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Pepperdine University
Graduate School of Education and Psychology

SOCIAL SUPPORT COMMUNICATION BEHAVIOR,
DEPRESSION SYMPTOMATOLOGY, AND MARITAL SATISFACTION AMONG
DISTRESSED COUPLES

A clinical dissertation submitted in partial satisfaction

of the requirement for the degree of

Doctor of Psychology

by

Kaddy Revolorio

July, 2017

Kathleen Eldridge, Ph.D. – Dissertation Chairperson

This clinical dissertation, written by

Kaddy Revolorio

under the guidance of a Faculty Committee and approved by its members, has been submitted to and accepted by the Graduate Faculty in partial fulfillment of the requirements for the degree of

DOCTOR OF PSYCHOLOGY

Doctoral Committee:

Kathleen Eldridge, Ph.D., Chairperson

Dennis Lowe, Ph.D.

Katherine J. W. Baucom, Ph.D.

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DEDICATION

To my loved ones, you all know who you are.

ACKNOWLEDGMENTS

First, I would like to thank my dissertation committee. A huge thank you to my outstanding dissertation chair, Dr. Kathleen Eldridge, your confidence in my abilities and guidance through the dissertation process helped me achieve this goal. To Dr. Dennis Lowe, thank you for your contributions to this project and for being a part of the committee. A huge thank you to Dr. Katherine Baucom, for the numerous hours spent helping me understand HLM and for your mentorship throughout my entire academic career. I would also like to thank Dr. Andrew Christensen, for generously sharing your data time and time again. Lastly, I would like to thank my friend and colleague, Shirley Chen, for all of your encouragement and motivation, and for making the dissertation writing process as fun as it could possibly be.

VITA

Kaddy Revolorio, M.A.**Education****Pepperdine University, Graduate School of Education and Psychology, Los Angeles, CA**

Doctorate of Psychology in Clinical Psychology

Dissertation: *Social Support Communication Behavior, Depression Symptomatology, and Marital Satisfaction Among Distressed Couples*

Dissertation Chair: Kathleen Eldridge, Ph.D.

August 2017 (anticipated degree)

Pepperdine University, Graduate School of Education and Psychology, Malibu, CA

Master of Arts in Clinical Psychology with an emphasis in Marriage and Family Therapy

April 2012

University of California, Los Angeles, Los Angeles, CA

Bachelor of Arts in Sociology with a minor in Applied Developmental Psychology

June 2010

Clinical Experience**Southern Arizona VA Health Care System, Tucson, AZ**

July 2016-Present

APA Accredited Pre-Doctoral Internship, Psychology Intern

Training Director: Nadine Cole, Ph.D.

Rotations: General Mental Health Outpatient (6 mos.), Military Sexual Trauma Program (6 mos.),

Chronic Pain Clinic (3 mos.), Blind Rehabilitation (3 mos.)

General Mental Health (6 months, full-time 7/2016-1/2017)

Supervisors: Heather Brister, Ph.D., Sabrina Hitt, Ph.D.

- Provide evidence-based individual therapy (CPT, ACT, DBT, CBT-I, STAIR/NST) to Veterans with mood disorders, PTSD, anxiety, and personality disorders in an outpatient setting
- Provide evidence-based couples therapy (IBCT) to Veterans and their partners
- Co-lead evidence-based group therapy (ACT, Skills for Life, Mindfulness Based Stress Reduction, Smoking Cessation)
- Member of the Dialectical Behavior Therapy team, provide individual therapy, phone coaching, and participate weekly in interdisciplinary team meetings
- Conduct biopsychosocial intake assessments and therapy intakes for Veterans seeking mental health treatment and provide reports with differential diagnoses and treatment recommendations

General Mental Health Assessment (12 months, 7/2016-7/2017)

Supervisor: Nadine Cole, Ph.D.

- Administer cognitive, personality, and neuropsychological assessments
- Conduct clinical interviews and review medical records
- Determine assessment batteries based on consultation questions
- Score assessments, and interpret results with considerations for cultural issues
- Complete integrative written reports and conduct sessions providing feedback and recommendations
- Referral questions include readiness for hormone replacement therapy and/or sex confirmation surgery for transgender Veterans, bariatric surgery evaluations, transplant evaluations, personality disorder

evaluations, diagnostic clarification, and recommendations for treatment approaches

Long-Term Psychotherapy (12 months, 7/2016-7/2017)

Supervisor: David Beil-Adaskin, Psy.D.

- Provide integrative, evidence-based individual therapy to Veterans with complex presentations
- Utilize principles from CBT, DBT, and ACT to target anxiety, mood, and trauma-related disorders
- Provide weekly supervision to a social work intern, with a focus on developing CBT skills
- Provide peer supervision in a weekly intern supervision group

Military Sexual Trauma (6 months, half-time 1/2017-7/2017)

Supervisor: Kathleen Young, Psy.D.

- Provide individual Prolonged Exposure (PE), Cognitive Processing Therapy (CPT), and Dialectical Behavior Therapy (DBT) skills based training to Veterans with military-related sexual trauma
- Co-lead CPT, DBT based skills, and Interpersonal Relationships groups
- Conduct weekly PTSD assessments integrating clinical interview, chart review, and self-report measures
- Participate in interdisciplinary PE/CPT consultation group

Chronic Pain Management Clinic (3 months, half-time 1/2017-4/2017)

Supervisor: Andrew Jones, Ph.D.

- Provide short-term individual treatment including ACT to Veterans with chronic pain
- Co-lead Pain Management Psycho-education Class and ACT for Chronic Pain groups
- Conduct initial psychological evaluations to assess need for behavioral health interventions for Veterans with chronic pain
- Conduct psychological assessments for patients considered for spinal cord stimulator implants
- Participate in interdisciplinary team meetings

Southwestern Blind Rehabilitation Center (3 months, half-time 4/2017-7/2017)

Supervisor: Julie Ewing, Ph.D.

- Provide individual treatment including sleep hygiene, anger management, CBT, ACT, and biofeedback to Veterans with legal blindness in an inpatient setting
- Provide family therapy targeting issues of adjustment and reintegration to Veterans and family members after successful completion of the Blind Rehabilitation program
- Co-lead Communication Class and Adjustment Class
- Participate in interdisciplinary treatment team meetings
- Conduct intake assessments including structured interviews, cognitive, memory, and mood assessments

LAC+USC Medical Center, Los Angeles, CA

September 2015-June 2016

Adult Inpatient Psychiatric Service

Supervisors: Elaine Eaton, Ph.D., Lucy Erickson, Ed.D.

Practicum, Psychology Practicum Clerk

- Provide group therapy to culturally diverse adult individuals with severe mental illness in an adult inpatient psychiatric hospital
- Administer cognitive, personality, and neuropsychological assessments
- Conduct brief clinical interviews and review medical records
- Determine assessment batteries based on clinical interviews and consultation questions
- Score assessments, and interpret results with considerations for cultural issues
- Make clinical recommendations for placement and treatment, write integrative reports and clinical notes
- Work with medical staff as part of a multidisciplinary consultation team, attend daily psychiatric ward rounds, and observe attending psychiatrist consult with patients

His Sheltering Arms Inc., Los Angeles, CA

February 2015-February 2016

Residential Long Term Treatment Center

Supervisor: Bruce Rush, Psy.D.

Practicum, Doctorate of Clinical Psychology Trainee

- Provide milieu therapy to culturally diverse adult clients in a residential substance abuse treatment center for low-income women with histories of trauma, homelessness, and incarceration
- Establish and co-lead DBT skills group with a shortened schedule
- Create group curriculum for skills based parenting group and co-lead
- Complete intakes, consent clients, coordinate ethical record keeping, and write progress notes
- Conduct psychological assessments (cognitive and personality) and write integrative assessments with cultural considerations
- Provide easily accessible feedback to clients
- Work with staff as part of a multidisciplinary consultation team
- Implemented treatment outcome measures and protocol for skills based groups

Harbor-UCLA Medical Center, Torrance, CA

September 2014-August 2015

Adult Cognitive Behavior Therapy, Adult CalWORKS CBT

Supervisor: Lisa Bolden, Psy.D.

Practicum, Psychology Extern

- Provide individual evidence-based treatment (CBT, ACT, CPT, CBASP, BA, Exposure) to culturally diverse low-income adult clients with various disorders (Depression, Dysthymia, Anxiety, Specific Phobia, Panic Disorder, PTSD, and BPD) in an adult outpatient psychiatry clinic
- Provide group therapy and co-lead DBT skills group for individuals with sub-threshold BPD, Seeking Safety for women with substance abuse and trauma, and CBT for Depression and Anxiety for individuals enrolled in CalWORKS program
- Complete intakes, consent clients, diagnose clients, and create treatment plans
- Collaborate on research, attend weekly research team meetings, and complete individual research
- Attended and participated in weekly Mindfulness class to practice and understand the utility for clients
- Attend weekly didactics covering the implementation of cognitive behavior therapy and other third wave behavioral therapies

Pepperdine University Community Counseling Center, Los Angeles, CA

July 2014-June 2016

Supervisors: Bruce Rush, Psy.D., Shelly Harrell, Ph.D.

Practicum, Doctorate of Clinical Psychology Trainee

- Provide individual therapy (CBT, ACT, DBT skills) and couples therapy (IBCT) to culturally diverse adult clients with various disorders (Depression, Social Anxiety, and BPD) in a low fee community clinic
- Complete intakes, consent clients, diagnose, and create treatment plans
- Write progress notes, negotiate and collect fees, and schedule clients

Pepperdine University Community Counseling Center, Irvine, CA

September 2013-July 2014

Supervisor: Joan Rosenberg, Ph.D.

Practicum, Doctorate of Clinical Psychology Trainee

- Provide individual therapy to adult culturally diverse clients with various disorders (Depression, Dysthymia, Anxiety, v-codes) in a low fee community clinic
- Complete intakes, consent clients, diagnose, and create treatment plans
- Write progress notes, collect fees, and schedule clients
- Participate in weekly case conference
- Attend weekly group and individual supervision

Los Angeles Child Guidance Clinic, Los Angeles, CA

April 2013-August 2013

First Steps Program and Early Intervention Outpatient

Supervisor: Lisa Carmack, Ph.D.

Clinical Therapist I

- Provide in-home individual and family therapy to at risk children (0-5) and families as part of a prevention program
- Implement therapeutic interventions to facilitate attachment and promote social-emotional development
- Provide caregivers with psychoeducation and resources to promote child development
- Complete developmental assessments, intakes, and diagnose clients
- Complete DMH paperwork, treatment plans, write progress notes, and schedule clients

Children's Institute, inc., Torrance, CA

January 2011-August 2012

Day Treatment Intensive

Supervisor: Adele Luttrell, LMFT, Kelsie Hernandez, LMFT

MFT Trainee

- Provide individual and milieu therapy to economically disadvantaged children (3-5) with trauma histories and severe emotional and behavior problems in a day treatment setting
- Designed small group therapeutic interventions and implemented weekly to enhance self-help and social skills
- Participated in weekly case conference and clinical meetings
- Completed client intakes, weekly notes, and client care plans
- Provided parents and families with resources and psychoeducation
- Attended psychological assessment feedback sessions
- Attended IEP meetings to provide support for families

Research Experience**His Sheltering Arms Inc., Los Angeles, CA**

February 2015-February 2016

Residential Long Term Treatment Center

Supervisor: Bruce Rush, Psy.D.

Doctorate of Clinical Psychology Trainee

- Established research program and participated in research activities to evaluate effectiveness of group therapy treatment protocol for a high risk difficult to treat population and the application of empirical evidence to treatment and service planning
- Responsible for measure selection, data collection, input, scoring, and data analysis using SPSS software

Psychiatry, Harbor UCLA Medical Center, Torrance, CA

September 2014-August 2015

Adult Outpatient Clinic

Supervisor: Lynn McFarr, Ph.D.

Psychology Extern

- Collaborated on a research team and attended weekly meetings
- Completed individual research projects on interpersonal problems amongst individuals with BPD and evidence of PTSD as well as changes in sadness amongst individuals with BPD and depression symptoms in a DBT program and presented findings at a conference
- Collaborated on Institutional Review Board application

Children's Institute, inc., Torrance, CA

June 2012-October 2012

Early Childhood Mental Health-Project Stable Home

Supervisors: Kyrie Sankaran, Ph.D., Bruce Baker, Ph.D.

Senior Research Associate

- Worked on a preventative program targeting children ages 0 to 3 years who are at developmental risk, primarily from maternal substance abuse during pregnancy and poverty
- Coordinated the research activities in program evaluation and in the application of empirical evidence to treatment and service planning, and assisted in grant writing
- Was responsible for management of data collection, input, scoring and data analysis using SPSS software
- Created Goal Attainment Scales, an individualized measure for all clients
- Monitored staff completion of required measures
- Interviewed parents to ensure client satisfaction
- Worked on an individual project examining the developmental progress of children enrolled in the study and presented findings

Psychiatry, Harbor-UCLA Medical Center, Torrance, CA

August 2010-September 2011

Women's Behavioral Health

UCLA Couple CARE for Parents Project

Supervisors: Katherine J.W. Baucom, Ph.D., Andrew Christensen, Ph.D., Astrid Reina-Patton, Ph.D.

Research Assistant

- Worked on a distress prevention study during the transition to parenthood in couples from disadvantaged backgrounds
- Translated self-report questionnaires and measures from English to Spanish
- Recruited and enrolled participants for the study from a low-income obstetrics clinic
- Completed in-home self-report and observational assessments with couples (observational assessments included a problem solving interaction, parenting interaction, and triadic play interaction)
- Completed monthly couple follow-up assessments that measure couple satisfaction
- Initiated data collection for an individual project tracking trends in participant interest in research amongst English and Spanish speaking pregnant women from economically disadvantaged backgrounds, maintained database for smaller study, and completed data analysis
- Worked on two individual projects examining the difference in lead time between couples that enrolled versus couples who did not and the difference in couple enrollment and retention amongst couples that were English speakers versus couples that were Spanish speakers

UCLA Sociology Department, Los Angeles, CA

January 2010-April 2010

Sociology Immersion Program

Supervisor: Robert Emerson, Ph.D.

Primary Investigator

- Completed training in ethnographic/observational research
- Attended weekly didactics on ethnographic research methodology
- Completed individual ethnographic research in a child development facility
- Research focused on the importance of rules in a setting that provides services for people
- Completed daily observational field notes
- Completed ethnographic paper

Psychiatry, Harbor-UCLA Medical Center, Torrance, CA

September 2009-September 2011

Adult Outpatient Clinic

Effectiveness of DBT

Supervisors: Katherine J.W. Baucom, Ph.D., Lynn McFarr, Ph.D.

Research Assistant

- Assisted in a study examining the effectiveness of a Dialectical Behavior Therapy Program in Spanish and English speaking patients with Borderline Personality Disorder
- Contacted individual with Borderline Personality Disorder for interview scheduling and reminders
- Consented participants, completed in person interviews and monthly follow-up telephone assessments

for clients with Borderline Personality Disorder

- Assisted in data entry of client and therapist self-report questions for every client in DBT
- Translated self-report questionnaires and measures from English to Spanish
- Contacted therapists to complete questionnaires, and filed questionnaires
- Worked on a smaller study looking at the trajectory of therapy interfering behaviors in patients with Borderline Personality disorder that completed or dropped out of a Dialectical Behavior Therapy Program

UCLA Couples' Therapy Lab, Los Angeles, CA

July 2008-September 2011

Supervisors: Katherine J.W. Baucom, Ph.D., Andrew Christensen, Ph.D.

Senior Research Assistant

- Transcribed videotaped distressed couples' interactions from a large study examining effectiveness of Integrative Behavioral Couples Therapy (IBCT) vs. Traditional Behavioral Couples Therapy (TBCT) amongst distressed couples over a five year period
- Supervised splitting of transcriptions of therapy sessions for the purpose of linguistic analysis
- Aided and trained new research assistants
- Counted blinks in couple interactions for the purpose of coding emotional arousal
- Coded mindfulness in distressed couples' interactions

Institute of Social Science Research, UCLA, Los Angeles, CA

February 2007-March 2010

Center for the Study of Urban Poverty

Supervisor: Abel Valenzuela, Ph.D.

Research Assistant

- Researched urban poverty, minority communities, labor centers and day labor information for a larger study examining ethnic minority labor conditions and labor movements in different cities in the United States
- Responsible for data entry, clerical tasks, reorganizing data, and filing questionnaires
- Assisted in conference planning and organization
- Assisted in reviewing grant proposals

Presentations

Revolorio, K. Y., DeSilva, L., Darrell, D., Jackson, L., Brown, L., & McFarr, L. (2015, November). *Changes in sadness amongst individuals with depressive symptoms and Borderline Personality Disorder in a DBT program*. Poster session conducted at the International Society for the Improvement and Teaching of Dialectical Behavior Therapy Convention, Chicago, IL.

Chen, X. S., **Revolorio, K. Y.**, Owens, E., Darrell, D., Jackson, L., Brown, L., & McFarr, L. (2015, November). *Differences in interpersonal problems amongst individuals with BPD and comorbid BPD and Evidence of PTSD*. Poster session conducted at the International Society for the Improvement and Teaching of Dialectical Behavior Therapy Convention, Chicago, IL.

Revolorio, K. Y., Chen, X. S., Eldridge, K., & Christensen, A. (2015, November). *Social support communication behavior as a moderator between mental health symptomatology and marital satisfaction among distressed couples*. Poster session conducted at the Association for Behavioral and Cognitive Therapies Convention, Chicago, IL.

Revolorio, K. Y., Chen, X. S., Eldridge, K., & Christensen, A. (2014, November). *Associations between mental health and relationship satisfaction in a randomized clinical trial of couple therapy*. Poster session conducted at the Association for Behavioral and Cognitive Therapies Convention, Philadelphia, PA.

Rystad, I. A, **Revolorio, K. Y.**, & Baker, B. L. (2013, April). *The developmental progress of young children participating in an in-home parenting program*. Poster session conducted at the Society for Research of Child Development Biennial Meeting, Seattle, WA.

Chen, X. S., **Revolorio, K. Y.**, Baucom, K. J. W., Reina-Patton, A., & Christensen, A. (2012, August). *Recruitment and retention of low-income couples: Spanish vs. English-speaking participants*. Poster session conducted at the American Psychological Association Annual Convention, Orlando, FL.

Revolorio, K. Y., Chen, X. S., Baucom, K. J. W., Reina-Patton, A., & Christensen, A. (2012, May). *Recruitment and enrollment of low-income couples for a distress prevention study during the transition to parenthood: The importance of timing*. Poster session conducted at the Association for Psychological Science Annual Convention, Chicago, IL.

Mallam, S., **Revolorio, K.**, Quezada, M., Baucom, K. J. W., Jackson, L. L., Bedics, J. D., & McFarr, L. M. (2011, August). *Identifying patterns in the trajectory of therapy-interfering behaviors in patients diagnosed with Borderline Personality Disorder*. Poster session conducted at the American Psychological Association Annual Convention, Washington, DC.

Manuscripts

Baucom, K. J., Chen, X. S., Perry, N. S., **Revolorio, K. Y.**, Reina, A., & Christensen, A. (2017). Recruitment and retention of low-SES ethnic minority couples in intervention research at the transition to parenthood. *Family Process*. Advance online publication. doi: 10.1111/famp.12287

Professional Associations

Association for Behavioral and Cognitive Therapies, Student Member
 Association for Behavioral and Cognitive Therapies, Couples SIG, Student Member
 American Psychological Association, Student Affiliate
 Society for a Science of Clinical Psychology, Student Member
 Association for Psychological Science, Student Member
 Psi Chi, International Psychology Honors Society
 Alpha Kappa Delta, International Sociology Honors Society

ABSTRACT

The relationships between individual depression symptomatology, marital satisfaction, and social support communication behaviors were examined. Social support communication behaviors of partners as a moderator of the relationship between their own individual depression symptomatology and marital satisfaction was also examined. This study included 96 chronically and seriously distressed heterosexual married couples seeking couple therapy. This study found no relationship between marital satisfaction and depressive symptomatology and no relationship between depression symptomatology and positive and negative social support ($p > .05$). A significant interaction between gender and marital satisfaction in predictive depressive symptomatology was found ($p < .05$). Negative social support was significantly negatively related to marital satisfaction ($p < .01$). Positive social support was significantly positively related to marital satisfaction ($p < .001$). Social support did not moderate the relationship between depression symptoms and marital satisfaction ($p > .05$).

Introduction

Previous research has shown that there is an association between individual mental health and couple functioning (e.g., Atkins et al., 2005; Baucom et al., 2007; Baucom, Whisman, & Paprocki, 2012; South, Krueger, & Iacono, 2011; Whisman, 1999, 2007; Whisman & Uebelacker, 2006). Marital distress has also been positively associated with specific disorders such as mood, anxiety, and substance disorders (Whisman, 2007; Whisman & Uebelacker, 2006). Additionally, marital satisfaction has been predicted by individual level of psychological distress in both partners (Whisman, Uebelacker, & Weinstock, 2004). The relationship between individual mental health and family relationships has been shown to be bidirectional, since mental health disorders negatively impact an individual's relationship with family members and the family member's attitude impacts the course of the individual's disorder (Pankiewicz, Majkovicz, & Krzykowski, 2012).

Previous research has also shown a link between symptoms of depression and marital distress (Atkins, Dimidjian, Bedics, & Christensen, 2009). Depressed individuals often report marital distress and difficulties with marital affective communication (Hickey et al., 2005). Being in a distressed relationship has also been associated with higher risks of mood disorders (Whisman & Uebelacker, 2006). Depressed individuals in distressed marriages recover slower from depressive episodes and are more likely to experience a relapse of depressive symptoms (Rehman, Gollan, & Mortimer, 2008).

Additionally, there is a body of literature that suggests that intimate partners of individuals that suffer from mental illness deal with several stressors. Individuals that live with people with mental illness are subject to distress and frequently have disrupted family lives (Gallagher & Mechanic, 1996). The financial, emotional and social stress experienced by family

members of individuals with mental illness may affect their own health and healthcare needs of other family members (Gianfrancesco, Wang, & Yu, 2005).

Research suggests that spouses of depressed individuals are at risk for depression themselves, and that caregiving stress and burden mediate the relationship between depressive symptoms in the spouse and in the patient (Jeglic et al., 2005). Negative perceptions of their partners can impact the non-affected spouse's ability to care for the individual with an affective disorder (Zendjidjian et al., 2012). These negative perceptions impact the way non-affected spouses communicate with their partners, and spouses experience a lack of emotional and practical support from their ill partners, even when their partners are in remission (Levkovitz, Fennig, Horesh, Barak, & Treves, 2000). This lack of affective communication is especially important, since better communication and greater desired closeness is associated with less initial marital distress, while poorer affective communication is associated with greater initial distress and more steps taken toward separation or divorce (Atkins et al., 2005). Due to the prevalence of depression and the negative effects on couples, this study further examines the relationship between depression symptomatology and marital satisfaction, and the moderating role of social support communication in the association between those two variables. Further, gender differences have been examined, and there does not appear to be any difference between men and women in the degree to which psychopathology was associated with self and partner marital satisfaction (Whisman et al., 2004).

Depression and Couple Satisfaction

The relationship between depression and marital distress is an area of growing research. Previous studies have shown a link between symptoms of depression and marital distress (Atkins et al., 2009; Beach, Katz, Kim, & Brody, 2003; Fincham & Beach, 1999; Kronmuller et al.,

2011; South et al., 2011; Whisman & Uebelacker, 2006). There appears to be an association between the severity of depression and marital distress for both depressed individuals and their partners (Whisman et al., 2004). In a study by Whisman et al. (2004), couples in which both partners were depressed reported lower satisfaction than couples in which only one partner had depression or anxiety.

Hickey et al. (2005) found that both depressed and non-diagnosed partners reported many difficulties in multiple life domains such as quality of life, stress, support, family functioning, marital satisfaction, and relationship attributions. Couples with one depressed partner are generally more negative, less positive and pleasant in their interactions compared to couples with no depressed partners (Gabriel, Beach, & Bodenmann, 2010). Additionally, earlier levels of marital satisfaction have been found to predict later levels of depressive symptoms in both husbands and wives (Beach et al., 2003). Rehman, Evraire, Karimiha, and Goodnight (2015) found that individuals with higher levels of depressive symptoms and individuals with partners with higher levels of depressive symptoms report less satisfaction in their romantic relationships. Additionally, individual symptoms of depression are associated with a larger decline in relationship satisfaction over time (Rehman et al., 2015).

A small gender difference has been found in the relationship between marital distress and depression, where a marginally stronger association between marital distress and depressive symptoms was found for wives (Beach et al., 2003; Whisman, 2001). However, Kouros and Cummings (2010) discovered that men's depressive symptoms may be more disruptive to the dyad. Furthermore, Joiner and Katz (1999) found no gender differences in depression contagion, which has been defined as the interaction between individuals with depressive symptoms and

their partners as a mechanism whereby depressive symptoms in one partner are connected to the symptoms of the other partner.

Social Support Behavior and Couple Satisfaction

Social support behavior, defined as “specific communicative behavior enacted by one party with the intent of benefiting or helping another” (Burleson & MacGeorge, 2002, p. 386), has also been shown to predict levels of marital satisfaction (e.g., Bradbury, Fincham, & Beach, 2000; Pasch & Bradbury, 1998; Sullivan, Pasch, Johnson, & Bradbury, 2010). Individuals that report more social support in their marriages tend to be more satisfied with their marriages than individuals that report less social support (Katz, Beach, & Anderson, 1996). Social support behavior also improves stability in relationships by increasing level of trust and expectation that a partner will respond to one’s future needs (Cutrona, Russell, & Gardner, 2005). Effective social support skills may promote feelings of intimacy, allowing partners to engage in relationship difficulties with less expressions of contempt and anger (Sullivan et al., 2010).

Distressed couples have been previously shown to communicate differently in everyday interaction than non-distressed couples, where distressed couples show decreased levels of positivity and increased levels of negativity (Gottman, Markman, & Notarius, 1977). In a study by Lavner and Bradbury (2012), newlywed couples that divorced by the 10-year follow-up displayed more negative social support during interactions than couples that did not divorce. This study included couples that were satisfied with their marriage for over four years, so social support behavior may be different for couples that have been married longer or are less satisfied. In a study of distressed couples seeking therapy, Sevier, Eldridge, Jones, Doss, and Christensen (2008) noted that over treatment, negativity and positivity decreased during personal problem discussions while withdrawal increased, and increases in marital satisfaction were associated

with increases in positivity and problem solving. Additionally, distressed couples often engage in negative reciprocity during social support seeking interactions, which can lower relationship satisfaction (Pasch, Bradbury, & Davila, 1997).

The social support behavior literature has typically found gender differences between husbands and wives in their ability to provide support, where wives are described as being more effective support providers than husbands (e.g., Cutrona, 1996). However, observational studies have found no differences in the type of support or amount of support that husbands and wives provide (Neff & Karney, 2005; Pasch et al., 1997; Verhofstadt, Buysse, & Ickes, 2007). Gender differences have been found in the relationship between social support behavior and marital satisfaction, where providing social support predicted marital satisfaction for husbands, and soliciting support predicted marital satisfaction for wives (Lawrence et al., 2008). Pasch et al.'s (1997) study found that husbands displayed less positive forms of support when their wives were high in negative affectivity, and wives were more negative than husbands when they were seeking support, particularly when wives were high in negative affectivity. Negative affectivity is defined as a consistent inclination to experience and express negative emotion (Pasch et al., 1997). Pasch et al.'s study also suggests that stress and negative affectivity may contribute to the gender difference in support interactions. Additionally, in Neff and Karney's (2005) study, husbands and wives differed in their timing of support, where wives viewed their husbands as displaying negativity and support when their own level of stress increased, and husbands viewed their wives as better support providers on days when husbands were more stressed.

Gender differences have also been noted in the relationship between type of social support communication and marital satisfaction, such that women's marital satisfaction is predicted by perceived amount of support received whereas men's marital satisfaction is

predicted by the perceived adequacy of the support received (Lawrence et al., 2008). Barry, Bunde, Brock, and Lawrence (2009) also found that husbands' depressive symptoms were lower to the extent that they perceived more esteem or emotional support, and wives' depressive symptoms were lower if they perceived more tangible support. Yet, Neff and Karney (2005) propose that self-report measures of support make it difficult to clarify if perceived support is based on actual received support or other steady characteristics of the marriage or the individual. Verhofstadt et al. (2007) used observational and self-report data when they studied the *marital support gap*, which is the idea that women are more likely to provide emotional support, and men are more likely to provide instrumental support. No gender differences were found in support provision when using the observational data, but small gender differences were found when using the self-report data, where wives were rated as providing more emotional and instrumental support than they believed they received from their husbands, and wives were perceived to respond in less negative ways than husbands when their spouses solicited support (Verhofstadt et al., 2007).

Depression and Communication Behavior

Previous literature has shown that depressed individuals and individuals with no mental health symptomatology differ in their communication patterns. Depressed individuals also report difficulties with marital affective and problem-solving communication (Hickey et al., 2005). Individuals with depression have been shown to express their depression strongly within their marital interactions, including a tendency towards lower levels of self-disclosure and positive affect expression, as well as higher rates of dysphoric mood, self-derogation, negative well-being, and aggression towards spouses (Biglan et al., 1985). Communication behaviors that are connected to level of depression include less conflict-resolution-oriented behavior and more

negative statements (Gabriel et al., 2010). Gabriel et al. (2010) found that partners of depressed individuals display more aggression and defensiveness and a higher duration of nonverbal positivity as well as a lower frequency of emotional self-disclosure and interest than the depressed partner. Similarly, Rehman, Gollan, and Mortimer (2008) found that marital interactions of couples with one depressed partner have a higher frequency of negative communication behaviors including verbal aggression, withdrawal, and blame, as well as a lower frequency of positive communication behaviors such as smiling, eye-contact, self-disclosure, and problem solving. Additionally, gender differences were found among maritally distressed individuals, where the highest level of negative behavior was found in depressed wives and the lowest level of positive behaviors were found in depressed husbands (Gabriel et al., 2010). Gender differences among depressed individuals in their interactions with their spouses have been found, where depressed men express higher rates of anger and irritability than depressed women (Halford, Buoma, Kelly, & Young, 1999).

Depression and Perceived Social Support

In a study by Dehle, Larsen, and Landers (2001), symptoms of depression and perceived stress were associated with the perceived adequacy of social support provided by a spouse. Additionally, Barry et al.'s (2009) study found that wives' depression symptoms were lower based on perceiving more tangible support, and husbands' depression symptoms were lower based on perceiving more esteem and emotional support. Hickey et al. (2005) found that couples with one depressed partner perceived lower social support than couples with one anxious partner, and both groups reported significantly lower social support than couples without mental health diagnoses. Additionally, depressed individuals are often more sensitive to nonsupport and criticism from individuals close to them (Beach & Gupta, 2003). Generally, social support

should be perceived to be provided skillfully (pertaining to timing, content, process, or reciprocation) to benefit the distressed individual and the dyad, as research suggests that when support is perceived to be given unskillfully it can be detrimental to the receiver's mental health (Rafaeli & Gleason, 2009). In a study of risk factors for perceived support overprovision and underprovision by Brock and Lawrence (2014), they found that higher levels of wives' stress were associated with higher levels of perceived support underprovision, and higher levels of husbands' stress during the transition to marriage were associated with higher levels of perceived overprovision for husbands and wives.

Depression and Observed Social Support Communication Behavior

The previously mentioned studies were on perceived social support, which has been shown to be a distinct construct from observed social support communication (Sarason, Pierce, Shearin, Sarason, & Waltz, 1991). In a review of the literature, Coyne and DeLongis (1986) identify limitations of studying only perceived social support as the means of understanding the role of social relationships in stress and coping. The authors suggest that perceptions of support are one feature of the person's transactions with his or her environment, and therefore analyzing the context of these perceptions by studying observed support behavior in relation to marital stress may more fully illustrate these processes to inform treatment (Coyne & DeLongis, 1986). Some studies have used observed social support communication in order to address the limitations of using perceived social support.

Davila, Bradbury, Cohan, and Tochluk (1997) found that when comparing social support behavior of wives, wives with higher levels of depression solicited, received, and provided support in a negative manner when interacting with their husbands. Neff and Karney (2005) suggest that wives may be more likely than husbands to increase their support provision when

their partners are depressed, so husbands' depression may be less likely to lead to marital distress because wives are responding more positively to their husband's depressive symptoms.

Moderators and Mediators of Depression and Couple Satisfaction

This study examines how social support communication moderates the relationship between depression symptomatology and marital satisfaction among distressed therapy seeking couples. Few studies have looked at moderators of depression and satisfaction, and social support communication as a moderator has yet to be examined. In a study by Kouros, Papp, and Cummings (2008), self-reported marital conflict was shown to moderate the relationship between marital satisfaction and depression, and higher levels of conflict strengthened the negative relationship between satisfaction and symptoms of depression. Sullivan et al. (2010) found that social support behaviors were more stable than problem solving behaviors over the first year of marriage, and that the manner that spouses respond to their partner's everyday requests and disclosures for support were more predictive of relationship stability and quality than negotiations of conflict. In Sullivan et al. (2010), social support was found to mediate the relationship between marital satisfaction and conflict in problem solving interactions. In that study, couples who entered marriage with poorer skills were less happy and more likely to divorce within the first 10 years of marriage, partially due to increases in negative behavior during conflicts over time (Sullivan et al., 2010). Additionally, in a review of the literature, Bradbury and Karney (2004) found that social support moderates the relationship between problem solving behavior and marital satisfaction, suggesting that social support and problem solving behaviors are distinct constructs. Social support appears to be an important aspect of a couple's relationship quality that is important to examine as a moderator, and previous findings suggest potential gender differences in this construct.

Statement of the Problem

This study examined the relationships among depression symptoms, marital satisfaction, and social support communication, as well as the role of social support communication in moderating the relationship between depression and marital satisfaction among distressed therapy seeking couples.

This study examined the following research questions:

- Research Question 1: What is the relationship between marital satisfaction and depression symptomatology?
 - Hypothesis 1: Marital satisfaction and depression symptomatology will be significantly negatively related for husbands and wives.
- Research Question 2: What is the relationship between depression symptomatology and social support communication?
 - Hypothesis 2: Depression symptomatology will be significantly positively related to negative social support communication. Depression symptomatology will be significantly negatively related to positive social support communication.
- Research Question 3: What is the relationship between marital satisfaction and social support communication?
 - Hypothesis 3: Marital satisfaction will be significantly negatively related to negative social support communication. Marital satisfaction will be significantly positively related to positive social support communication.
- Research Question 4: Does social support communication moderate the relationship between depression symptomatology and marital satisfaction?

- Hypothesis 4: Negative social support communication will moderate the relationship between depression symptomatology and marital satisfaction.
Positive social support communication will moderate the relationship between depression symptomatology and marital satisfaction.

Methodology

Participants

This study used previously collected pre-treatment data from a 5-year longitudinal study comparing the effectiveness of Integrative Behavioral Couple Therapy (IBCT) and Traditional Behavioral Couple Therapy (TBCT). The complete sample included 134 chronically and seriously distressed heterosexual married couples seeking couple therapy in Los Angeles (71 couples) and Seattle (63 couples; Christensen et al., 2004). Inclusion criteria in this study included that couples were legally married and cohabiting, met criteria for serious and stable marital distress based on measures of marital satisfaction that were given at three different time points prior to the intervention, and had to be seeking couple therapy. Additionally, both partners had to be between the ages of 18 and 65, be fluent in English, and have a minimum of a high school education or equivalent. Participants were also given a diagnostic interview, and couples were excluded if either partner met current full criteria for diagnoses that might directly interfere with treatment, including DSM-IV Axis I disorders of bipolar disorder, schizophrenia, or substance abuse or dependence or DSM-IV Axis II disorders of antisocial, borderline, or schizotypal personality disorder. Couples with battering men were excluded from the study based on wife reports of violence. Individuals could not be in psychotherapy to avoid confounding therapy results with alternative treatments. Partners could be on psychotropic medication if they had been taking the medication for at least 12 weeks, were on a stable dose for at least 6 weeks before treatment, and their physician did not anticipate any change in medication or dosage.

This study used a subsample of 96 couples who completed all measures of interest. Participants in this subsample ranged from 24 to 72 years old, with a mean age for wives of

41.36 years ($SD = 8.44$), and a mean age for husbands of 42.90 years ($SD = 8.74$). Couples were together for a mean of 10.81 years ($SD = 7.75$), married a mean of 9.63 years ($SD = 7.85$), and had an average of 1.14 children ($SD = 1.03$). The mean level of education for husbands was 17.22 years ($SD = 3.22$) and 17.20 years ($SD = 3.04$) for wives, and they earned a mean annual income of \$57,000 for the husbands and \$43,000 for the wives. The subsample was largely Caucasian (husbands: 75.0%, wives: 69.8%). Other ethnicities in this subsample include African American (husbands: 9.4%, wives: 10.4%), Asian or Pacific Islander (husbands: 6.3%, wives: 4.2%), Latino/Latina (husbands: 5.2%, wives: 7.3%), Native American or Alaskan Native (husbands: 1.0%), and Other (husbands: 3.1%, wives: 8.3).

Measures

Individuals completed the 32-item Dyadic Adjustment Scale (DAS; Spanier, 1976), a self-report measure of marital satisfaction. Scores range from 0 to 151, and higher scores indicate marital satisfaction. Items reflect levels of satisfaction, affection and cohesion, as well as the amount of agreement in the relationship. The DAS has been shown to have good internal consistency, with alphas typically in the low to mid .90s (Spanier, 1989), and good test-retest reliability and discriminant validity (Spanier, 1976, 1989). The original sample found internal consistencies of .89 for husbands and .87 wives (Atkins et al., 2005).

Individuals also completed the Compass Treatment Assessment System (COMPASS; Sperry, Brill, Howard, & Grissom, 1996) before treatment. This measure includes three self-report scales that evaluate individual functioning: Subjective Well-Being, Current Symptoms, and Current Life Functioning. The combination of these three scales converted into a *T* score forms the Mental Health Index (MHI). The MHI has an internal consistency of .87, and 3-4-week test-retest stability of .82 (Sperry et al., 1996). The MHI has a mean of 50 and a standard

deviation of 10 (Sperry et al., 1996). A higher score on this scale represents greater mental health, and a score of 60 or less has been shown to be representative of an outpatient population (Christensen et al., 2004). In the original sample, the MHI had an internal consistency of .86 for men and .88 for women (Atkins et al., 2005). This study used the depression subscale of the Compass Treatment Assessment System (COMPASS; Sperry et al., 1996), which individuals completed before treatment to assess depression symptomatology. This subscale is comprised of eight Likert-scale items assessing current symptoms. The depression subscale has an internal consistency of .88 and a 3-4 week test-retest stability of .77 (Sperry et al., 1996). The concurrent validity of the depression subscale was examined, and the scale correlated .68 with the Center for Epidemiological Studies of Depression Scale and .87 with the Beck Depression Inventory (Sperry et al., 1996). T-scores were computed using standard scoring protocol for the depression subscale. In this subsample, the Cronbach's alpha for the depression subscale was .89 for men and .87 for women. Further, in this subsample men's *t*-scores ranged from 33.43 to 67.99 (mean = 41.07, *SD* = 7.17), and women's *t*-scores ranged from 33.43 to 69.07 (mean = 39.59, *SD* = 6.47).

The Social Support Interaction Rating System was used to code social support communication behaviors from social support interactions that were completed during pre-treatment (SSIRS; Jones & Christensen, 1998). Prior to the social support interaction, spouses were told to choose an area of personal concern to change or improve that was not a problem in the relationship. After an area of concern was selected, couples were instructed to discuss each topic for 10 minutes, as follows:

... [W]e would like you to have two... 10-minute discussions... [and] we'd like you to discuss concerns in your life at this time. In each of these discussions, one of you will talk with the other about something you are concerned about or would like to change about yourself. This could be about almost anything, like your work habits, your career,

something about your personality or your appearance, some problem you have, friendships, or relationships within your family. The most important thing is that whatever you discuss should be something you are concerned about or want to change about yourself, and that is NOT really a problem in your marriage. In other words, this should be more of a personal thing that concerns you.

If spouses had a difficult time talking about or thinking of a topic, they were given a list of common topics chosen by couples. The interaction order was alternated randomly (husband or wife topic first). Couples were instructed to discuss the topic within the 10 minutes, as follows:

We would like [spouse 1] to spend the next 10 minutes talking with [spouse 2] about _____. During this time, [spouse 2], you can respond however you want to, but we do want you to be involved in some way in the discussion. When the 10 minutes are up, we will come back and ask the two of you to switch roles, so that in the second 10 minutes, [spouse 2] will talk with [spouse 1] about _____, with [spouse 1] responding to that.

After the interactions were audiotaped and videotaped, they were coded using the SSIRS. Coders were undergraduate students and were blind to all treatment conditions and hypotheses in the study. Graduate students trained the coders on the SSIRS using master training tapes and ratings (Sevier et al., 2008). Coders were asked to focus on one spouse at a time during each interaction and rate if that spouse engaged in behaviors specified by the codes (Baucom, Sevier, Eldridge, Doss, & Christensen, 2011). Rating of the interactions occurred over four years, and various randomly assigned coders independently watched and rated each interaction. The ratings were averaged for the final data set (Sevier et al., 2008). Nondistressed couple interactions were also rated to make sure that coders saw several responses. Coding began after some 26-week assessments were completed to ensure that coders rated pretreatment and 26-week assessments concurrently (Sevier et al., 2008). Graduate students supervised coders and held weekly training meetings to practice and discuss rating difficult items and ensure reliability (Sevier et al., 2008).

The SSIRS measures emotional features of a conversation and provides concrete ratings of the topic. The SSIRS is made up of 18 questions coded across four distinct categories:

affectivity, features of the interaction, topic definition, and dominance/submission (Black et al., 2011). The frequency of particular verbal and nonverbal behaviors, their intensity, and the context in which they occur were used to determine the appropriate rating of each dimension. Jones (2004) conducted a factor analysis of the items on the SSIRS, and two major factors were studied. The first factor assessed Negative Affect/Behavior during interactions, and the second factor assessed Positive Affect/Behavior. Negative Affect/Behavior includes belligerence/domineering, contempt/disgust, global negative affect, and defensiveness. Positive Affect/Behavior includes emotional support offered, global positive affect, affection, instrumental support offered, and satisfaction. Both factors had high coder reliability ($\alpha > .85$) and inter-item consistency ($\alpha > .80$; Jones, 2004).

Procedures

Couples first completed a three-stage screening and assessment procedure, including a phone interview to assess demographic eligibility and marital satisfaction, a mailed packet of questionnaires to assess marital satisfaction and domestic violence, and a pre-treatment laboratory assessment to evaluate marital satisfaction and which also included completing individual psychiatric interviews, multiple questionnaires, and the videotaped interactions. If they remained eligible, they scheduled their first appointment with their project therapist and were randomly assigned to one of the two treatment conditions. Couples participated in up to 26 sessions of either IBCT or TBCT and completed multiple assessments throughout treatment and during follow-up periods. Although couples completed the DAS and COMPASS questionnaires and two videotaped 10-minute personal problem discussions at three time points (pre-treatment, 26-weeks later, and 2-year follow-up after treatment terminated), the current study only examines pre-treatment data.

Data Analysis

The data were analyzed using Statistical Package for the Social Sciences (SPSS Version 22.0) software and Hierarchical Linear and Nonlinear Modeling (HLM 7; Raudenbush, Bryk, Cheong, Congdon, & du Toit, 2016) software. The researchers have prior training in using SPSS and doing regression analyses through coursework and analyses for conference presentations, and gained additional training in testing moderation effects using HLM.

Prior to testing the hypotheses, the data were examined and missing data and outliers were managed. The conditions and assumptions of regression were met by the data, and then an intercorrelation matrix was created. Depression symptomatology, negative social support, and positive social support were centered by their means.

Hypothesis 1. The first hypothesis, that marital satisfaction and depression are negatively related, was tested using gender, marital satisfaction, and the interaction between gender and marital satisfaction as predictors of depression symptomatology in a simultaneous linear regression.

Hypothesis 2. The relationship between depression and social support communication was tested using simultaneous linear regressions with gender, depression symptomatology, and the interaction between gender and depression symptomatology regressed on social support communication behavior.

Hypothesis 3. The relationship between marital satisfaction and social support communication was tested using simultaneous regressions with gender, marital satisfaction and the interaction between gender and marital satisfaction regressed on social support communication behavior.

Hypothesis 4. To test social support communication as a moderator of the relationship between depression and marital satisfaction, a multilevel model was used. Separate moderation models were tested for negative and positive social support to examine social support as a moderator of the interaction between depression symptomatology and individual marital satisfaction for husbands and wives. Social support was examined as positive and negative affect social support behavior, due to the factor analysis recommendations (Jones, 2004). To examine spouse social support as a moderator of the interaction between depression and marital satisfaction, the following model was tested:

$$\text{Level 1: } Y_{ij}(\text{Marital Satisfaction}) = \beta_0 + \beta_{1j}(\text{Spouse}) + \beta_{2j}(\text{Symptoms}) + \beta_{3j}(\text{Social Support pos/neg}) + \beta_{4j}(\text{Symptoms X Social Support}) + \beta_{5j}(\text{Symptoms X Social Support pos/neg X Spouse}) + r_{ij}$$

Level 2:

$$\beta_{0j} = \gamma_{00} + u_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

$$\beta_{4j} = \gamma_{40}$$

$$\beta_{5j} = \gamma_{50}$$

Results

All regression analyses were completed using Statistical Package for the Social Sciences (SPSS Version 22.0) software and all multilevel modeling was completed using Hierarchical Linear and Nonlinear Modeling (HLM 7; Raudenbush et al., 2016) software. An alpha level of .05 was used to determine statistical significance for all analyses.

Hypothesis 1

The first hypothesis, that marital satisfaction and depression are negatively related, was tested using gender, marital satisfaction, and the interaction between gender and marital satisfaction as predictors of depression symptomatology in a simultaneous linear regression. Contrary to the prediction, marital satisfaction was not related to depressive symptomatology ($p > .05$). There was a significant interaction between gender and marital satisfaction ($B = .14, p < .04$) in predicting depressive symptomatology. After conducting post-hoc analyses, there was a significant relationship between marital satisfaction and depression only for husbands ($r = -.24, p < .02$; for wives, $p > .05$).

Hypothesis 2

The relationship between depression and social support communication was tested using simultaneous linear regressions with gender, depression symptomatology, and the interaction between gender and depression symptomatology regressed on social support communication behavior. Two separate linear regressions were run, one for negative social support as a dependent variable, and one for positive social support as a dependent variable. Contrary to the prediction, depression symptomatology was not related to negative social support ($p > .05$). Additionally, the interaction between gender and depressive symptomatology in predicting negative social support was not significant ($p > .05$). Similarly, depression symptomatology was

not related to positive social support ($p > .05$), and the interaction between gender and depressive symptomatology in predicting positive social support was not significant ($p > .05$).

Hypothesis 3

The relationship between marital satisfaction and social support communication was tested using simultaneous regressions with gender, marital satisfaction and the interaction between gender and marital satisfaction regressed on social support communication behavior. As with hypothesis 2, separate regressions were run for negative social support and positive social support. As predicted, negative social support was significantly negatively related to marital satisfaction ($B = -.08, p < .01$). Additionally, positive social support was significantly positively related to marital satisfaction ($B = .11, p < .001$), and there were no significant findings with gender ($p > .05$).

Hypothesis 4

To test social support communication as a moderator of the relationship between depression and marital satisfaction, a multilevel model was used. Separate moderation models were tested for positive and negative social support to examine social support as a moderator of the interaction between depression and individual marital satisfaction for husbands and wives (see Table 1).

The first model for negative social support yielded no significant results and the 3-way interaction that included spouse was not significant ($p > .05$), meaning that there is no difference between husbands and wives in whether their negative social support communication moderates the association between depression symptoms and relationship satisfaction. Due to the 3-way interaction not being significant, a revised model was run, which excluded the 3-way interaction and the 2-way interactions that included spouse as a variable.

The second model tested for negative social support yielded no significant results and the interaction was not significant ($p > .05$), meaning that depression symptoms did not moderate the effect of negative social support on satisfaction. Due to the interaction not being significant, a revised model was run, which excluded all interactions.

The final model tested for negative social support yielded no significant results ($p > .05$), again indicating that negative social support did not moderate the effect of depression symptoms on satisfaction.

The first model for positive social support yielded no significant results and the 3-way interaction that included spouse was not significant ($p > .05$), meaning that there is no difference between husbands and wives in whether their negative social support communication moderates the association between their own depression symptoms and relationship satisfaction. Due to the 3-way interaction not being significant, a revised model was run, which excluded the 3-way interaction and the 2-way interactions that included spouse as a variable.

The second model tested for positive social support yielded no significant results and the interaction was not significant ($p > .05$), meaning that positive social support did not moderate the effect of depression symptoms on satisfaction. Due to the interaction not being significant, a revised model was run, which excluded all interactions.

The final model tested for positive social support yielded no significant results ($p > .05$), again indicating that positive social support did not moderate the effect of depression symptoms on satisfaction.

Discussion

This study aimed to better understand the relationship between depression symptomatology, marital satisfaction, and social support. Results failed to support the hypotheses that depression symptomatology uniquely contributed to marital satisfaction or social support communication behaviors in distressed couples. However, a significant association between marital satisfaction and depressive symptomatology was found for husbands. Interestingly, Christensen et al. (2004) found that improvement in DAS scores is related to improvement in symptom scores over time, indicating that treatment addressing marital satisfaction can also be associated with improved mental health. Results also did not support the hypothesis that depression symptoms and social support communication behavior are related for both husbands and wives. This may suggest that male and female individuals with and without depression symptoms may communicate similarly during supportive communications and it may be due to the lab setting nature of these interactions. Additionally, negative social support was significantly negatively related to marital satisfaction and positive social support was significantly positively related to marital satisfaction, meaning that partners expressing more positive social support are more satisfied and partners expressing more negative social support are more distressed. Results also failed to support the hypothesis that social support communication behaviors would moderate the effect of depression symptomatology on marital satisfaction. This may suggest that the amount of support provided in a relationship may not impact the inter-relationships between an individual's own depression symptoms and marital satisfaction. The results also failed to support any other difference in gender across hypotheses 2-4.

This study had several methodological limitations that should be noted. Though the study recruited from two distinct communities (Los Angeles and Seattle), the regional similarities (i.e., west coast cities) reduces the generalizability of the study to a more regionally diverse population. Participants in the current study were also disproportionately Caucasian (73%), college educated (average 17 years of education), and had been married for approximately 10 years. Additionally, partners were heterosexual, married, and living together, which reduced the generalizability of the results to a more ethnically and relationally diverse sample. The range of marital satisfaction in this sample is limited to moderately distressed and severely distressed couples, as all couples in this study were recruited for marital concerns. This sample also included individuals that overall reported fewer psychological symptoms and a small amount of individuals that reported symptoms that were at clinical levels (Christensen et al., 2004). The generalizability of the results of this study to couples with mild distress is limited. Additionally, the level of depression experienced by participants was generally in the mild to moderate range, which potentially affected the contributions of depression to variance in marital satisfaction and social support communication. This limited the ability to determine how severe levels of depression symptomatology are associated with marital quality and marital communication behavior.

Despite the advantages of using observed communication in this study, the social support communication tasks took place in laboratory settings, and previous observational research with couples have found differences in interactions in laboratory tasks as compared to interactions in natural settings (Gottman & Krokoff, 1989). Additionally, the coding system used was developed for the purpose of studying couple interaction behaviors, and it may have not been sensitive to behaviors that relate specifically to symptoms of depression. The topics of these

conversations were also not specific to depression which may influence their relationship to depressive symptomatology.

This study would also have benefited from measures of perceived support to supplement measures of observed social support behaviors, based on previous literature demonstrating that perceived support may be more related to marital satisfaction (Rafaeli & Gleason, 2009).

Additionally, individuals with depression symptomatology are often more sensitive to criticism and nonsupport from others (Beach & Gupta, 2003). Based on previous recommendations by Verhofstadt et al. (2007) that observational research is useful for assessing the accuracy and awareness of perceptions of support, it may have benefited the study to measure both provision of support (behavior) and reception of support (perceived). This study did not have enough statistical power to differentiate between which partner had symptomatology or to determine whether individuals with symptomatology or their partners were providing or soliciting support. This would have been important due to the literature suggesting that individuals with mental health symptomatology and their spouses provide and solicit support differently than couples without symptomatology (Brock & Lawrence, 2014).

Other limitations include a limited measure of depressive symptomatology, as the COMPASS depression subscale only includes eight items. More widely administered measures of depressive symptomatology such as the Beck Depression Inventory (BDI) would have been useful in providing more comprehensive assessments of symptomatology. Access to pre-treatment data from the Structured Clinical Interview-I for DSM-IV (SCID-I) to provide an additional assessment of depressive symptomatology at both sub-clinical and diagnostic levels would be helpful in understanding the impact of depression on couple satisfaction and social support interactions. This research is entirely cross-sectional and therefore does not provide

directional or causal information about social support, marital satisfaction, and mental health symptomatology.

Some strengths of this study include the sample size ($n = 96$), use of observed social support communication measures, and the contribution to the sparse literature on moderating variables that include observed social support. This study included a decent sample size, which makes the results more generalizable. The ability to use observed social support communication measures helps contribute to the existing literature on social support communication behaviors, as it has generally only included perceived social support.

Although all findings in this study are based on pre-treatment data, some findings can be considered when clinically treating couples. The association between marital satisfaction and depressive symptoms among husbands suggests that individual depression symptoms should be monitored and potentially addressed in couple treatment if clinically significant. In a summary of current treatments for depression in the context of couple therapy, Beach and Gupta (2003) include Behavioral Couple Therapy (BCT), Interpersonal Psychotherapy-Conjoint Marital Therapy (IPT-CM), and BCT plus individual Cognitive Therapy as viable treatment options. Additionally, Lebow, Chambers, Christensen, and Johnson (2012) found that couples therapy equally impacts depression and marital distress, and point to Coping-Oriented Couples Therapy (COCT) and potentially Emotionally Focused Couple Therapy (EFT) as a way to treat depression within the context of a couple. Lastly, the finding of negative social support being negatively related to marital satisfaction and positive social support being positively related to marital satisfaction can be used help identify interventions that clinicians can use in therapy. For example, if distressed couples engage in negative social support communication behaviors (belligerence/domineering, contempt/disgust, global negative affect, and defensiveness),

different communication behaviors can be taught and reinforced in treatment, with the expectation that more positive behaviors will eventually be associated with greater satisfaction. It may also be the case that as other treatment methods lead to improvement in satisfaction, the nature of support communication may similarly improve, even if it isn't a direct target of treatment. Conversely, if couples are engaging in positive social support behaviors (emotional support offered, global positive affect, affection, instrumental support offered, and satisfaction), these behaviors should be reinforced in therapy.

Future studies should analyze this dyadic data differently, and examine actor and partner effects. The current study statistically tested whether spouses' own social support moderated the effect of their own depression symptoms on their own satisfaction. Being able to look at actor and partner effects by using actor-partner interdependence models (APIM; Kenny, Kashy, & Cook, 2006) would help determine if the association between spouses' depression symptoms and their relationship satisfaction is moderated by their partner's social support. This would be an important next step to take because it has been suggested that a supportive marital relationship can decrease vulnerability to depression (Jacobson, Fruzzetti, Dobson, Whisman, & Hops, 1993), and some research shows that social support may decrease depressive symptoms, thus indirectly increasing couple satisfaction (Cramer, 2004). Due to previous research that has shown that couple therapy has been useful in decreasing symptoms of psychopathology, including major depression and bipolar disorder (Carr, 2009), analyzing the data in this manner would also help inform couple therapy, as clinicians may choose to target social support communication to influence the relationship between individual mental health and relationship satisfaction.

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Table 1

Marital Satisfaction Predicted by Depression Symptomatology and Social Support Communication Behavior

	<u>Negative SS</u>			<u>Positive SS</u>		
	B	SEB	<i>t</i>	B	SEB	<i>t</i>
Model 1						
Gender	0.84	1.63	0.51	0.99	1.53	0.65
Depression	-0.11	0.16	-0.70	-0.03	0.14	-0.24
Social support	-0.09	0.49	-0.19	0.45	0.32	1.38
Depression x social support	0.38	0.28	1.36	0.34	0.28	1.23
Gender x depression	-0.04	0.04	-1.05	0.03	0.04	0.78
Gender x social support	0.17	0.33	0.50	0.60	0.36	1.66
Depression x social support x gender	0.01	0.04	0.32	0.04	0.06	0.60
Model 2						
Gender	0.88	1.67	0.53	0.98	1.60	0.61
Depression	-0.12	0.16	-0.78	-0.04	0.15	-0.24
Social support	-0.16	0.50	-0.31	0.54	0.32	1.67*
Depression x social support	-0.03	0.04	-0.78	0.03	0.04	0.74
Model 3						
Gender	0.86	1.67	0.52	1.05	1.61	0.65
Depression	-0.13	0.15	-0.86	-0.05	0.15	-0.33
Social support	-0.14	0.52	-0.27	0.55	0.32	1.69

Note. All *p* values were non-significant ($p > 0.5$). One marginal effect of positive social support communication on marital satisfaction was found. * $p = 0.09$

APPENDIX A

Extended Review of the Literature

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Atkins, Berns, George, Doss, Gattis, & Christensen (2005). Prediction of response to treatment in a randomized clinical trial of marital therapy	<ul style="list-style-type: none"> • Predictors of couple marital therapy treatment response (initial distress and change in satisfaction) • Demographics • Interpersonal factors • Intrapersonal factors • Uses IBCT study data 	Article, Empirical	<ul style="list-style-type: none"> • Studied pretreatment measures that predict which couples benefit from behaviorally oriented couple therapy • Demographic variables (age, education, income, years married, and children), intrapersonal variables (overall mental health and personality characteristic of neuroticism), and interpersonal variables (self-reported communication, commitment, and intimacy) • Found that relatively little predicts successful or unsuccessful outcome. 	<ul style="list-style-type: none"> • Quantitative • Self-report • Hierarchical linear modeling 	<ul style="list-style-type: none"> • Dyadic Adjustment Scale (DAS) • Demographic Info • Personality: NEO Five-Factor Inventory (NEO-FFI) • Compass Outpatient Treatment Assessment System (COMPASS) • Structured Clinical Interviews for DSM-IV for Axis I and II (SCID) • Family History of Distress Scale (FAM) from MSI-R • Communication Patterns Questionnaire (CPQ) • Intimacy: Closeness and Independence Inventory (CII) • Affective Communication Scale (AFC) from MSI-R • Sexual Dissatisfaction Scale (SEX) from MSI-R • Commitment/relationship stability: Marital Status Inventory (MSI) 	<ul style="list-style-type: none"> • 134 seriously and stably distressed married heterosexual couples

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Atkins, Dimidjian, Bedics, & Christensen (2009). Couple Discord and Depression in Couples During Couple Therapy and in Depressed Individuals During Depression Treatment	<ul style="list-style-type: none"> • Depression • Marital distress • Change over time after Treatment • Two samples • Neuroticism • Gender 	Article, Empirical	<ul style="list-style-type: none"> • Explore the baseline association between depressive symptoms and marital distress and how the association between marital distress and depressive symptoms changes across two different treatment modalities, where the primary or targeted symptom is either depression or marital discord. • Gender and neuroticism considered as possible moderators of the association • Baseline association between depression and distress across both samples • Reliable association between changes in the primary problem (e.g., relationship distress in the couple therapy study) and changes in the secondary problem (e.g., depression in the couple therapy study), but overall effects on secondary problems were quite small • Neuroticism played a moderating role across the 2 samples, strengthening and weakening the association between depression and relationship distress depending on the sample and gender 	<ul style="list-style-type: none"> • Quantitative • Self-report • Conditional probabilities and correlations • Hierarchical linear modeling 	<ul style="list-style-type: none"> • Beck Depression Inventory (BDI) • Depression subscale of Compass Outpatient Treatment Assessment System (COMPASS) • Structured Clinical Interviews for DSM-IV for Axis I and II (SCID) • Dyadic Adjustment Scale (DAS) • NEO Five-Factor Inventory (NEO-FFI) 	<ul style="list-style-type: none"> • Christensen et al., 2004: 134 seriously and stably distressed married heterosexual couples • Dimidjian et al., 2006: 120 adults meeting DSM-IV criteria for major depression

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Barry, Bunde, Brock, & Lawrence (2009). Validity and Utility of a Multidimensional Model of Received Support in Intimate Relationships (2009). Validity and Utility of a Multidimensional Model of Received Support in Intimate Relationships	<ul style="list-style-type: none"> • Couples • Factor analyses • Measurement • Support in Intimate Relationships Rating Scale (SIRRS) • Perceived received social support 	Article, Empirical	<ul style="list-style-type: none"> • Purpose to generate and cross-validate a factor analytically derived set of support types for global perceptions of received support • A novel, 4-factor structure of support types was generated • This structure was reliable and valid in dating and marital relationships, across men and women, and across time • Each support type demonstrated incremental validity for explaining marital adjustment, depression symptoms, and anxiety symptoms longitudinally • Some gender differences in perceived support and depression and anxiety symptoms 	<ul style="list-style-type: none"> • Quantitative • Self-report 	<ul style="list-style-type: none"> • Support in Intimate Relationships Rating Scale (SIRRS) • Marital Adjustment Test (MAT) 	<ul style="list-style-type: none"> • Sample 1: 408 Students at Midwestern University in exclusive, heterosexual relationships lasting at least 2 months • Sample 2: 260 Students at Midwestern University in exclusive, heterosexual relationships lasting at least 2 months • Sample 3: 101 Newlywed couples recruited through marriage license records from cities in the Midwest

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Baucom, Eldridge, Jones, Sevier, Clements, Markman, Stanley, Sayers, Sher, & Christensen (2007). Relative Contribution of Relationship Distress and Depression to Communication Patterns in Couples	<ul style="list-style-type: none"> • Depression • Marital distress • Problem-solving communication behaviors • Three samples 	Article, Empirical	<ul style="list-style-type: none"> • To explore the ability of depression to predict major types of communication (positive, negative, problem-solving, demand/withdraw) after controlling for shared variance between marital distress and depression) • Marital satisfaction was not consistently related to depressive symptomatology or diagnostic depression across all three samples (only found to be negatively related in two samples) • Symptomatic and diagnostic depression were not directly related to any communication behavior studied • Marital satisfaction was found to be related to some interaction patterns. Sample 1 (positively related to positivity, negatively related to negativity, related to wife demand/husband withdraw), Sample 2 (negatively related to problem-solving), Sample 3 (negatively related to global negative) • After controlling for marital satisfaction, depression did not consistently contribute to the prediction of interaction patterns. Sample 1 (not related to communication, interaction between sex and diagnostic depression added to the prediction of wife demand/husband withdraw after controlling for marital satisfaction), Sample 2 (depressive symptomatology was related to avoidance, but not to any communication pattern), Sample 3 (depressive symptomatology and diagnostic depression were not related to communication patterns) 	<ul style="list-style-type: none"> • Quantitative • Self-report • Coding • Regression analyses 	<ul style="list-style-type: none"> • Dyadic Adjustment Scale (DAS) • Mental Health: Compass Outpatient Treatment Assessment System (COMPASS) • Structured Clinical Interviews for DSM-IV for Axis I (SCID) • Depression Scale of the Minnesota Multiphasic Personality Inventory (MMPI) • Symptom Checklist (SCL-90) • Marital Adjustment Test (MAT) • Social Support Interaction Rating System (SSIRS) • Couple Interaction Rating System (CIRS2) • Marital Interaction Coding System, Version III (MICS III) • Interacts Dimension Coding System (IDCS) 	<ul style="list-style-type: none"> • Sample 1: 132 seriously and stably distressed married heterosexual couples • Sample 2: 59 distressed couples seeking couples therapy • Sample 3: 93 couples who were planning marriage and were recruited for a relationship development program

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Baucom, Whisman & Paprocki (2012). Couple-based interventions for psychopathology (2012). Couple-based interventions for psychopathology	<ul style="list-style-type: none"> • Couple-based interventions for psychopathology • Relationship Distress • Literature Review • Examples • Efficacy 	Article, Conceptual, Review	<ul style="list-style-type: none"> • Relationship distress and psychopathology are longitudinally and cross-sectionally associated. • Individual therapy for psychopathology is less effective when the couple is distressed • Couple-based interventions can decrease individual psychopathology and improve relationship functioning. • Three models of couple-based interventions for treating individual psychopathology: 1) partner-assisted interventions, 2) disorder-specific interventions and 3) couple therapy interventions • Provides examples of couple-based interventions for OCD, AN, and MDD 	N/A	N/A	N/A

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Baucom, Sevier, Eldridge, Doss, & Christensen (2011). Observed Communication in Couples Two Years After Integrative and Traditional Behavioral Couple Therapy: Outcome and Link With Five-Year Follow-Up	<ul style="list-style-type: none"> • Observed communication • Outcome and Follow-up • Change in couple communication • Support in Intimate Relationships Rating Scale (SIRRS) • Difference between TBCT and IBCT 	Article, Empirical	<ul style="list-style-type: none"> • Examines changes in observed communication after therapy termination in distressed couples from a randomized clinical trial • Partners' negativity and withdrawal continued to decrease from post-therapy to 2-year follow-up. And, partners' positivity decreased from post-therapy to 2-year follow-up, problem solving did not change over this time period • IBCT wives negativity decreased from post-therapy to 2-year follow-up, TBCT wives did not have a significant decrease. TBCT husbands positivity decreased, IBCT husbands did not experience this significant decrease in positivity. • Decreases in withdrawal and increases in problem solving are associated with greater relationship satisfaction. Reductions in wives' positivity from post to 2-year follow-up were associated with lower levels in relationship satisfaction in husbands at 2-year follow up, but were associated with higher levels of relationship satisfaction in wives. • Increase in wives' positivity from pre-therapy to post-therapy were significantly associated with relationship stability and treatment response 5 year later. • After controlling for withdrawal, the association between increased positivity and treatment response remained 	<ul style="list-style-type: none"> • Quantitative • Self-report • Coding • Hierarchical Linear Modeling 	<ul style="list-style-type: none"> • Dyadic Adjustment Scale (DAS) • Social Support Interaction Rating System (SSIRS) • Couple Interaction Rating System (CIRS) 	<ul style="list-style-type: none"> • 134 seriously and stably distressed married heterosexual couples

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Beach, Katz, Kim, & Brody (2003). Prospective Effects of Marital Satisfaction on Depressive Symptoms in Established Marriages: A Dyadic Model	<ul style="list-style-type: none"> • Marital discord • Depression • Longitudinal study • Marital satisfaction • Cross-spouse effects 	Article, Empirical	<ul style="list-style-type: none"> • Examines if each spouses' own marital satisfaction is associated with their own current level of depressive symptoms • Examines if each spouses' own marital satisfaction would predict their own depressive symptoms one year later, after controlling for initial depressive symptoms • Examines if there is a significant sex difference in the association between earlier marital satisfaction and later depressive symptoms • Examines if there is cross-spouse effects of earlier marital satisfaction on later depressive symptoms, even after accounting for within-spouse effects • Earlier satisfaction predicted later depressive symptoms for both husbands and wives (equally) • Found a marginally significant sex difference in the magnitude of the concurrent association between marital distress and depressive symptoms (significant for both husbands and wives but stronger for wives) • Found a significantly greater stability of depressive symptoms for husbands than for wives • No evidence of sex differences in the magnitude of the within-spouse effects or in the cross-spouse effects of earlier marital satisfaction on later depressive symptoms • Husbands' earlier marital satisfaction predicted wives' later depressive symptoms and, wives' earlier marital satisfaction predicted husbands' later depressive symptoms 	<ul style="list-style-type: none"> • Quantitative • Self-report • Structural Equation Modeling 	<ul style="list-style-type: none"> • Marital Adjustment Test (MAT) • Center for Epidemiologic Studies-Depression Scale (CES-D) 	<ul style="list-style-type: none"> • 166 couples from randomly sampled intact first marriages with adolescent children

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Black, Katsamanis, Baucom, Lee, Lammert, Christensen, Georgiou, & Narayanan (2011). Toward Automating a Human Behavioral Coding System for Married Couples' Interactions Using Speech Acoustic Features	<ul style="list-style-type: none"> • Behavioral Signal Processing (BSP) • Couple therapy • Dyadic interactions • Observational methods/coding systems 	Article, Conceptual, Empirical	<ul style="list-style-type: none"> • Proposes an engineering methodology for automating a manual human behavioral coding system for marital problem-solving discussions using acoustic speech features. • Review of current couple coding systems • Social Support Interaction Rating System (SSIRS) measured the emotional content of couple interactions and topic conversation. Made up of 19 codes across 4 categories: affectivity, dominance/submission, features of the interaction, and topic definition. • Couple Interaction Rating System (CIRS) made up of 13 codes and was designed for coding problem-solving discussions 	<ul style="list-style-type: none"> • Quantitative • Observation 	<ul style="list-style-type: none"> • Social Support Interaction Rating System • Couples Interaction Rating System (CIRS) 	<ul style="list-style-type: none"> • 134 seriously and stably distressed married heterosexual couples

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Bradbury, Fincham, & Beach (2000). Research on the Nature and Determinants of Marital Satisfaction: A Decade in Review	<ul style="list-style-type: none"> • Literature review • Couple satisfaction • Interpersonal processes within marriage • Micro and macrocontexts within marriage 	Article, Literature Review	<ul style="list-style-type: none"> • Examines interpersonal processes that operate within marriage such as cognition, affect, physiology, behavioral patterning, social support and violence • Examines milieus within which marriages operate such as microcontexts (e.g., presence of children, life stressors, and transitions) and macrocontexts (e.g., economic factors, perceived mate availability) • Examines the conceptualization and measurement of couple satisfaction • There is evidence that maladaptive attributions covary with elevated rates of negative behaviors during marital problem solving discussions • Increased demands lead to increased avoidance, which in turn leads to increased demands for engagement, with the end result being a decline in marital satisfaction (Demand/withdraw pattern) • Support processes have been reliably linked with marital functioning and with important health outcomes in families • Link between physical aggression and marital quality assumed rather than demonstrated • Various micro (e.g., children, spouses' background and characteristic, life stressors and transitions) and macro (e.g., socioeconomic factors) contexts are linked to marital satisfaction 	N/A	N/A	N/A

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Bradbury & Karney (2004). Understanding and Altering the Longitudinal Course of Marriage	<ul style="list-style-type: none"> • Literature review • Couple interactional process • Marital outcomes • Prevention 	Article, Literature Review	<ul style="list-style-type: none"> • Examines how social support and positive affect moderate the effects of problem-solving skills on changes in marital quality • Studies partners' vulnerabilities and strengths as antecedents of marital aggression and hostile interaction • Acknowledges the central role of acute and chronic circumstances in managing fluctuations in partner's judgments of marital quality • Couples with poor problem-solving skills achieve similar marital outcomes as couples with good problem-solving skills, provided that they display high levels of humor, affection, and interest/curiosity. Only when spouses display low levels of these positive emotions that poor skills appear to be harmful • High levels of wives' negative affect in problem-solving interactions and high levels of wives' negative support to produce high levels of marital distress, suggesting that deficits in one domain can potentiate the effects of deficits in another domain 	N/A	N/A	N/A

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Brock & Lawrence (2014). Intrapersonal, Interpersonal, and Contextual Risk Factors for Overprovision of Partner Support in Marriage	<ul style="list-style-type: none"> • Support • Overprovision • Adequacy • Risk Factors • Marriage • Attachment • Intimacy • Stress 	Article, Empirical	<ul style="list-style-type: none"> • Aims to identify risk factors for experiencing support overprovision • Underprovision and overprovision are two qualitatively distinct types of inadequate support, and overprovision of “wrong” support is more detrimental than underprovision • Intrapersonal (anxious and avoidant attachment), interpersonal (conflict management and emotional intimacy), and contextual factors (chronic stress) identified and analyzed as potential risk factors • Higher levels of husbands’ avoidant attachment styles and husbands’ stress during the transition into marriage were associated with greater overall levels of overprovision for both husbands and wives. • Greater emotional intimacy at the onset of marriage associated with lower levels of husbands’ and wives’ support overprovision • Anxious attachment (both husbands’ and wives’), wives’ avoidant attachment, conflict management, and wives’ stress were not significant predictors of support overprovision • Support under- provision was influenced by husband and wife anxious attachment, wife avoidant attachment, conflict management, and wife stress • Interpersonal dysfunction (intimacy) partially mediated husband avoidant attachment • Neither husband stress nor wife stress significantly moderated the effects of intrapersonal and interpersonal variables on support overprovision • Risk factors for support overprovision appear distinct from risk factors for support underprovision 	<ul style="list-style-type: none"> • Quantitative • Self-Report • Multivariate two-level model 	<ul style="list-style-type: none"> • Support in Intimate Relationships Rating Scale (SIRRS) • The Relationship Scales Questionnaire (RSQ) • The Relationship Quality Interview (RQI) • The Chronic Strains Inventory (CSI) 	<ul style="list-style-type: none"> • 103 newlywed couples in the Midwest in first marriage

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Carr (2009). The effectiveness of family therapy and systemic interventions for adult-focused problems	<ul style="list-style-type: none"> • Systemic interventions • Mood disorders • Anxiety disorders • Relationship distress 	Article, Literature Review	<ul style="list-style-type: none"> • Summarizes the evidence base for systemic practice with adult-focused problems (relationship distress, psychosexual problems, domestic abuse, anxiety disorders, mood disorders, alcohol abuse, schizophrenia, and adjustment to chronic physical illness) • Results suggest that systemic practices (family therapy and other family-based interventions) are effective either alone or as part of multimodal programs for relationship and individual mental health problems 	N/A	N/A	N/A

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Christensen, Atkins, Berns, Wheeler, Baucom & Simpson (2004). Traditional Versus Integrative Behavioral Couple Therapy for Significantly and Chronically Distressed Married Couples	<ul style="list-style-type: none"> • Marriage • Relationship satisfaction • Relationship stability • Communication • Individual functioning • Treatment efficacy 	Article, Empirical	<ul style="list-style-type: none"> • Purpose to examine the overall and comparative efficacy of TBCT vs. IBCT in treating seriously and chronically distressed married couples • TBCT and IBCT are effective treatments for both moderately and seriously distressed couples. 	<ul style="list-style-type: none"> • Quantitative • Self-Report • Hierarchical linear modeling 	<ul style="list-style-type: none"> • Marital Adjustment Test (MAT) • Marital Satisfaction Inventory-Revised (MSI-R): Global Distress Scale (GDS), Problem solving communication subscale (PSC), Affective communication subscale (AFC) • Dyadic Adjustment Scale (DAS) • Conflict Tactics Scale-Revised (CTS-2) • Structured Clinical Interviews for DSM-IV for Axis I and II (SCID) • Marital Status Inventory (MSI) • Compass Outpatient Treatment Assessment System (COMPASS): Mental Health Index (MHI), Current Symptoms (CS) 	<ul style="list-style-type: none"> • 134 seriously and stably distressed married heterosexual couples

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Coyne & DeLongis (1986). Going Beyond Social Support: The Role of Social Relationships in Adaptation	<ul style="list-style-type: none"> • Perceived social support • Stress • Marriage 	Article, Literature Review	<ul style="list-style-type: none"> • Emphasizes limitations of the concept of perceived social support as a means of understanding the role of social relationships in stress and coping • Focusing on perceived support provides little information about the interpersonal dynamics that take place in close relationships or about how supportive provisions are mobilized and used in the coping process • States that concept of support is oversimplified and we must look at other factors such as a person's characteristics, circumstances, available support, and cost and benefits before determining proper interventions 	N/A	N/A	N/A

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Cramer (2004). Emotional Support, Conflict, Depression, and Relationship Satisfaction in a Romantic Partner	<ul style="list-style-type: none"> • Partner Conflict • Partner Support • Relationship Satisfaction • Depression 	Article, Empirical	<ul style="list-style-type: none"> • Aims to determine the relative contribution of partner conflict and support to satisfaction with a romantic relationship • Aims to see if support is indirectly associated with relationship satisfaction through reduced conflict and depression • Depression is associated with satisfaction in romantic relationships, although causal direction is unclear • Support was indirectly associated with relationship satisfaction through a reduction of depression but was not associated with conflict 	<ul style="list-style-type: none"> • Quantitative • Self-Report 	<ul style="list-style-type: none"> • Relationship Assessment Scale (Hendrick, 1988) • Revised SCL-90-R Depression subscales (Derogatis, 1983) 	<ul style="list-style-type: none"> • 111 students at a British university

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Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Davila, Bradbury, Cohan & Tochluk (1997). Marital Functioning and Depressive Symptoms: Evidence for a Stress Generation Model	<ul style="list-style-type: none"> • Depressive symptoms • Marital stress • Perceived social support • Observed social support behaviors 	Article, Empirical	<ul style="list-style-type: none"> • Examined if depressed spouses would create stress in their marriage, which would in turn lead to further depression • Investigated if social support perceptions and behavior would function as a mechanism of stress generation in marriage over 1 year • Clear evidence of stress generation was found among wives • Social support perceptions and behavior appeared to mediate the association between depressive symptoms and subsequent stress for wives • For husbands, social support perceptions and behavior appeared to be largely a product of marital stress 	<ul style="list-style-type: none"> • Quantitative • Self-Report 	<ul style="list-style-type: none"> • Beck Depression Inventory (BDI) • Chronic stress interview • Social Support Interaction Coding System • Social support perceptions on Likert scale before interaction 	<ul style="list-style-type: none"> • 172 newlywed couples in first marriages participating in an ongoing, longitudinal study of marriage

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Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Dehle, Larsen & Landers (2001). Social Support in Marriage	<ul style="list-style-type: none"> • Perceived social support • Spousal support • Marital quality • Depressive symptomatology • Perceived stress 	Article, Empirical	<ul style="list-style-type: none"> • The purpose of the current study is to examine associations between the perceived adequacy of social support provided by spouses and both marital and individual functioning. • Perceived support adequacy was correlated in the expected direction with marital quality, depressive symptomatology, and perceived stress 	<ul style="list-style-type: none"> • Quantitative • Self-Report • Hierarchical multiple regressions 	<ul style="list-style-type: none"> • Support in Intimate Relationships Rating Scale (SIRRS) • Kansas Marital Satisfaction Scale (KMS) • Positive and Negative Quality in Marriage Scale (PANQIMS) • Dyadic Adjustment Scale (DAS) • Perceived Stress Scale (PSS) • Beck Depression Inventory (BDI) • Edmonds Marital Conventionalization Scale (MCS) for social desirability 	<ul style="list-style-type: none"> • 212 married individuals from undergraduate psychology courses

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Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Fincham & Beach (1999). Conflict in Marriage: Implications for Working with Couples	<ul style="list-style-type: none"> • Marital Conflict • Mental Health • Physical Health • Family Health 	Article, Literature Review	<ul style="list-style-type: none"> • Purpose is to provide a review of the literature on marital conflict • To promote a theoretical manner of studying and observing marital conflict behavior • A link between marital conflict and depression has been noted • Marital conflict appears less consequential for anxiety disorders, which may reflect a complex association varying according to spouse gender and type of anxiety disorder • Marital conflict is associated with poorer health and with specific illnesses such as cancer, cardiac disease and chronic pain • Marital conflict is also associated with poorer parenting, poorer child adjustment, problematic attachment to parents, increased likelihood of parent-child conflict, and conflict between siblings • Distressed couples emit more negative statements and fewer positive statements and show greater reciprocation of negative behaviors during problem-solving interactions 	N/A	N/A	N/A

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Gallagher & Mechanic (1996). Living with the Mentally Ill: Effects on the Health and Functioning of other Household Members	<ul style="list-style-type: none"> • Mental Illness • Social functioning • Family burden 	Article, Empirical	<ul style="list-style-type: none"> • Purpose is to compare health outcomes for people who live with someone who is mentally ill to people who do not live with someone who is mentally ill • Sharing a household with a mentally ill person is associated with poorer self-reported physical health, increased risk of reporting some activity limitation, increased services utilization, a greater risk of hospitalization or visiting a physician • Severity and duration of mental illness had little effect across health outcomes 	<ul style="list-style-type: none"> • Quantitative • Self-Report survey 	<ul style="list-style-type: none"> • National Health Interview Survey, Mental Health Supplement 	<ul style="list-style-type: none"> • 716 people with no mentally ill family member in their household, 776 people with mentally ill family member in their household

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Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Gianfrancesco, Wang, & Yu (2005). Effects of patients with bipolar, schizophrenic, and major depressive disorders on the mental and other healthcare expenses of family members	<ul style="list-style-type: none"> • Family • Major depression • Healthcare 	Article, Empirical	<ul style="list-style-type: none"> • Purpose is to understand if family members who live with individuals with serious mental disorders have higher healthcare costs than control groups • Living with a person with serious mental illness significantly increases healthcare expenses of family members, especially mental healthcare 	<ul style="list-style-type: none"> • Quantitative 	<ul style="list-style-type: none"> • Administrative data from US Blue Cross Blue Shield plan 	<ul style="list-style-type: none"> • 6,111 Bipolar disorder family members, 802 schizophrenic family members, 34,321 major depression family members

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Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Halford, Bouma, Kelly & Young (1999). Individual Psychopathol ogy and Marital Distress: Analyzing the Association and Implications for Therapy	<ul style="list-style-type: none"> • Couples • Relationship distress • Psychopathology • Depression • Anxiety 	Article, Literature Review	<ul style="list-style-type: none"> • Review of literature on association between individual psychopathology and marital problems with focus on depression, alcohol abuse, anxiety disorders, and psychoses • Explores suggestions for therapy, both individual and couple focused, and the importance of assessment 	N/A	N/A	N/A

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Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Hickey, Carr, Dooley, Guerin, Butler & Fitzpatrick (2005). Family and marital profiles of couples in which one partner has depression or anxiety	<ul style="list-style-type: none"> • Couples • Depression • Anxiety • Relationship functioning • Perceived social support 	Article, Empirical	<ul style="list-style-type: none"> • Aim to develop comprehensive psychosocial profiles of couples in which one partner had a diagnosis of anxiety or depression • Domains were: (1) Quality of life, stress, and social support; (2) family functioning; (3) marital functioning; and (4) relationship attributions • Depressed group had significant difficulties in all four domains, control group showed minimal difficulties, and the anxious group occupied an intermediate position 	<ul style="list-style-type: none"> • Quantitative • Self-Report survey 	<ul style="list-style-type: none"> • Structured Clinical Interview for DSM-IV-TR Axis I Disorders (SCID-IIP) • Self-rating Depression and Anxiety Scales (SDS) • Quality of Life Inventory (QOLI) • Family Inventory of Life Events and Changes (FILE) • Perceived Social Support Scale (PSSS) • The Family Assessment Device (FAD) • Marital Satisfaction Inventory-Revised (MSI-R) • Relationship Attribution Measure (RAM) 	<ul style="list-style-type: none"> • 76 couples: 29 in which one partner was depressed, 21 in which one partner had an anxiety disorder, and 26 nondistressed control couples

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Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Jeglic, Pepper, Ryabchenko, Griffith, Miller, & Johnson (2005). A Caregiving Model of Coping with a Partner's Depression	<ul style="list-style-type: none"> • Caregiving Burden • Depression • Caregiving stress • Spousal well being 	Article, Empirical	<ul style="list-style-type: none"> • Tested a caregiving model of depression in spouses • Spouses living with a partner with depressive symptoms had more symptoms of depression themselves • Feelings of stress and burden associated with caregiving mediate the relationship spouses depression symptoms and their partner's depression 	<ul style="list-style-type: none"> • Quantitative • Self-Report survey 	<ul style="list-style-type: none"> • Structured Clinical Interview for DSM-IV-TR (SCID) • Hamilton Depression Rating Scale (HRSD) • Caregiving Burden Scale (CBS) 	<ul style="list-style-type: none"> • 31 couples

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Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Joiner & Katz (1999). Contagion of Depressive Symptoms and Mood: Meta- Analytic Review and Explanations from Cognitive, Behavioral, and Interpersonal Viewpoints	<ul style="list-style-type: none"> • Contagion • Depression • Meta-analytic review 	Article, Empirical	<ul style="list-style-type: none"> • Tries to explore if the idea of "contagious depression" is supported in previous studies • Contagious depression is supported by the current literature • Explains contagion from a cognitive, behavioral and interpersonal viewpoint 	<ul style="list-style-type: none"> • Quantitative • Self-Report • Meta-Analytic 	N/A	<ul style="list-style-type: none"> • 4,952 individuals from 36 different studies

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Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Kenny, Kashy, & Cook (2006). Dyadic data analysis	<ul style="list-style-type: none"> • Couples • Data analysis • Dyadic data • Actor-Partner Interdependence Model 	Book, Empirical	<ul style="list-style-type: none"> • Provides suggestion on way to analyze dyadic data by testing for actor and partner effects • Actor effect includes a person's outcomes as a function of their own characteristics • Partner effect includes person affected by partner's characteristics but not their own • Using APIM can statistically help identify interactions 	<ul style="list-style-type: none"> • Quantitative • Actor-Partner Interdependence Model (APIM) 	N/A	N/A

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Kouros & Cummings (2010). Longitudinal Associations Between Husbands' and Wives' Depressive Symptoms	<ul style="list-style-type: none"> • Depression contagion • Subclinical • Couples • Marital satisfaction • Moderation • Gender difference 	Article, Empirical	<ul style="list-style-type: none"> • Examined linear and proportional change in depressive symptoms among husbands and wives and whether changes in husbands' and wives' symptoms over three years were predicted by their partners' previous level of symptoms • Tested marital satisfaction as a moderator of the longitudinal association between spouses' depressive symptoms • Higher levels of husbands' depressive symptoms predicted subsequent elevations in wives' symptoms over time • This association was stronger for couples that reported being maritally distressed as compared to couples that reported being maritally satisfied • Low levels of husbands' depressive symptoms predicted decreases in wives' symptoms over time. • Wives' previous level of depressive symptoms did not predict husbands' latent change in symptoms 	<ul style="list-style-type: none"> • Quantitative • Dynamic bivariate latent difference score (LDS) mode 	<ul style="list-style-type: none"> • Depression Subscale of Symptom Checklist 90 Revised (SCL-90-R) • Marital Adjustment Test (MAT) 	<ul style="list-style-type: none"> • 296 heterosexual couples living in a small city in the Midwest recruited to participate in a 3-year prospective longitudinal study on family processes and child development

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Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Kouros, Papp, & Cummings (2008). Interrelations and Moderators of Longitudinal Links Between Marital Satisfaction and Depressive Symptoms Among Couples in Established Relationships	<ul style="list-style-type: none"> • Depressive symptoms • Marital satisfaction • Moderators of conflict • Relationship length 	Article, Empirical	<ul style="list-style-type: none"> • Examined how husbands' and wives' marital satisfaction changed over 3 years. • Decreased marital satisfaction over time predicted increased depressive symptoms, and increased symptoms over time predicted lower levels of marital satisfaction, with no gender differences • At higher levels of marital conflict, the negative relationship between marital satisfaction predicting depressive symptoms was strengthened • Higher levels of marital conflict weakened the negative association between depressive symptoms predicting marital satisfaction 	<ul style="list-style-type: none"> • Quantitative • Self-Report • Multivariate hierarchical linear modeling 	<ul style="list-style-type: none"> • Center for Epidemiological Studies on Depression Scale (CES-D) • Marital Adjustment Test (MAT) • Marital Conflict - O'Leary-Porter Scale 	<ul style="list-style-type: none"> • 296 couples in the community in established relationships with at least one child

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Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Kronmuller, Backenstrass, Victor, Postelnicu, Schenkenbach, Joest, Fiedler, & Mundt (2011). Quality of marital relationship and depression: Results of a 10-year prospective follow-up study	<ul style="list-style-type: none"> • Marital Satisfaction • Spousal relationships • Depression • Expressed emotions 	Article, Empirical	<ul style="list-style-type: none"> • Examined the long-term course of depression and relationship outcomes • Followed-up one, two and ten years after inpatient with Major Depression was discharged from hospital and assessed marital satisfaction and expressed emotion • Decrease of marital satisfaction over time in the long-term course of depression (strong association between the course of depression and marital satisfaction) • All patients that reported dissatisfaction had a recurrence of depression in the follow-up period. • Spousal Expressed Emotion status was prognostic factor for quality of the relationship after 10 years (better for prognostic of future quality than current quality) 	<ul style="list-style-type: none"> • Quantitative • Longitudinal • ANOVA 	<ul style="list-style-type: none"> • SCID • Longitudinal Interval Follow-up Evaluation (LIFE) • Hamilton Depression Rating Scale (HDRS) • Beck Depression Inventory (BDI) • Terman Item • Five Minute Speech Sample (FMSS) • Perceived Criticism Index (PCI) 	<ul style="list-style-type: none"> • 50 consecutively admitted inpatients and their spouses • Inpatients had to meet inclusion criteria of a diagnosis of major depression according to the DSM-III-R

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Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Lavner & Bradbury (2012). Why do even satisfied newlyweds eventually go on to divorce?	<ul style="list-style-type: none"> • Divorce • Newlyweds • Marital satisfaction • Observed communication • Social support behavior • Commitment • Stress • Personality 	Article, Empirical	<ul style="list-style-type: none"> • Identifies risk factors early in marriage that distinguish initially satisfied couples who eventually divorce at 10 year follow-up from those who remain married • Proposes that low-distress couples who go on to divorce may differ from those who do not divorce in lower levels of commitment, poorer observed communication, more maladaptive personality, and higher levels of stress 	<ul style="list-style-type: none"> • Quantitative • Longitudinal • Self-report and observational 	<ul style="list-style-type: none"> • Commitment Inventory • Neuroticism scale of the Eysenck Personality Questionnaire • Multidimensional Anger Inventory • Rosenberg Self-Esteem Scale • Acute stress - Life Experience Survey • Chronic stress - interviewed about the quality of nine life domains • Verbal Aggression subscale of the Conflict Tactics Scale • Problem solving skills - The Kategoriensystem fur Partnerschaftliche Interaktion • Problem solving affect - Specific Affect Coding System • Social Support Interaction Coding System 	<ul style="list-style-type: none"> • 136 newlywed couples identified from marriage licenses filed in Los Angeles County • All couples were stably satisfied with their marriages over four years

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Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Lawrence, Bunde, Barry, Brock, Sullivan, Pasch, White, Dowd, & Adams (2008). Partner support and marital satisfaction: Support amount, adequacy, provision, and solicitation	<ul style="list-style-type: none"> • Partner social support • Perceived support • Observed support • Marital satisfaction 	Article, Empirical	<ul style="list-style-type: none"> • Tries to understand if amount of support received or adequacy of support received is more important in predicting marital satisfaction • Tries to understand if providing support or soliciting support predicts marital satisfaction • Found that for husbands, perception of support adequacy predicted marital satisfaction more than support amount• For husband, providing support predicted marital satisfaction • Found that for wives, support amount predicted marital satisfaction more than support adequacy • For wives, soliciting support predicted marital satisfaction 	<ul style="list-style-type: none"> • Quantitative • Self-report and observational 	<ul style="list-style-type: none"> • Support in Intimate Relationship Rating Scales (SSIRS) • Social Support Interaction Coding System (SSICS) • Marital Adjustment Test (MAT) • Quality of Marriage Index (QMI) • Kansas Marital Satisfaction (KMS) 	<ul style="list-style-type: none"> • Two samples. Both samples include newlywed couples that have been married 3 to 6 months • Sample 1: 62 couples • Sample 2: 235 couples

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Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Lebow, Chambers, Christensen, & Johnson (2012). Research on the treatment of couple distress	<ul style="list-style-type: none"> • Anxiety • Depression • Couples therapy • Literature review 	Article, Literature Review	<ul style="list-style-type: none"> • Marital distress is associated with broad categories of anxiety, mood and substance use disorders. • Couple events experienced as humiliating such as infidelity and separation often lead to depression and anxiety and vice versa • Couple therapy is helpful in the treatment of individual disorders 	N/A	N/A	N/A

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Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Levkovitz, Fennig, Horesh, Barak, & Treves (2000). Perception of ill spouse and dyadic relationship in couples with affective disorder and those without	<ul style="list-style-type: none"> • Depression • Bipolar • Spouses • Perception of personality • Relationship satisfaction 	Article, Empirical	<ul style="list-style-type: none"> • Purpose to compare the perception of spouses and relationship quality of patients with severe affective disorders in remission and spouses of healthy partners • Examined the level of psychological symptoms of spouses and included a healthy control group • Well spouses of affective patients in remission reported less consensus, unity and expressions of affection in their marital relationship and ranked ill spouses lower on positive qualities and higher on negative qualities than controls • Well spouses reported receiving less emotional and practical support from ill spouses as compared to controls 	<ul style="list-style-type: none"> • Quantitative • Self-report 	<ul style="list-style-type: none"> • Beck Depression Inventory (BDI) • Brief Symptom Inventory (BSI) • Dyadic Adjustment Scale (DAS) • Characteristics Attributed to Spouse • 11 items from Social Support Questionnaire (SSQ) 	<ul style="list-style-type: none"> • 34 married or cohabitating patients in remission from major affective disorder and their spouses • 34 spouses in couples without DSM diagnosis matched on socioeconomic status

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Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Neff & Karney (2005). Gender Differences in Social Support: A Question of Skill or Responsiveness?	<ul style="list-style-type: none"> • Observed social support • Gender differences • Stress 	Article, Empirical	<ul style="list-style-type: none"> • Suggests that the provision of effective spousal support over the course of a marriage involves not only knowing how to support a partner but also understanding when to provide that support to the partner • No significant differences found in husbands' and wives' support provision behaviors or average daily perceptions of supportive or negative behaviors • Husbands' support provision behaviors during the interactions were not significantly associated with severity of their wives' problem for positive and negative behaviors. Wives' positive support provision significantly associated with the severity of their husbands' problem, such that husbands discussing more severe problems tended to receive the best support from their wives • Husbands experiencing more stress over the week reported receiving more positive support from their wives and wives experiencing more stress reported receiving more negative behaviors from their husbands • As husbands' stress increased, they reported that their wives responded to this increase by providing them with more support. As wives' stress increased, they reported that their husbands responded by providing them with more supportive and more negative behaviors. 	<ul style="list-style-type: none"> • Quantitative • Self-report and Observational • Hierarchical linear modeling 	<ul style="list-style-type: none"> • Social Support Interaction Coding System (SSICS) • Problem severity – couples were asked three questions about problem • Daily stressful life circumstances - diary card • Daily perceptions of spousal support – diary card • Daily perceptions of negative spousal behaviors – diary card • Daily hours spent together – diary card 	<ul style="list-style-type: none"> • 169 newlywed couples

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Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Pasch & Bradbury (1998). Social support, conflict, and the development of marital dysfunction	<ul style="list-style-type: none"> • Social support behavior • Observed communication • Marital satisfaction 	Article, Empirical	<ul style="list-style-type: none"> • Suggests that the manner in which spouses help each other contend with personal, rather than marital, difficulties is a potentially important domain for understanding how marriages succeed and fail • Husbands in couples later classified as distressed were twice as likely to display anger and contempt during conflict discussions • Marital satisfaction was associated concurrently with behaviors spouses exhibited, and relatively satisfied spouses were more likely to behave in ways that facilitate mutual understanding and less likely to reject or blame their partners • Relatively satisfied spouses expressed low levels of anger and contempt, as did their spouses. • Behaviors wives exhibited when offering support to and soliciting support from their husbands predicted later relationship deterioration • Wives in couples later classified as distressed were about half as likely to display positive behavior and twice as likely to display negative behavior when offering support, and twice as likely to display negative behavior when soliciting support 	<ul style="list-style-type: none"> • Quantitative • Observation • Hierarchical Linear Modeling 	<ul style="list-style-type: none"> • Marital Adjustment Test • Verbal Tactics Coding Scheme (VTCS) • Specific Affect Coding System (SPAFF) • Social Support Interaction Coding System 	<ul style="list-style-type: none"> • 60 newlywed couples

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Pasch, Bradbury, & Davila (1997). Gender, negative affectivity, and observed social support behavior in marital interaction	<ul style="list-style-type: none"> • Social support behavior • Neuroticism • Depression • Gender differences • Marital satisfaction 	Article, Empirical	<ul style="list-style-type: none"> • Studied the association of support-seeking and provision behaviors with negative affectivity, as assessed by measures of neuroticism and depressed mood in newlywed couples • No significant difference between husbands and wives in their proportions of helper behaviors • As helpers, wives more negative and engaged in more off-task behavior than husbands • Wives were more negative on average than their husbands when talking about a personal characteristic or difficulty they would like to change • Husbands were less likely to provide specific, helpful suggestions to the extent that they were high in negative affectivity • Wives who were high in negative affectivity were likely to provide and solicit or receive support in a mostly negative manner • Husbands' high levels of negative affectivity were associated with wives exhibiting higher proportions of positive emotional helper behavior, while wives' high levels of negative affectivity were associated with husbands exhibiting lower proportions of positive emotional helper behavior and lower proportions of other positive helper behavior 	<ul style="list-style-type: none"> • Quantitative • Observation 	<ul style="list-style-type: none"> • Marital Adjustment Test • Neuroticism Scale of Eysenck Personality Questionnaire • Beck Depression Inventory • Social Support Interaction Coding System 	<ul style="list-style-type: none"> • 60 newlywed couples

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Rafaeli & Gleason (2009). Skilled Support Within Intimate Relationships	<ul style="list-style-type: none"> • Social support • Relationship • Stress 	Article, Literature Review	<ul style="list-style-type: none"> • Focuses on perceived and observed support processes within committed intimate dyadic relationships • Knowledge that someone is available to be supportive is associated with reduced distress during times of stress, but the actual receipt of support is often associated with worse rather than better psychological outcomes, even when support is beneficial in increasing positive feelings • Advice giving, minimization of feeling, identification with feelings, and encouragement of recovery are most often seen as unhelpful • Effectiveness of social support is partly dependent on its timing (i.e., when the support is provided, how the provider and the recipient traverse the stages of support, and how that supportive interaction fits, or does not fit, within cycles of reciprocation). • Some types of emotional or practical assistance (e.g., caring, tangible assistance) are likely to be more helpful than others (e.g., advice), but the greatest benefit is likely to occur when there is optimal matching between the type of need and the type of support. • Visible support, when recipients are aware of support) and directive support, when a provider provides support without the request or against the wishes of the recipient, can reduce and reverse intended effects • Receipt coupled with provision of support tends to be beneficial for both partners in a relationship 	N/A	N/A	N/A

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Rehman, Gollan, & Mortimer (2008). The marital context of depression: Research, limitations, and new directions	<ul style="list-style-type: none"> • Marriage • Depression • Interpersonal • Gender differences 	Article, Literature Review	<ul style="list-style-type: none"> • Focus is on previous research done on marital relationships and depression • Common co-occurrence of depression and marital distress • Evidence that interpersonal difficulties in depression are shown more readily in the context of the spousal relationship • There are negative outcomes for both marriages and spouses of individuals with depression 	N/A	N/A	N/A

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Sarason, Gregory, Pierce, Shearin, & Waltz (1991). Perceived social support and working models of self and actual others	<ul style="list-style-type: none"> • Perceived social support • Perceptions of self • Perceptions of others • Personal relationships 	Article, Empirical	<ul style="list-style-type: none"> • Aim was to examine linkages between perceived social support and perceptions of self and others, and others' perceptions of the self • Perceptions of social support are separate from observable features of potentially supportive transactions • Perceived support is predictive of coping effectiveness, adjustment outcome, and psychological and physical well-being 	<ul style="list-style-type: none"> • Quantitative 	<ul style="list-style-type: none"> • Social Support Questionnaire (SSQ) • UCLA Loneliness Scale • Social Reticence Scale II • Parental Bonding Instrument • Quality of Relationships Inventory (QRI) 	<ul style="list-style-type: none"> • Study 1: 130 undergraduate students • Study 2: 210 undergraduate students

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Sevier, Eldridge, Jones, Doss & Christensen (2008). Observed Communication and Associations With Satisfaction During Traditional and Integrative Behavioral Couple Therapy	<ul style="list-style-type: none"> • Couples satisfaction • IBCT • TBCT • Observed communication • Positivity • Negativity • Withdrawal • Problem solving 	Article, Empirical	<ul style="list-style-type: none"> • The current study investigated observed communication changes and associated satisfaction changes in two types of therapies, TBCT and IBCT • Observed potential mechanisms of change, including positivity, negativity, withdrawal, and problem solving in both problem solving and social support interactions • Couple therapy improves communication behaviors over time, with some differences between discussion type • Declines in marital satisfaction were associated with increased negativity during relationship problem interactions and increased withdrawal during personal problem interactions, but no treatment differences in these associations were found. 	<ul style="list-style-type: none"> • Quantitative • Observation • Hierarchical Linear Modeling 	<ul style="list-style-type: none"> • Dyadic Adjustment Scale (DAS) • Global Distress Scale of the Marital Satisfaction Inventory–Revised (MSI-R) • Couple Interaction Rating System (CIRS) • Social Support Interaction Rating System (SSIRS) 	<ul style="list-style-type: none"> • 134 seriously and stably distressed married heterosexual couples

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
South, Krueger, & Iacono (2011). Understanding General and Specific Connections Between Psychopathology and Marital Distress: A Model Based Approach	<ul style="list-style-type: none"> • Marital distress • Psychopathology • Internalizing • Externalizing 	Article, Empirical	<ul style="list-style-type: none"> • First study to examine if strong relationships found between marital distress and various comorbid psychopathology syndromes are due to their shared versus specific variance • Internalizing and externalizing psychopathology factors were significantly negatively associated with marital adjustment in both the individual and his or her partner • After accounting for the impact of the INT and EXT factors, there were no significant independent associations with any specific forms of psychopathology • Marital distress was significantly negatively correlated with the psychopathology indicator variables • Marital satisfaction was negatively correlated with symptoms of major depression for men and women 	<ul style="list-style-type: none"> • Quantitative • Observation • Structural Equation Modeling 	<ul style="list-style-type: none"> • Structured Clinical Interview for Axis I and II for DSM-III-R • Substance Abuse Module of the Composite International Diagnostic Interview • Dyadic Adjustment Scale (DAS) 	<ul style="list-style-type: none"> • 929 couples who participated in the Minnesota Twin Family Study (MTFS)

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Sullivan, Pasch, Johnson, & Bradbury (2010). Social Support, Problem Solving, and the Longitudinal Course of Newlywed Marriage	<ul style="list-style-type: none"> • Marital satisfaction • Social support behavior • Problem solving behavior • Divorce • Mediation 	Article, Empirical	<ul style="list-style-type: none"> • Purpose to examine the cross-lagged associations between problem-solving behaviors and social support behaviors and relation to 10-year changes in relationship satisfaction and dissolution. • Conflict and support behaviors were observed and coded for husbands and wives shortly after marriage and 1 year later, from discussions of marital difficulties and personal challenges • Social support behaviors predicted affective problem solving, marital satisfaction, and divorce • How spouses respond everyday disclosures and requests for support may be more consequential than how they negotiate conflict in producing behavioral changes that foreshadow later marital satisfaction and stability • Social support alone is demonstrated to predict long-term marital satisfaction and marital status directly and indirectly by affecting spouses' behavior in the other domain • Support behaviors appear to be more stable over the 1st year of marriage than problem solving behaviors 	<ul style="list-style-type: none"> • Quantitative • Observation • Longitudinal • Hierarchical Linear Modeling (HLM) • Hierarchical multiple regression 	<ul style="list-style-type: none"> • Marital Adjustment Test (MAT) • Specific Affect Coding System (SPAFF) • Social Support Interaction Coding System (SSICS) 	<ul style="list-style-type: none"> • 172 newly wed couples in first marriages participating in an ongoing, longitudinal study of marriage

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Verhofstadt, Buysse, Ickes (2007). Social support in couples: An examination of gender differences using self-report and observational methods	<ul style="list-style-type: none"> • Social support • Couples • Gender differences • Observational methods • Self-report 	Article, Empirical	<ul style="list-style-type: none"> • Aimed to understand if there is a gender difference in support provision and support solicitation • Gender difference was found in self-report data, women were more likely to provide instrumental and emotional support and respond less negatively to spousal support solicitation than men • No gender difference was found in observational data 	<ul style="list-style-type: none"> • Quantitative • Observation 	<ul style="list-style-type: none"> • Dyadic Adjustment Scale (DAS) • Social Support Interaction Questionnaire (SSIQ) • Quality of Relationship Inventory (QRI) • Social Support Interaction Coding System (SSICS) 	<ul style="list-style-type: none"> • Study 1: 458 married Belgian couples • Study 2: 32 married Belgian couples

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Whisman (1999). Marital Dissatisfaction and Psychiatric Disorders: Results From the National Comorbidity Survey	<ul style="list-style-type: none"> • Marital dissatisfaction • Psychopathology 	Article, Empirical	<ul style="list-style-type: none"> • Purpose to evaluate the association between marital dissatisfaction and 12-month prevalence rates of common Axis I psychiatric disorders in a nationally representative sample of married individuals • Marital dissatisfaction was associated with the presence of any disorder, but differences were found between men and women after controlling for comorbid disorders 	<ul style="list-style-type: none"> • Quantitative • Self-report survey 	<ul style="list-style-type: none"> • Composite International Diagnostic Interview (CIDI) based on DSM-III-R • Marital dissatisfaction two items: "All in all, how satisfied are you with your relationship—very, somewhat, not very, or not at all satisfied?" and "Overall, would you rate your relationship as excellent, good, fair, or poor?" 	<ul style="list-style-type: none"> • 2,538 married respondents from the National Comorbidity Survey

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Whisman (2007). Marital Distress and DSM-IV Psychiatric Disorders in a Population-Based National Survey	<ul style="list-style-type: none"> • Marital dissatisfaction • Psychopathology • Gender moderator • Age moderator 	Article, Empirical	<ul style="list-style-type: none"> • Studied the association between a multi-item measure of marital distress and DSM-IV psychiatric disorders in a population-based survey of individuals in the United States in which there was no upper age exclusionary criterion. • Studied if the associations between marital distress and psychiatric disorders were moderated by gender or age • Marital distress was associated with a range of psychiatric disorders 	<ul style="list-style-type: none"> • Quantitative • Self-report survey 	<ul style="list-style-type: none"> • World Health Organization World Mental Health Survey Initiative version of the Composite International Diagnostic Interview (WMH-CIDI) based on DSM-IV • 14 items (1, 2, 5, 8, 12, 16, 18, 20, 21, 24, 25, 26, 27, and 28) from the Dyadic Adjustment Scale (DAS) 	<ul style="list-style-type: none"> • 2,213 married individuals from National Comorbidity Survey Replication (NCS-R)

(continued)

Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Whisman & Uebelacker (2006). Impairment and distress associated with relationship discord in a national sample of married or cohabiting adults	<ul style="list-style-type: none"> • Marriage • Marital discord • Psychological distress • Impairment 	Article, Empirical	<ul style="list-style-type: none"> • Examined the association between relationship discord, multiple measures of impairment and psychological distress • When controlling for current anxiety, mood and substance use disorder, the association between relationship discord, impairment and psychological distress remained significant 	<ul style="list-style-type: none"> • Quantitative • Self-report survey 	<ul style="list-style-type: none"> • National Comorbidity Survey (NCS) • Distress Index • Composite International Diagnostic Interview (CIDI) 	<ul style="list-style-type: none"> • 2,677 married or cohabiting individuals

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Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Whisman, Uebelacker, & Weinstock (2004). Psychopathol ogy and marital satisfaction: The importance of evaluating both partners	<ul style="list-style-type: none"> • Anxiety • Depression • Marital Satisfaction • Couples 	Article, Empirical	<ul style="list-style-type: none"> • Studied the association between both partners' level of depression and anxiety and both partners' level of marital satisfaction among married couples • Marital satisfaction was predicted by the individual's own level of anxiety and depression (actor effects) and by their spouse's level of depression only (partner effects) • No gender differences were found 	<ul style="list-style-type: none"> • Quantitative • Path analysis & hierarchical linear modeling 	<ul style="list-style-type: none"> • MMPI-2 content scales • Dyadic Adjustment Scale 	<ul style="list-style-type: none"> • 774 couples

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Authors, Year, Title	Focus	Source & Type	Key Points	Methods / Design	Measures/Data Collection	Sample
Zendjidjian, Richieri, Adida, Limousin, Gaubert, Parola, Lancon, & Boyer (2012). Quality of life among caregivers of individuals with affective disorders	<ul style="list-style-type: none"> • Caregiver • Major Depressive Disorder • Bipolar Disorder • Quality of life 	Article, Empirical	<ul style="list-style-type: none"> • Aims of this study were to assess the quality of life (QoL) of caregivers of individuals with affective disorders (MDD and BD), to compare QoL levels with those observed in caregivers of individuals with schizophrenia and in the general population, and to determine the impact of sociodemographic and clinical factors on the caregivers' QoL • QoL lower for caregivers of individuals with affective disorders than controls 	<ul style="list-style-type: none"> • Quantitative • Self-report 	<ul style="list-style-type: none"> • Socio-demographic characteristics of the caregiver and patient • DSM-IV diagnosis and illness duration of the patient • Clinical Global Impression (CGI) of symptom severity • QoL questionnaire: the Short Form 36 (SF36) with physical composite scores and mental composite scores (PCS-SF36 and MCS- SF36) 	<ul style="list-style-type: none"> • 710 caregivers of patients in psychiatric departments of a French public teaching hospital: • 232 caregivers of individuals with affective disorders (115 BD, 117 MDD) • 246 caregivers of individuals with schizophrenia • 232 French age-sex-matched controls

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APPENDIX B

IRB Approval Letter



Pepperdine University
24255 Pacific Coast Highway
Malibu, CA 90263
TEL: 310-506-4000

NOTICE OF APPROVAL FOR HUMAN RESEARCH

Date: September 30, 2015

Protocol Investigator Name: Kaddy Revolorio

Protocol #: 15-09-045

Project Title: Social Support Communication Behavior as a Moderator Between Mental Health and Marital Satisfaction Among Distressed Couples

School: Graduate School of Education and Psychology

Dear Kaddy Revolorio:

Thank you for submitting your application for exempt review to Pepperdine University's Institutional Review Board (IRB). We appreciate the work you have done on your proposal. The IRB has reviewed your submitted IRB application and all ancillary materials. Upon review, the IRB has determined that the above entitled project meets the requirements for exemption under the federal regulations 45 CFR 46.101 that govern the protections of human subjects.

Your research must be conducted according to the proposal that was submitted to the IRB. If changes to the approved protocol occur, a revised protocol must be reviewed and approved by the IRB before implementation. For any proposed changes in your research protocol, please submit an amendment to the IRB. Since your study falls under exemption, there is no requirement for continuing IRB review of your project. Please be aware that changes to your protocol may prevent the research from qualifying for exemption from 45 CFR 46.101 and require submission of a new IRB application or other materials to the IRB.

A goal of the IRB is to prevent negative occurrences during any research study. However, despite the best intent, unforeseen circumstances or events may arise during the research. If an unexpected situation or adverse event happens during your investigation, please notify the IRB as soon as possible. We will ask for a complete written explanation of the event and your written response. Other actions also may be required depending on the nature of the event. Details regarding the timeframe in which adverse events must be reported to the IRB and documenting the adverse event can be found in the *Pepperdine University Protection of Human Participants in Research: Policies and Procedures Manual* at community.pepperdine.edu/urb.

Please refer to the protocol number denoted above in all communication or correspondence related to your application and this approval. Should you have additional questions or require clarification of the contents of this letter, please contact the IRB Office. On behalf of the IRB, I wish you success in this scholarly pursuit.

Sincerely,

Judy Ho, Ph.D., IRB Chairperson

cc: Dr. Lee Kats, Vice Provost for Research and Strategic Initiatives