relationship between psychiatric distress and therapy alliance. Instead, couple's therapy research almost exclusively focuses on marital adjustment impacting therapy alliance (Isakson, et al., in press; Madmodhousen, 2005). The concentration on marital adjustment was demonstrated in an article by Garfield (2004). Although the article was not empirically based, it integrated research findings within the field and highlighted clinical considerations in regard to alliance in couple's therapy. Overall, the article highlighted marital distress to be the essential ingredient that may damage the establishment of therapy alliance. Although the impact of individual symptoms was addressed, the author stated that the focus should be directed towards how symptomatology impacts relationship adjustment.

Parallel suppositions regarding the importance of concentrating on marital adjustment were presented in an article by Knobloch-Fedders et al. (2004), who conducted a study on variables that possibly predict split alliances in couple's therapy. In short, the study focused on whether split alliances in therapy are correlated with marital distress, individual symptomatology, or the family of origin functioning. The sample consisted of 80 people treated at a large Midwestern outpatient clinic that specializes in

couple and family therapy. Specifically, they researched data from 35 couples who had completed all intake data. They also included ten other participants, but their partners were excluded due to missing data. Treatment was conducted by 29 therapists using a systemic approach to therapy called integrative problem-centered therapy (IPCT; Pinsof, 1995).

The measure used to examine symptomatology administered before the first session was the COMPASS Treatment Assessment System (Howard, Brill, Lueger, O'Mahoney, & Grissom, 1995), a 68 item questionnaire designed to assess patient characteristics and responses to treatment. It has three subscales: current well-being, current symptoms, and current life satisfaction. The current well-being scale assesses distress, health, emotional/psychological adjustment, and current life satisfaction. The current symptoms scale evaluates the frequency of symptoms derived from seven clinical diagnoses (depression, anxiety, obsessive-compulsive, adjustment, bipolar, phobia, and substance abuse disorders). The current life functioning scale investigates six facets of life functioning: self-management, work/school/homemaker, social/leisure, intimacy, family, and health. Each subscale showed good internal consistency and reliability.

In addition, they employed the Marital Satisfaction Inventory-Revised (MSI-R; Snyder, 1997) and the Family Assessment Device (FAD; Epstein, Baldwin, & Bishop, 1983; Miller, Epstein, Bishop, & Keitner, 1985) before the first session, which both measure the interpersonal qualities of marital adjustment. Finally, the researchers measured alliance formation with the Couple Therapeutic Alliance Scale-Revised (CTAS-R; Pinsof, 1994) after the first and eighth session. Ultimately, the study concluded that individual symptoms were not related to alliance formation in conjoint

treatment. They hypothesized that symptomatology may not be the primary focus in conjoint treatment, thus, symptoms may not indicate alliance perspectives.

Further support for these findings was presented by Madmodhousen et al. (2005), whose study explored the impact of marital and psychiatric distress on alliance as well. The participants included a non random sample of 79 French-speaking couples living in Quebec, who completed at least three sessions of therapy. Each couple completed the French version of the Dyadic Adjustment Scale (DAS; Spanier, 1976), a representation of global marital adjustment, as well as the Psychiatric Symptoms Index (PSI; Ilfeld, 1976), which measures the symptoms of psychological distress experienced in the last seven days (depression, anxiety, cognitive disturbance, and hostility). After the third session, the couples completed a French version of the Couples Therapy Alliance Scale (CTAS-r) independently from the other spouse.

From the results, the authors concluded that marital adjustment predicts alliance scores at session three. Conversely, psychiatric symptoms did not appear to be related to the formation of alliance. The discussion inferred that it may be more difficult for a therapist to establish a positive alliance with a couple where one spouse is very dissatisfied with the relationship in comparison to a relationship where a spouse is anxious. Because of this, marital adjustment is a greater priority to take into consideration when researching client factors that impact alliance formation in conjoint treatment.

One of the few studies that contradict this finding was conducted by Bourgeois et al. (1990), which is the only study to deemphasize the impact of marital adjustment on alliance formation. Through this study, researchers investigated the relationship between

marital distress, therapy alliance formation, and treatment outcome. Their goal was to determine whether couple distress is a strong predictor of alliance formation and how the quality of alliance is a predictor of outcome.

A group marital skills training program was initiated in which 63 couples met for nine weekly three hour sessions. The couples were married and cohabitating French speaking residents of Quebec, Canada, with a mean age of 38.5, average of two children, and mean income of \$38,416. Five senior therapists and seven cotherapists who were licensed psychologists implemented the program. Each treatment group contained one therapist, one co-therapist, and four couples (two distressed/two non-distressed). Therapists utilized an intervention called the CSP-Couple Survival Program, a primarily didactic program, which incorporates cognitive, behavioral, and affective dimensions. During the course of treatment, they incorporated modeling, role playing, feedback, and homework to teach marital skills.

Prior to the first session, each couple completed the Dyadic Adjustment Scale (DAS; Spanier, 1976), the Potential Problem Checklist (PPCL; Patterson, 1976), the Marital Happiness Scale (MHS; Azrin, Naster, & Jones, 1973), and the Problem Solving Inventory (PSI, Heppner & Peterson, 1982). The Dyadic Adjustment Scale assesses marital adjustment, the Potential Problem Checklist addresses couple's sources of conflict, the Marital Happiness Scale measures the level of marital happiness, and the Problem Solving Inventory evaluates perceptions of problem solving behaviors and attitudes. Following the third session, the couples completed the Couples Therapy Alliance Scale (CAS; Pinsof & Catherall, 1986) to investigate the level of alliance

formation. In addition, the couples were again administered the four pretherapy measures a week after the end of treatment.

In the end, the relationship of marital distress to alliance quality was evaluated by the clients and the therapist. Conclusions indicated that the level of distress was not a predictor of alliance or a determinant of successful treatment. Therefore, levels of marital distress neither impaired nor facilitated the formation of alliance.

Of concern, however, is the fact that the study consisted of group marital therapy, which utilized a skills training program that was exclusively didactic. In order to be accepted to their treatment program, both members of a couple had to agree and comply with the goals and tasks. In addition, the couples were encouraged to only discuss non-conflictual issues, which lessened the emotional charge during treatment. Therefore, the authors warned that the results could not be generalized to a clinical sample of distressed couples.

Overall, there is limited evidence that marital distress is associated with poorer alliance in couple's therapy, while individual symptoms are less influential. This was demonstrated in both Knobloch-Fedders et al. (2004) and Mamodhousen et al.'s (2005) research, which declared that individual symptom distress does not seem as important as marital distress in alliance formation during conjoint treatment. Thus, a greater understanding of the relationship between the level of symptom distress and marital adjustment is required.

Within the individual literature there is a negative relationship between symptom distress and alliance formation, yet this is not the case in couple's treatment. It is possible that the impact of individual symptomatology on alliance formation is mediated

by the level of marital adjustment when studying couples. Therefore, the couple's literature necessitates a greater understanding of the influence of marital and psychiatric adjustment upon each other as well as their influence on the formation of therapeutic alliance. Couple's therapy also requires consideration of the asymmetrical effect of gender, yet no known studies have explored differences in symptom distress and marital adjustment and the impact on alliance formation in couple's therapy.

Gender and Therapy Alliance

Instead, research has emphasized gender effects on outcomes in couple's therapy, while few demonstrate how gender influences alliance formation (Isakson, et al., in press; Symonds & Horvath, 2004). Many articles stress the male's alliance as a more powerful determinant of successful outcomes in couple's therapy. (Bourgeois et al., 1990; Brown & O'Leary, 2000; Garfield, 2004; Symonds & Horvath, 2004). If this is the case, perhaps a difference in symptom distress between males and females will also impact alliance formation. However, the articles that have explored alliance formation concentrate on split alliance rather than differences in symptom distress at the beginning of couple's treatment (Knobloch-Fedders, et al., 2004; Madmodhousen et al., 2005). Only one study addresses the divergence in male or female symptom distress at the onset of treatment and how this influences outcomes (Isakson, et al., in press). Consequently, no studies have investigated how differences in levels of symptoms impact alliance formation.

The two studies mentioned previously, Knobloch-Fedders et al. (2004) and Mamodhousen et al. (2005) also happen to be studies that highlighted the difference that gender plays in the role of split alliances. Knobloch-Fedders et al. emphasized split alliances that develop from marital adjustment and family of origin distress (2004). The

researchers stated that marital distress most strongly influences the development of split alliance for men. Likewise, Mamodhousen et al. (2005) concluded that conflicting views of alliance were more likely to occur when men experienced distressed relationships. In addition, split alliances existed when women had fewer psychiatric symptoms. This indicates that the perception of alliance in couples may differ if male's experience low marital adjustment and females are better adjusted in psychiatric problems.

This is important because the results of Madmodhousen et al. (2005) imply that there is a difference in alliance formation when couples present with different levels of symptom distress. Only one study to date has examined the difference in males and female's symptom distress at intake (Isakson, et al., in press), but the purpose of the study was to investigate the impact of differences in symptomatology on therapy outcomes. The authors established that there is a difference in outcomes based upon males and female's level of symptoms at intake. Of interest to this study, the article stated that if the male was in the clinical range for level of symptom distress and female was not, the male showed significant improvement. However, if the female was in the clinical range and the male was not, the female did not show significant improvement unless treated individually. Therefore, male's symptoms appear to be more influential in couple's therapy outcomes. However, an oversight of the study was the exclusion of marital distress as a predictor in therapy outcome. Therefore, the researchers could not determine whether marital adjustment was related to the difference in male's and female's outcomes.

This research highlights the potential importance of gender effects upon therapy alliance and therapy outcomes. The authors inferred that male's symptoms and alliance play a greater role in therapy outcomes. However, it is unclear whether this effect converts to alliance formation when there is a difference in symptom distress at intake. No research has explored the impact of differences in symptom distress upon alliance formation in conjoint treatment. Additionally, no studies have accounted for the impact of symptom distress upon marital adjustment.

Introduction of the Research Questions

Currently, research has demonstrated that high symptom distress negatively influences alliance formation within individual therapy. However, couple's therapy research highlights marital adjustment as the major predictor of alliance formation rather than individual symptoms. Finally, it appears that there is a gender difference in male and female alliance scores and outcomes.

Of importance to this study, it has been purported that comprehensive measures of alliance are more predictive of outcome in therapy than measures of specific therapist behaviors, such as empathy and acceptance (Pinsof & Catherall, 1986). In addition, the client's perception is thought to be most predictive of success beyond therapist or observer perspectives (Coady, 1993; Dunkle & Friedlander, 1990; Eckert, et al., 1988; Horvath & Luborsky, 1993). Finally, several studies stress the importance of establishing an alliance early in the course of treatment. Some authors state that alliance is established in the first few sessions with little change thereafter (Knobloch-Fedders, et al., 2004; Mamodhousen, et al., 2005; Raue et al., 1993; Salvio et al., 1992; Symonds & Horvath, 2004)

Therefore, the objective of this study is to explore whether marital adjustment mediates the relationship between pretreatment symptomatology and alliance formation in couple's treatment. Based on the previously-introduced hypothesized models, Figures I, II, and III, the following research questions are outlined as follows:

- Question 1:** Is male and female symptom distress associated with male and/or female therapeutic alliance formation? (Models 1 & 2)
- Question 2:** Is the difference in symptom distress levels related to male and/or female therapeutic alliance formation? (Models 1 & 2)
- Question 3:** Is male and female symptom distress associated with male and/or female marital adjustment? (Models 1 & 2)
- Question 4:** Is the difference in symptom distress levels related to male and female marital adjustment? (Models 1 & 2)
- Question 5:** Is male and female marital adjustment associated with male and/or female therapeutic alliance formation? (Models 1 & 2)
- Question 6:** Is male and/or female symptom distress associated with the difference in therapeutic alliance formation? (Model 3)
- Question 7:** Is the difference in male and female symptom distress associated with the difference in therapeutic alliance formation? (Model 3)
- Question 8:** Is male and/or female symptom distress associated with the difference in marital adjustment? (Model 3)
- Question 9:** Is the difference in male and female symptom distress levels related to the difference in marital adjustment? (Model 3)
- Question 10:** Is the *difference* in male and female marital adjustments related to the *difference* in therapeutic alliance formation? (Model 3)

METHODS

To answer these research questions, a quasi-experimental, time-series research design was conducted at the Auburn University Marriage and Family Therapy Center. The Marriage and Family Therapy Center is the on-campus training clinic for the Commission on Accreditation for Marriage and Family Therapy Education accredited master's program and provides services to East Alabama residents. The center is staffed by student therapists in training who are supervised by the center's faculty, who are licensed doctors of Marriage and Family Therapy.

Quantitative data, gathered from the Outcome Questionnaire (OQ-45.2; Lambert et al., 1996), the Revised Dyadic Adjustment Scale (RDAS; Spanier, 1976), and the Couple Therapy Alliance Scale (CTAS; Pinsof & Catherall, 1986) was collected from files of individuals and couples in committed relationships who received therapy services at the Marriage and Family Therapy Center between March 1, 2002 and April 30, 2006.

The information acquired was from self-report questionnaires that were administered and compiled by therapist interns for clinical, administrative, and research purposes. Before the first session, clients received and completed an intake packet which contained both the symptom distress instrument (OQ-45.2) and the marital adjustment instrument (RDAS). Between these therapy sessions, the intern therapists required the couples to complete one questionnaire before each session. This questionnaire assessed client's perspectives of progress through therapy, but it was not used for the purposes of

this study. After completing four sessions, clients were administered the instruments that they filled out before the first session, with the addition of the Couple Therapy Alliance Scale (Pinsof & Catherall, 1986).

The data collected from these batteries were coded according to the following criteria: all paperwork must be filled out completely and the correct information regarding client code, session number, and therapist identification must be included on the forms. The data was collected by first and second year graduate therapist interns and inserted into SPSS by undergraduate and graduate research assistants. After the data was entered, graduate research assistants ran frequencies on the data to ensure that all completed data had been entered accurately.

In short, this study strictly used the data from the symptom distress and marital adjustment measures which were administered before the first session as well as the couple alliance scale following the fourth session of therapy. Further discussion of the purpose, descriptions, and reliabilities of the instruments can be found in Appendixes A, B and C.

RESULTS

Participants

During the time period of March 1, 2002 to April 30, 2006, there were 214 cases of men and women in committed relationships who initiated therapy at the Auburn University Marriage and Family Therapy Center. Out of these cases, 106 couples in committed relationships completed at least four sessions of therapy. Therefore, the total participants included 212 men and women in committed relationships who attended therapy at the Auburn University Marriage and Family Therapy Center.

In order to collect all data from the participants, each must have completed at least four therapy sessions as well as the intake and fourth session's paperwork. Sixty-five males and 70 females represented this category. The retention rates for those who completed fourth session paperwork were 61% for males and 66% for females. An attrition analysis was conducted to investigate whether there was a significant difference between participants who remained in the study versus those who terminated and it was discovered that no attrition bias was found. Further discussion of the attrition analysis is included in Appendix D.

Demographically, the participants included in the study ranged from 19 to 59 years old. There were 78 White males, 82 White females, 14 African American males, 15 African American females, 3 Hispanic/non-White males and females, and 2 Asian males and females. The clients' annual household incomes ranged from less than

\$10,000 to above \$40,000 annually. Clients' educational levels ranged from completion of grade school to the completion of a doctorate degree. Sample sizes and percentiles of each category are included in Table 1. In addition, the percentages of males and females who chose not to provide demographic data are also included.

Table 1. Demographics of males and females in committed relationships

Demographics (% chose not to provide)	Males		Females	
	N	Percent	N	Percent
Age Group (2%)				
18-29	48	46.2%	56	54.4%
30-39	33	31.7%	36	35.0%
40-49	17	16.3%	7	6.8%
50 or above	6	5.8%	4	3.9%
Racial Group (7%)				
White	78	78.8%	82	81.2%
African American	16	16.1%	15	14.9%
Hispanic/Non-White	2	2.1%	1	1.0%
Asian	2	2.2%	2	2.0%
Income Category (10%)				
Less than \$10,000	17	17.5%	20	21.5%
\$10,001 to \$20,000	21	21.6%	16	17.2%
\$20,001 to \$30,000	20	20.6%	17	18.3%
\$30,001 to \$40,000	17	17.5%	17	18.3%
Over \$40,000	22	22.7%	23	24.7%
Client Education (5%)				
GED/High School	37	36.6%	40	39.6%
Vocational/Technical	20	19.8%	18	17.8%
Bachelor's Degree	26	25.7%	25	24.8%
Master's Degree	8	7.9%	12	11.9%
Other	10	9.9%	6	5.9%

Distributions of Data

The distributions of all variables for males and females were examined to verify that each one exhibited normal distributions. When a distribution is normal, the values of skewness and kurtosis should be zero (Field, 2005). Originally, the male marital adjustment scores were mildly skewed. Upon inspection of the data, three of the male questionnaires were improperly completed. Therefore, these cases were deleted from the data set.

Consequently, all measures utilized for this study were normally distributed as confirmed by the Kolmogorov-Smirnov and Shapiro-Wilk statistics. The means, standard deviations, skewness coefficients, kurtosis coefficients and Kolmogorov-Smirnov/Shapiro-Wilk statistics for each measure are reported for both males and females in Table 2 and Table 3, respectively.

Table 2. Statistical analysis of distributions for males on measures of symptom distress, marital adjustment, and therapy alliance scores (N= 58).

	Male Symptom Distress	Male Marital Adjustment	Male Therapy Alliance
Mean	57.11	37.53	219.57
Standard Deviation	19.73	7.71	37.69
Skewness	.29	.002	-.29
Kurtosis	-.02	-.44	-.47
Shapiro-Wilk	.99	.99	.97
Kolmogorov-Smirnov	.08	.06	.08

* $p < .05$

Table 3. Statistical analysis of distributions for females on measures of symptom distress, marital adjustment, and therapy alliance scores (N= 67).

	Female Symptom Distress	Female Marital Adjustment	Female Therapy Alliance
Mean	66.55	33.86	222.01
Standard Deviation	23.99	9.48	33.26
Skewness	.18	-.01	-.02
Kurtosis	-.54	-.44	-.70
Shapiro-Wilk	.99	.99	.97
Kolmogorov-Smirnov	.07	.06	.09

* $p < .05$

Plan of Analysis

A mediator is an intervening variable which accounts for the relationship between the predictor and the outcome. For this study, in order for marital adjustment to be considered a mediator, the variable must account for the relationship between symptom distress and therapeutic alliance formation. In testing the mediator hypothesis, the recommendations of Baron and Kenny (1986) will be followed. Mediation is determined by a series of three analyses:

- a) the independent variables (*male symptom distress; female symptom distress; difference in symptom distress*) must be correlated with the dependent variables (*therapeutic alliance formation; difference in therapy alliance*)
- b) the independent variables (*male symptom distress; female symptom distress; difference in symptom distress*) must be correlated with the hypothesized

mediators (*male marital adjustment; female marital adjustment; difference in marital adjustment*)

- c) the hypothesized mediators (*male marital adjustment; female marital adjustment; difference in marital adjustment*) must be correlated with the dependent variables (*therapeutic alliance formation; difference in therapy alliance*).

If the criteria of all three analyses are satisfied, further analysis can test whether the effect of the independent variable is significantly reduced by controlling for the hypothesized mediator.

Several researchers have supported the importance of utilizing more powerful strategies for testing mediation than Baron and Kenny's (1986) criteria alone. One is accomplished through the Sobel test (Preacher & Hayes, 2004). The Sobel test indicates whether the indirect effect is statistically significant in the direction predicted by the mediation hypothesis. It directly addresses whether the total effect of the independent variable on the dependent variable is reduced by the addition of the mediator. This study will also use the Sobel test to calculate the indirect effect and test it for significance.

In summary, this study will explore the hypothesized mediation of male/female marital adjustment in the relationship between male/female symptom distress, the difference in symptom distress, and therapeutic alliance formation in couple's therapy. This study will also investigate the *difference* in male/female marital adjustment as a mediating variable between male/female symptom distress, the difference in symptom distress, and the *difference* in therapeutic alliance formation. Male and female symptom

distress, male and female difference in symptom distress (both measured by OQ-45.2), male and female marital adjustment (RDAS), and therapy alliance (CTAS) will be used to assess these relationships. Initially, correlations will be obtained to measure whether there is an interaction possible to test for mediation. Then a series of regression analyses will be conducted to control for possible mediating variables. If the effect of the independent variable is reduced when controlling for the hypothesized mediator, the Sobel test will be utilized to calculate the significance of mediation effects.

The results of this study will be presented in the following order. First, the significant correlations for the male/female symptom distress, difference in symptom distress levels, male/female marital adjustment, and male/female therapeutic alliance formation will be presented. Additionally, the significant correlations between male/female symptom distress, *difference* in symptom distress, *difference* in male/female marital adjustment, and *difference* in therapeutic alliance formation will be elucidated. During the process of understanding these relationships, the results of the research questions will be outlined (See Table 4). From these correlations, additional models, beyond the original three hypothesized models, will be presented and described. And, finally, the significance of these relationships will be expounded upon through multiple regressions used to determine the fit in all of the hypothesized models.

Correlation Analyses

In order for the proposed models to be investigated through mediation, correlations between requisite variables were necessary, as explained by Baron and Kenny (1986). In response to the correlation analysis, the following relationships were

illuminated, as indicated through the research questions. Table 4 includes all the significant correlation coefficients and p-values. Also note that Appendix E contains a correlation table of all significant and non-significant relationships between the variables included in this study.

Table 4. Statistically significant pearson correlations and p-values, as directed from the research questions in this study.

Research Question	Significant Correlations from the Specified Research Question	Correlation Coefficient	<i>p</i>-Value
Question 1	Male symptom distress with male therapeutic alliance formation	-.40	<0.01
Question 3	Male symptom distress with male marital adjustment	-.45	<0.01
Question 3	Male symptom distress with female marital adjustment	-.43	<0.01
Question 3	Female symptom distress with male marital adjustment	-.40	<0.01
Question 3	Female symptom distress with female marital adjustment	-.39	<0.01
Question 5	Male marital adjustment with male therapeutic alliance formation	.34	<0.01
Question 5	Female marital adjustment with male therapeutic alliance formation	.40	<0.01
Question 6	Male symptom distress with the difference in therapeutic alliance formation	-.32	<0.05
Question 7	Difference in male and female symptom distress with the difference in therapeutic alliance formation	-.26	<0.05
Question 10	Male marital adjustments related to the difference in therapeutic alliance formation	.36	<0.01
Question 10	Female marital adjustments related to the difference in therapeutic alliance formation	.30	<0.05

As shown in Table 4, statistically significant correlations were discovered in research questions 1, 3, 5, 6, 7, and 10. As discussed previously, these 5 research

questions referred to all three hypothesized models in a fairly even distribution.

Therefore, multiple regression analysis is both justifiable and would be beneficial in providing further insight on the significance of these models. This analysis will be discussed in the next section.

Additional relationships that warrant further investigation are as indicated by the correlations from male symptom distress; male marital adjustment; and female marital adjustment, with male therapeutic alliance formation and the difference in therapeutic alliance formation (Questions 1, 3, 5, 6, and 10). These relationships can be represented graphically in models that are shown below as Figures 4, 5, and 6. In addition to conducting multiple regression analyses on the previous models, these other three models will be tested for statistical significance.

However, it is important to note that the significant correlations fall between +/- .25 and +/- .40. From a strictly interpretive stance, these correlations are weak to moderate. The lack of statistical power will weaken the impact of any multiple regression results that can be found. Because having weak correlations is common in social science literature, this means that no definitively causal relationships can be inferred from the results of this study.

Multiple Regression Analyses

From the correlation analyses, several variables met Baron and Kenny's (1986) criteria for mediation. These variables were:

- a) male marital adjustment mediating the relationship between male symptom distress and male therapeutic alliance formation;

- b) female marital adjustment mediating the relationship between male symptom distress and male therapeutic alliance formation;
- c) male marital adjustment mediating the relationship between male symptom distress and difference in therapeutic alliance formation
- d) female marital adjustment mediating the relationship between male symptom distress and difference in therapeutic alliance formation

Therefore, only Model 1 satisfied the conditions for mediation, and Models 2 and 3 did not. This made it possible for Model 1, as shown in Figure I, to be utilized in the multiple regression analysis.

Additional Analyses

Additionally, three other mediation relationships were investigated after evaluating the results of these correlations. Although these models were not originally hypothesized, each model fit with the previous theoretical model of marital adjustment as a mediating factor between symptom distress and alliance formation. These models, (Model 4, 5, and 6) are shown below graphically in Figures IV, V and VI.

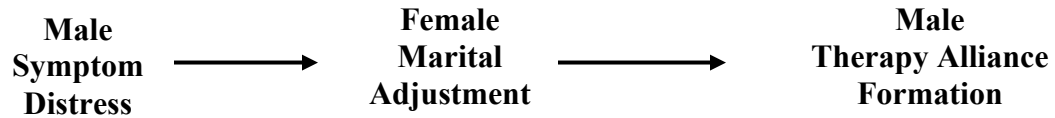


Figure IV. Hypothesized Model 4: Female Marital Adjustment as a Mediating Factor between Male Symptom Distress and Male Therapeutic Alliance Formation

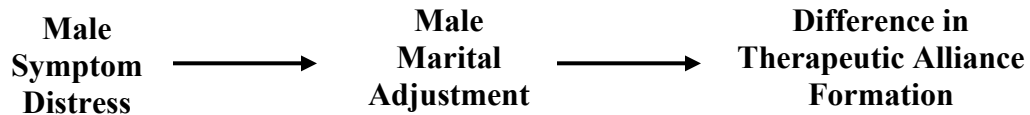


Figure V. Hypothesized Model 5: Male Marital Adjustment as a Mediating Factor between Male Symptom Distress and the Difference in Therapeutic Alliance Formation

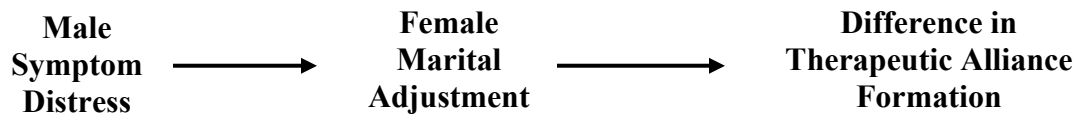


Figure VI. Hypothesized Model 6: Female Marital Adjustment as a Mediating Factor between Male Symptom Distress and Difference in Therapeutic Alliance Formation

The three models shown above as Figures IV, V and VI and the model shown as Figure I, were used in the multiple regression analyses.

The original correlation coefficients, as well as the modified correlation coefficients that resulted from the regression of both independent variables on the dependent variable within each model, are shown in Table 5. From this regression table, the predictors are highly correlated, indicating a possibility of collinearity between the independent variables.

Table 5. Original standardized correlation coefficients, t-scores, and modified correlation coefficients from four multiple regression models in which mediating factors were predicted by selected control variables

MEDIATION MODEL	Significant Correlations from the Specified Hypothesized Model	Original r	t	Modified r
Model 1	a) Male symptom distress with male therapeutic alliance formation	-.41***	-3.36	.26
	b) Male marital adjustment with male therapeutic alliance formation	.40**	3.25	-.29*
	c) Male symptom distress with female marital adjustment	-.52***	-5.83	
Model 4	a) Male symptom distress with male therapeutic alliance formation	-.41***	-3.36	-.30*
	b) Female marital adjustment with male therapeutic alliance formation	.38**	3.09	.23
	c) Male symptom distress with female marital adjustment	-.44***	-4.66	
Model 5	a) Male symptom distress with the difference in therapeutic alliance formation	-.32*	-2.46	-.19
	b) Male marital adjustment with the difference in therapeutic alliance formation	.38**	-5.83	.28
	c) Male symptom distress with male marital adjustment	-.52***	2.10	
Model 6	a) Male symptom distress with the difference in therapeutic alliance formation	-.32*	-2.46	.26
	b) Female marital adjustment with the difference in therapeutic alliance formation	.26*	1.97	.11
	c) Male symptom distress with female marital adjustment	-.44***	-4.66	

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

The tolerance statistics for Models 1, 4, 5, and 6 (Tolerance = .74, .78, .70, and .73, respectively) indicated that there is enough variability in each predictor in the regression model that can not be explained by the other predictors. This indicated that the independent variables are not collinear. However, the low to moderate correlation scores presented previously, demonstrated the possibility that the four models do not capture all of the variability in the outcome. Nonetheless, further results from the regression analyses of the four models are described in detail below.

Results from Multiple Regression Analysis on Model 1 and Model 4: Male Marital Adjustment and Female Marital Adjustment as a Mediating Factor between Male Symptom Distress and Male Therapeutic Alliance Formation. For Model 1, the multiple regression analysis indicated that the mediation model was a somewhat poor fit because the overall R^2 value was 0.23, the adjusted R^2 was 0.30 and the standard error of the estimate was 33.77. Male symptom distress and male marital adjustment significantly predicted 17% and 16% of variance in male therapeutic alliance formation. Male symptom distress and male marital adjustment accounted for 27% of the variance in the outcome. Overall, the relationship of the model was significant ($F(2, 53) = 7.69, p < .001$). Therefore, the regression equation for Model 1 is:

$$\text{MTAF} = 204.20 - 0.57 \text{MSD} + 1.26 \text{MMA}$$

where MTAF is male therapy alliance formation, MSD represents male symptom distress, and MMA is male marital adjustment.

Therefore, with all other variables held constant, male symptom distress scores were negatively related to therapy alliance formation. On the other hand, male marital

adjustment was positively related to male therapy alliance formation. In short, for a one unit difference in male therapy alliance formation, there is a negative .57 unit difference in symptom distress and a 1.26 unit difference in marital adjustment scores, on average.

For Model 4, the regression results indicated that this was also a significant mediation model ($F(2, 54) = 7.23, p < .01$). The overall R^2 value was 0.21, the adjusted R^2 was 0.18 and the standard error of the estimate was 33.79. Male symptom distress and female marital adjustment significantly predicted 17% and 15% of variance in male therapeutic alliance formation. Male symptom distress and female marital adjustment accounted for 19% of the variance in the outcome. Therefore, the regression equation for Model 4 is:

$$\text{MTAF} = 221.04 - .60 \text{MSD} + .95 \text{FMA}$$

where MTAF is male therapy alliance formation, MSD represents male symptom distress and FMA is female marital adjustment.

With all other variables held constant, male symptom distress scores were negatively related to male therapy alliance formation. On the other hand, female marital adjustment was positively related to male therapy alliance formation. Consequently, for a one unit difference in male therapy alliance formation, there is a negative .60 unit difference in symptom distress and a positive .95 unit difference in marital adjustment scores, on average.

In summary, as indicated in Table 5, the relationships between male symptom distress remained significant when controlling for male and female marital adjustment, which became non-significant. This infers that male symptom distress may mediate the

relationships between male and female marital adjustment and male therapy alliance formation.

Results from Multiple Regression Analysis on Model 5 and Model 6: Male Marital Adjustment and Female Marital Adjustment as a Mediating Factor between Male Symptom Distress and the Difference in Therapeutic Alliance Formation. Similar to Models 1 and 4, the regression analysis indicated that Model 5 was a significant mediation model ($F(2, 52) = 5.35, p < .01$). The overall R^2 value was 0.17, the adjusted R^2 was 0.14 and the standard error of the estimate was 33.39. Male symptom distress and male marital adjustment significantly predicted 10% and 27% of variance in the difference in therapeutic alliance formation. Male marital adjustment with the difference in therapeutic alliance formation accounted for 15% of the variance in the outcome. Therefore, the regression equation for Model 5 is:

$$DTAF = -34.37 - .36 MSD + 1.31 MMA$$

where DTAF is the difference in therapeutic alliance formation, MSD represents male symptom distress and MMA is male marital adjustment.

With all other variables held constant, male symptom distress scores were negatively related to the *difference* in therapy alliance formation. On the other hand, male marital adjustment was positively related to the *difference* in therapy alliance formation. Consequently, for one unit in the *difference* in therapy alliance formation, there is a negative .36 unit difference in symptom distress and a positive 1.31 unit difference in marital adjustment scores, on average.

Lastly, Model 6 was also a significant model ($F(2, 53) = 3.24, p < .05$), although the strength of the significance was the weakest thus far. The overall R^2 value was 0.11, the adjusted R^2 was 0.08 and the standard error of the estimate was 33.07. Male symptom distress and male marital adjustment significantly predicted 10% and 7% of the variance in male therapeutic alliance formation. Male symptom distress and female marital adjustment accounted for 19% of the variance in the outcome. Therefore, the regression equation for Model 6 is:

$$DTAF = 8.55 - .50 MSD + .44 FMA$$

where DTAF is the difference in male therapy alliance formation, MSD represents male symptom distress, and FMA is female marital adjustment.

Controlling for all variables in the model, male symptom distress scores were negatively related to the *difference* in therapy alliance formation. In contrast, female marital adjustment was positively related to the *difference* in therapy alliance formation. Thus, for one unit in the difference in therapy alliance formation, there is a negative .50 unit difference in male symptom distress scores and a positive 1.31 unit difference in female marital adjustment scores, on average.

Both Model 5 and 6 originally met the conditions for mediation, however, the relationships between male symptom distress and female marital adjustment became non-significant in the mediation hypothesis when regressed simultaneously. Consequently, it is possible that neither male symptom distress nor male/female marital adjustment mediates the relationship between male symptom distress and the difference in therapy alliance scores. Nevertheless, for future studies, it is important to note that when the

sample size was *doubled*, both Models 5 and 6 fulfilled the criteria for mediation. In model five, male symptom distress accounted for a significant amount of the variance in the difference in therapeutic alliance formation, controlling for female marital adjustment scores. Interestingly, the opposite results were found for Model 6. Male marital adjustment explained a significant amount of the variance in the difference in alliance formation, controlling for male symptom distress scores.

Test of the Indirect Effect

Table 6. Sobel test for the significance of whether the total effect of the independent variable on the dependent variable is significantly reduced upon the addition of the mediator in Model 1, Model 4, Model 5, and Model 6.

MEDIATION MODEL	Test for Mediation (z-score)	p-value
Model 1: Male Marital Adjustment as a Mediating Factor between Male Symptom Distress and Male Therapeutic Alliance Formation	2.84	<.01
Model 4: Female Marital Adjustment as a Mediating Factor between Male Symptom Distress and Male Therapeutic Alliance Formation	2.57	<.01

As designated previously, the Sobel test was conducted to determine whether a significant reduction occurred with the inclusion of the mediating variable in the models which satisfied the conditions of mediation (Preacher & Hayes, 2003). Originally, the correlations obtained between the variables presented the possibility that Models 1, 4, 5, and 6 were representative of mediation. However, in Models 5 and 6, the significance of both variables diminished when they were simultaneously regressed on the dependent

variable, difference in therapeutic alliance formation. Thus, these models were not able to be assessed for mediation effects, which explains why they are not included in Table 6.

For the purpose of this study, the Sobel z values must be sufficiently large in order for significant mediation to be identified (absolute value: 1.96, $p < .05$). In Table 6, both Models 1 and 4 demonstrated that the association between the independent and dependent variable was significantly reduced, indicating the presence of a mediation relationship ($p < .01$).

DISCUSSION

This study explored the relationship between individual client contributions to the formation of therapeutic alliance in couple's therapy, such as symptom distress and marital adjustment. Based on findings from existing literature in the field, it was hypothesized that marital adjustment is a mediating variable in the relationship between male and female symptom distress at therapy intake and therapeutic alliance formation after the fourth therapy session. This study also investigated the possible mediation of the *difference* in marital adjustment scores between male and female symptom distress levels at intake and the *difference* in therapeutic alliance formation. Furthermore, the difference in levels of symptom distress between males and females at intake were examined in relation to these proposed mediation models.

To effectively understand the findings of the study, this chapter will provide a summary of the significant results. Following the summary, the implications of the findings for clinical and research benefits will be presented in relation to existing literature. The final section will highlight the limitations of the study and future research possibilities.

Summary of Results

Assessing mediation relationships is a complex task, especially because a demonstration of full mediation is relatively rare (Preacher & Hayes, 2004). However,

this study investigated two hypothesized models which satisfied the criteria for mediation relationships (Baron & Kenny, 1986). Therefore, the findings illuminated by this study clarify the impact of individual client contributions within these two models, which influenced the development of a positive therapeutic alliance in couple's therapy.

Model 1. The results from Model 1 indicated that there was a negative relationship between male symptom distress at intake and male therapy alliance formation following the fourth session. Conversely, it was possible that male marital adjustment at intake was positively associated with male therapy alliance scores. This suggested that males who suffered from high levels of anxiety, depression, and marital distress in their lives, also struggled to develop a positive relationship with their therapist at the beginning of treatment.

Nevertheless, when controlling for male symptom distress levels at intake, the relationship between male marital adjustment and therapy alliance formation decreased to a non-significant level. These findings implied that marital distress did not impact the relationship with the therapist when a male had high levels of symptom distress. Consequently, male's individual life functioning may be a more important focus than relationship distress when couples come to therapy.

Model 4. Interestingly, similar outcomes were discovered upon exploration of the hypothesized mediation for Model 4. The results suggested that there was a significant negative relationship between male symptom distress at intake and male therapy alliance formation following the fourth session. In addition, female marital adjustment at intake

was positively associated with male therapy alliance scores. Again, this indicated that males who suffered from high levels of anxiety and depression in their lives, also struggled to develop a positive relationship with their therapist. However, if his female partner indicated high levels of relationship distress at the beginning of conjoint treatment, then his ratings of therapy alliance were possibly lower.

Originally, female marital adjustment was the predicted mediator in the relationship between male symptom distress and male therapy alliance formation. However, there were parallel findings as in Model 1 when male marital adjustment became non-significant when controlling for male symptom distress. Yet, in this case, female marital adjustment became non-significant when male symptom distress was simultaneously regressed upon therapy alliance formation. This again addressed the possibility that male's level of symptoms at intake may be a crucial vehicle to the formation of male's therapy alliance formation.

Implications and Benefits of Research Findings

In conclusion, these findings provided intriguing evidence and new possibilities of the impact that male symptom distress had upon therapeutic alliance formation in couple's therapy. Of importance, this study had not predicted male symptom distress scores to be a mediating factor in the relationship between male marital distress scores and male therapeutic alliance formation. Instead, it was hypothesized that male marital adjustment mediated the relationship between symptom distress levels at intake and the formation of therapeutic alliance. In fact, virtually all published literature on couple's therapy which investigated the relationship between symptom distress, marital

adjustment, and alliance formation stated that marital adjustment was predictive of the establishment of the relationship with the therapist rather than individual's symptom distress (Knobloch & Fedders, et al., 2004; Madmohoussen, et al., 2005). Therefore, this study contradicted previous research on conjoint treatment which declared that individual's symptom distress is not important in the formation of therapy alliance.

Based on these particular findings, it may be predicted that male's symptom distress levels play a large role in the formation of therapeutic alliance, rather than females. This coincides with current literature which points to the significance of male predictors in therapy alliance and outcomes during the course of conjoint treatment (Brown & O'Leary 2000; Madmohoussen, 2005).

However, it does not explain what impact females may have had through the process of therapy. Because there were no significant relationships between female symptoms, relationship distress, and alliance formation, it is less clear what impacts the female's relationship with the therapist. Perhaps there are other variables in which females are influential. On the other hand, it is possible that females are more lenient in their ratings of therapy alliance than males, regardless of their levels of symptom distress and marital adjustment. Despite these unknown factors within the findings, it is clear that this is an underdeveloped area in social science literature.

In general, the possible benefits of this information include a greater understanding of how specific client contributions impact alliance formation. From the evidence that male symptom distress impacted male alliance formation, clinicians may gain knowledge about how to help individual problems in the context of important

relationships. Also, it may facilitate renewed exploration in client features of alliance formation, such as symptom distress, rather than establishing that marital distress is more important in conjoint treatment.

Limitations

Consequently, an invitation to investigate symptom distress in the process of alliance formation would be improved by taking into consideration the limitations within this study. First of all, because this study had no control group this created sampling bias. If the study had a control group, and the sample was large enough, this bias could have been controlled and the effect could have been measured more accurately. Since it was not a random sample, there was no way of actually measuring whether the treatment was the cause of alliance formation or if the difference was a result of the participants themselves. This is particularly important because this study only utilized data from client's self-report questionnaires. In addition, the independent variables were only measured at the first session and therapy alliance was measured after the fourth, which could possibly impact a difference in findings if they were measured at different times.

This study also had a small sample size, which detracts from the generalizability of these findings to the entire population of people who receive therapy. This was especially crucial as the sobel test of the indirect effects works most effectively for large sample sizes (Preacher & Leonardelli, 2004). The sobel test can not definitively indicate whether full or partial mediation occurs. Because it only tests the significance level, other measurement methods would be recommended. For example, structural equation modeling has been suggested because it provides a means for controlling measurement

error and offers alternative ways to investigate mediation effects (Preacher & Hayes, 2004).

Finally, neither clients nor therapists' behaviors are capable of being fully confined to the scores of an instrument. This is particularly the case when one works with a therapy population, where individuals choose to drop out of treatment, not complete paperwork, and therapist's neglect to follow procedures. In addition, this study included no control for the possible confounding influence of therapist features. Therefore, further analysis and replication is necessary to facilitate the generalizability of these findings beyond East Alabama residents who received treatment at the Auburn University Marriage and Family Therapy Center.

Future Research

Many of this study's limitations are common within the social science literature. Nevertheless, the study's findings suggest that there is more to be understood about symptom distress and marital adjustment than was previously conveyed through other studies. At this point, no conclusive evidence has been established in the field regarding this topic. Therefore, there is still little understanding of the interaction between specific client contributions and their impact on the formation of alliance in couple's therapy.

In particular, the interface between males and females in committed relationships is especially obscure in how they influence the relationship with the therapist. The *difference* between male and female symptom distress or marital adjustment in couple's therapy does not seem to explain how the individual impacts their partner in the therapeutic process.

From previous findings, it appears that females' relationships with the therapist are unimpeded by pre-therapy levels of symptom distress and marital adjustment. However, the reasons for this are unknown. Consequently, there is hope in furthering the understanding of differences such as these between males and females in conjoint treatment. Because the research in this area has been limited, this study initiated more depth in the understanding of client contributions to alliance formation. This information may be helpful for researchers and clinicians to advance ways to assist individual's problems in the context of their relationships.

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APPENDIX A Symptom Distress Measure

The Outcome Questionnaire-45.2 (OQ-45.2; Lambert et al., 1996) is an outcome assessment scale that strives to measure client's subjective experiences and the way they function in the world. It was developed for the purpose of tracking and assessing client outcomes, such as anxiety and depression (Isakson, et al., in press; Vermeersch et al., 2004). There are research findings which suggest that there is not a significant difference between gender, race, or age with the total score on the OQ-45.2. Therefore, the instrument may be a versatile measure of client's progress in therapy to be administered throughout the course of treatment and at termination (OQ-45.2; Lambert et al., 1996; Vermeersch et al., 2004).

Patient progress is measured based on the idea that there are three important dimensions of a patient's life (Lambert et al., 1996). This conceptualization is the foundation of three subscales for the OQ-45.2 questionnaire. These subscales include, symptom distress (intrapsychic symptoms, how client feels inside), interpersonal relationships (how they get along with friends, family, etc.), and social role performance (distress level in work/school). Each facet of functioning is included in the instrument's 45 item self-report questionnaire, which utilizes a 5 point Likert-type scale (0= never, 1= rarely, 2= sometimes, 3= frequently, 4= almost always). Scores on the measure range from 0 to 180 with higher scores indicating higher distress (Isakson, et al., in press).

The subscales and full scale have good test-retest reliability with coefficients ranging from $\alpha = .71$ to $.93$. The researchers provide evidence of the concurrent validity of the sub-scales as well (correlations with other measures range from $.43$ to $.88$) as the full scale (correlations with other measures range from $.53$ to $.87$). All were significantly related to criterion measures beyond the $.01$ level of confidence (Lambert et al., 1996). The alpha for the completers of the OQ 45.2 for this study was $\alpha = .94$ for males and $\alpha = .95$ for females, respectively. Following is a copy of the Outcome Questionnaire (Lambert, et al., 1996).

Outcome Questionnaire (OQ®-45.2)

Instructions: Looking back over the last week, including today, help us understand how you have been feeling. Read each item carefully and mark the box under the category which best describes your current situation. For this questionnaire, work is defined as employment, school, housework, volunteer work, and so forth.

- | | Never | Rarely | Sometimes | Frequently | Almost Always |
|---|-------|--------|-----------|------------|---------------|
| 1. I get along well with others | □ | □ | □ | □ | □ |
| 2. I tire quickly | | | | | |
| 3. I feel no interest in things | | | | | |
| 4. I feel stressed at work/school | | | | | |
| 5. I blame myself for things | | | | | |
| 6. I feel irritated | | | | | |
| 7. I feel unhappy in my marriage/significant relationship | | | | | |
| 8. I have thoughts of ending my life | | | | | |
| 9. I feel weak. | | | | | |
| 10. I feel fearful | | | | | |
| 11. After heavy drinking, I need a drink the next morning to get going. (If you do not drink, mark "never") | | | | | |
| 12. I find my work/school satisfying | | | | | |
| 13. I am a happy person. | | | | | |
| 14. I work/study too much | | | | | |
| 15. I feel worthless. | | | | | |
| 16. I am concerned about family troubles | | | | | |
| 17. I have an unfulfilling sex life. | | | | | |
| 18. I feel lonely | | | | | |

19. I have frequent arguments.
20. I feel loved and wanted
21. I enjoy my spare time
22. I have difficulty concentrating
23. I feel hopeless about the future
24. I like myself
25. Disturbing thoughts come into my mind that I cannot get rid of
26. I feel annoyed by people who criticize my drinking (or drug use) (If not applicable, mark "never")
27. I have an upset stomach
28. I am not working/studying as well as I used to
29. My heart pounds too much
30. I have trouble getting along with friends and close acquaintances
31. I am satisfied with my life
32. I have trouble at work/school because of drinking or drug use (If not applicable, mark "never")
33. I feel that something bad is going to happen
34. I have sore muscles
35. I feel afraid of open spaces, of driving, or being on buses, subways, and so forth.
36. I feel nervous
37. I feel my love relationships are full and complete
38. I feel that I am not doing well at work/school
39. I have too many disagreements at work/school
40. I feel something is wrong with my mind
41. I have trouble falling asleep or staying asleep
42. I feel blue
43. I am satisfied with my relationships with others.
44. I feel angry enough at work/school to do something I might regret
45. I have headaches

APPENDIX B Marital Adjustment Measure

The Revised Dyadic Adjustment Scale (RDAS) is an updated version of the Dyadic Adjustment Scale developed by Spanier in 1976. The RDAS is a 14-item questionnaire that measures marital adjustment. It consists of three sub-scales: consensus (1-6), satisfaction (7-10), and cohesion (11-14). Scores on the consensus scale can range from 0-30, scores on the satisfaction scale range from 0-20, and scores on the cohesion scale can range from 0-19. Higher scores from the scales on this instrument indicate more consensus, greater satisfaction, and better cohesion in an individual's primary romantic relationship. This results in a total score that may demonstrate better marital adjustment.

Construct validity and criterion validity has been established for the updated RDAS. The reliability coefficients demonstrate that the RDAS has internal consistency and split-half reliability. The Cronbach's alpha, Guttman and Spearman-Brown split half reliability coefficients for the total RDAS scales are .90, .94, and .95, correspondingly. The Chronbach alpha for the consensus, satisfaction, and cohesion sub-scale are .81, .85, and .80, respectively. The consensus, satisfaction, and cohesion sub-scales have Guttman split half reliability of .88, .88, and .79 and a Spearman-Brown split-half reliability of .89, .88, and .80, all respectively (Busby, Christensen, Crane, & Larson, 1995). Internal validity of the RDAS for this the completers in this sample was $\alpha = .87$ for males and $\alpha =$

.86 for females. Following is a copy of the Revised Dyadic Adjustment Scale (Spanier, 1976).

Revised Dyadic Adjustment Scale

Most persons have disagreements in their relationships. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

	Always Agree	Almost Always Agree	Occasional Agreement	Frequently Disagree	Almost Always Disagree	Always Disagree
1. Religious matters	5	4	3	2	1	0
2. Demonstrations of affection	5	4	3	2	1	0
3. Making major decisions	5	4	3	2	1	0
4. Sex relations	5	4	3	2	1	0
5. Conventionality (correct or proper behavior)	5	4	3	2	1	0
6. Career decisions	5	4	3	2	1	0
	All the time	Most of the time	More often than not	Occasionally	Rarely	Never
7. How often do you discuss or have you considered divorce, separation, or terminating your relationship?	0	1	2	3	4	5
8. How often do you and your partner quarrel?	0	1	2	3	4	5
9. Do you ever regret that you married (or live together)?	0	1	2	3	4	5
10. How often do you and your mate "get of each other's nerves"?	0	1	2	3	4	5

	Every Day	Almost Every Day	Occasionally	Rarely	Never
11. Do you and your mate engage in outside interests together?	4	3	2	1	0

How often would you say the following events occur between you and your mate?

	Never	Less than once a month	Once or twice a month	Once or twice a week	Once a day	More often
12. Have a stimulating exchange of ideas	0	1	2	3	4	5
13. Work together on a project	0	1	2	3	4	5
14. Calmly discuss something	0	1	2	3	4	5

From: Busby, D.M., Crane, D.R., Larson, J.H., & Christensen C. (1995). A revision of the Dyadic Adjustment Scale for use with distressed and nondistressed couples: Construction hierarchy and multidimensional scales. Journal of Marital and Family Therapy, 21, 289-308

APPENDIX C Therapeutic Alliance Measure

This study will utilize the Couple Therapy Alliance Scale (CTAS; Pinsof & Catherall, 1986), a self report instrument that is designed to measure clients' perceptions of their relationship with their therapist, in other words, the therapy alliance. This instrument is the only existing measure to empirically determine alliance in marital therapy (Bourgeois, 1990). The CTAS consists of 40 statements which the client evaluates using a 7-point Likert type scale, rating the extent to which they completely disagree (1) to completely agree (7) about the various features of the alliance (Pinsof & Catherall, 1986).

Bordin (1979) first asserted that there are three components of therapeutic alliance that are generalizable to all psychotherapies; namely, the development of bonds, assignment of tasks, and agreement on goals (Bourgeois, et al., 1990; Eaton, et al., 1988; Horvath & Luborsky, 1993; Pinsof, 1988; Pinsof & Catherall, 1986; Vermeersch, Whipple, Lambert, Hawkins, Burchfield, & Okiishi, 2004). A bond represents affective aspects such as therapist understanding, client trust, and reciprocal respect. In addition, tasks must be perceived as important in order for collaboration, agreement, and change to occur. Finally, when clients perceive the goals as clear, important, and capable of being accomplished the efficacy of therapy increases (Garfield, 2004; Johnson, et al., 2002; Raue, et al., 1993).

The 40 statements of the CTAS encompass these three subscales: bonds (n= 10 items), tasks (n= 13 items), and goals (n= 6 items). Pertaining to the bonds subscale, examples include, “The therapist does not understand me,” and “My partner feels accepted by the therapist.” Furthermore, statements such as, “The therapist has the skills to help my partner and me,” and “The therapist is not helping my partner and me”, are indicative of the tasks subscale. Finally, the goals subscale contains items like, “The therapist is in agreement with the goals that my partner and I have for ourselves as a couple in therapy,” and “The therapist does not understand the goals that my partner and I have for ourselves in therapy.”

Half of the statements are phrased positively while half are phrased negatively. The negatively phrased statements are reverse-scored on each sub-scale and then a total score is calculated by the sum of all the scores. The reported test-retest reliability for the CTAS is $r=.84$. The internal consistency of the instrument was investigated by Heatherington and Friedlander (1990), who reported of an alpha level of .93 for the total score. Alpha levels for the bonds, tasks, and goals subscales are .85, .88, and .70 respectively. Pinsof and Catherall (1986) report content validity as the only form of validity that has been established for this scale. The internal validity for the CTAS with the completers of this scale was .96 for the males .95 for the females. A copy of the Couple Therapy Alliance Scale follows.

Couple Therapy Alliance Scale

Instructions: The following statements refer to your feelings and thoughts about your therapist and your therapy right NOW. Please work quickly. We are interested in your FIRST impressions. Your ratings are CONFIDENTIAL. They will not be shown to your therapist or other family members and will only be used for research purposes. Although some of the statements appear to be similar or identical, each statement is unique. PLEASE BE SURE TO RATE EACH STATEMENT.

Each statement is followed by a seven-point scale. Please rate the extent to which you agree or disagree with each statement AT THIS TIME. If you completely agree with the statement, circle number 7. If you completely disagree with the statement, circle number 1. Use the numbers in-between to describe variations between the extremes.

Completely Agree 7	Strongly Agree 6	Agree 5	Neutral 4	Disagree 3	Strongly Disagree 2	Completely Disagree 1
1. The therapist cares about me as a person	7	6	5	4	3	2 1
2. The therapist and I are not in agreement about the goals for this therapy.	7	6	5	4	3	2 1
3. My partner and I help each other in this therapy.	7	6	5	4	3	2 1
4. My partner and I do not feel the same ways about what we want to get out of this therapy.	7	6	5	4	3	2 1
5. I trust the therapist.	7	6	5	4	3	2 1
6. The therapist lacks the skills and ability to help my partner and myself with our relationship.	7	6	5	4	3	2 1
7. My partner feels accepted by the therapist.	7	6	5	4	3	2 1
8. The therapist does not understand the relationship between my partner and myself.	7	6	5	4	3	2 1
9. The therapist understands my goals in therapy.	7	6	5	4	3	2 1
10. The therapist and my partner are not in agreement about the about the goals for this therapy.	7	6	5	4	3	2 1
11. My partner cares about the therapist as a person.	7	6	5	4	3	2 1
12. My partner and I do not feel safe with each other in this therapy.	7	6	5	4	3	2 1
13. My partner and I understand each other's goals for this therapy.	7	6	5	4	3	2 1
14. The therapist does not understand the goals that my partner and I have for ourselves in this therapy.	7	6	5	4	3	2 1
15. My partner and the therapists are in agreement about the way the therapy is being conducted.	7	6	5	4	3	2 1
16. The therapist does not understand me.	7	6	5	4	3	2 1
17. The therapist is helping my partner and me with our relationship.	7	6	5	4	3	2 1
18. I am not satisfied with the therapy.	7	6	5	4	3	2 1
19. My partner and I understand what each of us is doing in this therapy.	7	6	5	4	3	2 1
20. My partner and I do not accept each other in this therapy.	7	6	5	4	3	2 1

21. The therapist understands my partner's goals for this therapy.	7	6	5	4	3	2	1
22. I do not feel accepted by the therapist.	7	6	5	4	3	2	1
23. The therapist and I are in agreement about the way the therapy is being conducted.	7	6	5	4	3	2	1
24. The therapist is not helping me.	7	6	5	4	3	2	1
25. The therapist is in agreement with the goals that my partner and I have for ourselves as a couple in this therapy.	7	6	5	4	3	2	1
26. The therapist does not care about my partner as a person.	7	6	5	4	3	2	1
27. My partner and I are in agreement with each other about the goals of this therapy.	7	6	5	4	3	2	1
28. My partner and I are not in agreement about the things that each of us needs to do in this therapy.	7	6	5	4	3	2	1
29. The therapist has the skills and ability to help me.	7	6	5	4	3	2	1
30. The therapist is not helping my partner.	7	6	5	4	3	2	1
31. My partner is satisfied with the therapy.	7	6	5	4	3	2	1
32. I do not care about the therapist as a person.	7	6	5	4	3	2	1
33. The therapist has the skills and ability to help my partner.	7	6	5	4	3	2	1
34. My partner and I are not pleased with the things that each of us does in this therapy.	7	6	5	4	3	2	1
35. My partner and I trust each other in this therapy.	7	6	5	4	3	2	1
36. My partner and I distrust the therapist.	7	6	5	4	3	2	1
37. The therapist cares about the relationship between my partner and myself.	7	6	5	4	3	2	1
38. The therapist does not understand my partner.	7	6	5	4	3	2	1
39. My partner and I care about each other in this therapy.	7	6	5	4	3	2	1
40. The therapist does not appreciate how important my relationship between my partner and myself is to me.	7	6	5	4	3	2	1

APPENDIX D

Attrition Analysis of Study Participants

For this study, drop-out was defined as any male or female who completed the initial paperwork and completed four sessions of therapy but did not complete fourth session paperwork.. The primary reasons for drop out include: participants incomplete answering of questionnaires or therapist's non-compliance with procedures.

It is crucial to conduct an attrition analysis in order to ensure that men and women who do not complete the study are no different from those who do complete the study, which is a threat to validity. Consequently, those included in the study should not significantly differ from those who are excluded, in demographics or the scores from the instruments utilized in the study.

Chi-square analyses were used to test for a difference between remaining in the study and the following demographic variables: age, race, income, and education. Results of these analyses indicate that it is very likely that these frequencies differ by chance. Thus, there is not a significant interaction between completion of the paperwork and the demographic variables for males and females. Therefore, the clients who did not drop-out were not statistically different from the clients who dropped out in this study.

T-tests were used to test for a difference between participants remaining in the study and those who dropped out by symptom distress pre-therapy scores, marital adjustment pre-therapy scores, and therapy alliance scores following the fourth session.

No significant differences were found between those who dropped out of the study and those participants who remained in the study: on the OQ45.2 (Lambert, et al. 1996) symptom distress pre-therapy scores (males: $t(65) = -.12, p \leq .90$; females: $t(70) = .22, p \leq .83$) or the RDAS (Spanier, 1976) marital adjustment pre-therapy scores (males: $t(65) = -.69, p \leq .49$; females: $t(70) = -.60, p \leq .55$). From these analyses, it may be concluded that attrition bias is not present. See Table 6 located below.

Table 7. Comparison of means for participants who remained in the study versus those who dropped out before the fourth session.

Demographics	MALES		FEMALES	
	χ^2 or t-score	Sig. (2-tailed)	χ^2 or t-score	Sig. (2-tailed)
Age	1.58	.66	2.17	.54
Race	3.00	.22	1.74	.42
Income	4.37	.36	2.21	.70
Education	2.91	.57	4.96	.29
Symptom Distress Scores (first session)	-.12	.90	.22	.83
Marital Adjustment Scores (first session)	-.69	.49	-.60	.55

$\sim p < .10$

APPENDIX E

Table 8. Pearson Correlation Coefficients for Male and Female Symptom Distress, Male and Female Marital Adjustment, and Male and Female Therapy Alliance as well as the Correlations of the Differences between Males and Females on these Instruments.

Variables	1	2	3	4	5	6	7	8	9
1. Male OQ First Session	1.00								
2. Female OQ First Session	.46**	1.00							
3. Male RDAS First Session	-.45**	-.39**	1.00						
4. Female RDAS First Session	-.43**	-.39**	.59**	1.00					
5. Male TA Fourth Session	-.40**	-.17	.34**	.40**	1.00				
6. Female TA Fourth Session	-.15	-.17	.07	.19	.46**	1.00			
7. OQ Difference (Symptom Distress)	.35**	-.67**	-.02	.08	-.17	.11	1.00		
8. RDAS Difference (Marital Adjustment)	-.05	.05	.43**	-.48**	-.08	-.16	-.10	1.00	
9. TA Difference (Therapy Alliance)	-.32*	-.04	.36**	.30*	.63**	-.41**	-.26*	.07	1.00

* $p < .05$ ** $p < .01$