Eastern Michigan University

DigitalCommons@EMU

Master's Theses and Doctoral Dissertations

Master's Theses, and Doctoral Dissertations, and Graduate Capstone Projects

2023

Dyadic analysis of positive and negative social support behaviors and psychological outcomes in romantic couples

Lucas H. Parnell

Follow this and additional works at: https://commons.emich.edu/theses

 Part of the Psychology Commons

Dyadic Analysis of Positive and Negative Social Support Behaviors and Psychological Outcomes in Romantic Couples

by

Lucas H. Parnell

Thesis

Submitted to the Department of Psychology

Eastern Michigan University

in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

in

Experimental Psychology

Thesis Committee:

Chong Man Chow, Ph.D.

Rusty McIntyre, Ph.D.

Stephen Jefferson, Ph.D.

May 9, 2023

Ypsilanti, Michigan

Dedication

This thesis is dedicated to my family Charles Parnell, Kaia Parnell, Mara-Jay Parnell, and Jessie Gibson. They have given me unconditional Love and support throughout a difficult time. I am excited for the new chapters that life holds for us all and know that we will be together in one way or another. I Love you all. I would like to specially dedicate this to my mother, Kathy Holden, who passed away February 22, 2022. She touched the lives of so many people. Working as a child advocacy lawyer, and later as a special education para educator, she helped numerous children whom most of society had written off. To me, she is better than any mother I could have asked for. Her positivity, humor, honesty, humility, compassion, and humor continue to truly make this world a better place. As she taught me to believe in the goodness of others, I can only hope to help humanity as much as she did. Spoken words are only one form of communication, but I hope to speak again. I Love you.

Acknowledgments

The process of completing this thesis has been a unique, winding, and stimulating journey which I would not have been able to navigate without the help of many people. As a social scientist, I believe that no piece of work is merely the product of any individual's efforts, but also a manifestation of influences and experiences. I would like to acknowledge some of the many people who influenced my academic career and provided me with the experiences which shaped my perceptions of our remarkable world. This work would not be possible without the help of my thesis committee Dr. Chong Man Chow, Dr. Stephan Jefferson, and Dr. Rusty McIntyre. A special thanks goes out to Dr. Chow who exhibited a great deal of patience and understanding throughout the process of completing this thesis. His mentoring and knowledge propelled me to be the scientist I am today. I would also like to thank Dr. Jeremy Tost, Dr. Clay King, Dr. Chelsie Hess, all the professors I have encountered at both Eastern Michigan University and Colorado Mesa University who have largely shaped my academic career. Lastly, I would like to thank my amazing friends who have maintained my sanity throughout my academic career.

Abstract

The current study examined the effect of social support behaviors on psychological adjustment in couples. Couples (N = 123) completed surveys assessing depressive and anxiety symptoms. Observational support interactions were conducted to measure partners' positive and negative affective support behaviors. Structural equation modeling and actor-partner interdependence models (APIM) were used to estimate effects. Results highlight the unfavorable effects of negative social support behaviors on one's own depression symptoms. Additionally, men's, but not women's, negative support behaviors were found to be associated with elevated partner depression symptoms. No significant predictors were found in models predicting anxiety. The combination of partners' support behaviors was not predictive of depression or anxiety symptoms in men or women. Future research should continue to examine the complex relationship between social support and psychological adjustment.

Keywords: social support, depression, anxiety, couples, dyadic data

Table of Contents

List of Tables

List of Figures

Dyadic Analysis of Positive and Negative Social Support Behaviors and Psychological Outcomes in Romantic Couples

Interpersonal relationships and social support are key to establishing mental well-being (Langford et al., 1997). Support from romantic partners is particularly important, as partners are often a primary source of social support in adulthood (Buhrmester, 1998). Not all support behaviors, however, lead to positive outcomes (Lee et al., 2020). Whereas some studies have established a connection between positive social support behaviors (e.g., empathy, sympathy, and encouragement) and lower rates of depression (Buschmann & Hollinger, 1994), some negative social support behaviors (e.g., communication in a frustrated, annoyed, or angry tone) have been linked to higher levels of depression (Rehman et al., 2010). The link between social support and psychological adjustment seems to be complex within the context of a close relationship. It is possible that the interpersonal support tendencies between two members of a relationship that are intended to be supportive may be maladaptive and negatively impact the mental health of each member of the relationship (Dixon-Gordon et al., 2015). This suggests couples that can effectively provide support may have better mental health outcomes than couples with dysfunctional support tendencies. Previous research has established connections between the congruency of couples' social support behaviors and relationship satisfaction (Chow & Ruhl, 2018); however, little is known about the congruency of social support in couples and its impact on members' mental health outcomes. Therefore, the proposed study will examine the effect of positive and negative social support behaviors in couples and their association with each member's mental health outcomes using the actor-partner interdependence model (APIM). The current study adds to the relatively few studies that utilize observations to study combined social support behaviors between romantic partners and their relation to psychological outcomes.

Conceptualizing Social Support

Past research has used various operational definitions of social support (Gariepy et al., 2016). One reason for this inconsistency is the wide variety of concepts that are categorized as social support. A concept that is often combined with social support, which consists of resources available to an individual in the form of social relationships, is *social integration*, or the extent to which an individual engages in social relationships (e.g., social network; Cohen et al., 1985). Like social support, it is difficult to measure the full breadth of an individual's social integration, leading to a variety of measures that materialize a variety of concepts that are all slightly different. *Role-based integration* measures the extent to which an individual participates in different types of social relationships (e.g., spouse, parent, friend, co-worker), while *social participation integration* measures the extent to which an individual participates in social activities (e.g., visiting friends, attending a party, book club; Brissette et al., 2000). Both measures are within the general umbrella of social integration such that they are defined by whether people are integrated into a social support network; however, the nuances of how each definition leads to two distinct social integration concepts. Similarly, past research has examined the varying types of social support.

One important conceptualization of social support is Weiss's (1974) model. He organized social support into four subcategories: emotional, instrumental, appraisal, and informational support. Emotional support, which involves caring for others using sympathy, esteem boosting, etc., is the most typical conceptualization of social support, especially in psychological research. Instrumental support involves some sort of aid like payments or gifts, appraisal support entails giving feedback or information regarding self-evaluation, and informational support implies giving advice or the use of relevant information to aid in decision-making. While these

subcategories are useful in distinguishing various types of social support, they can often be difficult to differentiate when considering other operational definitions of interpersonal support. For instance, self-esteem support, a type of support that intends to improve how others feel about themselves, could be considered emotional or appraisal support (Berkman et al., 2000). Varying definitions have also led to large variations in the measurement of social support.

The current study conceptualizes social support as two categories of specific behaviors: positive and negative support behaviors. This dimensionality is similar to Guy Bodenmann's theory of dyadic coping, which classifies dyadic coping strategies as positive or negative. Positive coping strategies include common dyadic coping (both partners participate to address an issue), supportive dyadic coping (one partner provides support to another), and delegated dyadic coping (one partner takes over tasks of the other to alleviate stress), while negative coping strategies include ambivalent coping (half-hearted, tentative), hostile coping (ridiculing, insulting, disrespectful), and superficial coping (shallow, empty, uninterested; Bodenmann, 1997). Thus, the current study specifically defines positive social support behaviors as smiling, laughing, humorous statements, and statements that make the partner feel understood and validated, jokes, proposals that are clearly facetious solutions to the problem, statements emphasizing the humorous aspects of a situation or problem, paraphrasing the partner's statements, reflecting feelings, giving positive feedback, and expressing care, concern, or understanding of the person's feelings and negative social support behaviors as facial and verbal expressions of distress or sadness, numbing to avoid emotional reactions, prolonged negative emotional expression, or rehashing negative emotions/experiences.

Measuring Social Support

Self-Report Method

As is true of many psychological constructs, self-report is the most common way researchers measure social support (Gottlieb & Bergen, 2010). Most self-report measures of social support, like the Social Support Questionnaire (SSQ), include items about both the type of perceived social support received and the extent to which perceived support is received from various individuals (Sarason et al., 1983). For instance, the SSQ prompts participants to list individuals that fit a supportive description. These types of measures include social support as well as social integration. Other measures, like the Interpersonal support evaluation list (ISEL), include items relating to whether the individual feels they have social support without taking into account the extent or various sources of support (Brookings & Bolton, 1988). Both the SSQ and ISEL are measures of *perceived support*. Another form of social support typically measured by self-report is *received support*, which measures the numerous types of support that an individual receives (Gottlieb & Bergen, 2010). Though this can be useful in measuring different support methods, it is difficult to account for every type of social support. Because social support can be difficult to accurately measure, many researchers choose to examine perceived social support. This offers the value of perspective from the individuals in question but is subject to perceptual biases and inaccuracies.

Some self-report measures include specifications of the source of support; however, the categorization of sources is typically specified to the intent of individual studies. For instance, many studies investigating support among college students use the Multidimensional Scale of Perceived Social Support (MSPSS), which measures support from family, friends, and significant others (Zimet et al., 1988), whereas some industrial-organizational studies examine

how workers perceive/receive support from family, coworkers, and supervisors (Baruch-Feldman et al., 2002).

All self-report methods of measuring social support are subject to self-report biases (Barrera, 1986). Enacted social support, which is the observable behaviors enacted in social interactions, is a more objective construct of social support. Studies have shown that perceived and enacted social support are, in fact, separable constructs with distinguishable impacts on mental health outcomes (Barrera, 1986; Lakey et al., 2010). Thus, the current study utilized an observational method of capturing social support behaviors in couples.

Observational Method

Observational measures of support are far more time-consuming and, therefore, are used less frequently in social research (Verhofstadt et al., 2007). The most common form of observational method used to measure social support is observed interactions, which involves monitoring two or more individuals conversing in conversation, usually in a laboratory setting (Barrera, 1986). Mostly, these conversations are semi-structured. Participants are given a prompt tailored to the constructs of interest for each study. Dyadic support interactions typically involve exposing some sort of vulnerability in one participant to see how the other offers support. Participants might be asked to talk about something that is stressful or something they view as problematic in their lives. Observed interactions are useful for identifying details of support behaviors in a typical interaction. Observed methods offer may be more accurate in measuring some concepts of support, and often measure behaviors that relate more closely to specific constructs (e.g., criticism, complimenting). By directly measuring observed behaviors, even latent variables, like varying constructs of social support, can be measured more accurately. Observational studies are particularly important in social support literature because constructs of

support measured in observational and self-report studies are distinctly different. Observational studies tend to measure enacted support while self-report studies tend to measure perceived support. Enacted support has been found to have a less consistent relationship, and in some cases no relationship, with psychological well-being when compared to perceived support (Marroquin, 2011). This could be because individuals do not perceive maladaptive support as social support, only reporting support they perceive as adequate. This possibility makes observations of social support all the more important. Even when using daily-diary forms of self-report, the data will reflect the biases and perspectives of one individual (Gunthert & Wenze, 2012). Observations are not influenced by any one individual's perspective and allow for the inspection of the actual behaviors that create effective social support.

Social Support in Couples

Social support plays a significant role in romantic relationships. There are a host of mental and physical benefits for individuals including protection against depression and other psychopathologies (Coyne & Downey, 1991) and positive effects on the cardiovascular, endocrine, and immune systems (Uchino et al., 1996). Moreover, there are advantages to interactive support within couples beyond individual benefits. Social support and social support adequacy have been found to significantly impact marital quality (Dehle et al., 2001). Many aspects of interpersonal and romantic relationships, such as marital quality and self-disclosure, have beneficial effects on individual psychopathology as well (Whisman & Kaiser, 2008; Khan & Garrison, 2009), creating a circular effect in which social support plays a role in overall well-being.

Significant Others as Primary Support Givers

Romantic partners play a particularly important role as providers of support in adulthood. This is not always true, as people tend to rely on different sources of social support throughout their lifetime (Buhrmester, 1998). In childhood, family members are the biggest provider of support. This typically begins to change around middle school age when preteens expand their social networks and begin to rely on friends as sources of support. Further, studies have found that, for adolescents, a majority of daily stressors revolve around interpersonal conflict with friends or significant others (Chow & Ruhl, 2014). Alsubaie et al. (2019) found that support from friends was a stronger predictor of depression and quality of life in college-aged individuals when compared to support from family members. This continues until about the mid-twenties when individuals start to rely more on their significant others. From this point forward, significant others typically remain one of the main sources of social support throughout the remainder of life.

It is noteworthy, however, that these stages of life and sources of support are a generalization to the most common forms of relationship progression. Social support and its effects are specific to individual circumstances. A study conducted in Japan found that, amongst those married with children, support from children had a weak impact on positive well-being, whereas support from children had a larger impact on positive well-being in those who were not married with children (Okabayashi et al., 2004). This suggests that the importance of support from varying sources changes depending on the nature of those relationships and the extent of social integration.

Social Support and Psychological Adjustment

Though previous research has not been able to distinguish a specific mechanism by which significant others impact mental health outcomes, there is a clear link between romantic involvement and various health benefits. Married individuals, regardless of sexuality, and unmarried individuals in committed relationships have higher psychological well-being and lower rates of depression when compared to single individuals (Wienke & Hill, 2009; Koball et al., 2010). While many connections between social support and psychological well-being are firmly established, here the specified behaviors that fall under the umbrella of social support behaviors and their connection to mental health are examined.

Positive Social Support Behaviors

A fundamental component of many relationships is the discussion of negative life events. This is a key aspect of self-disclosure that can increase perceived closeness in relationships (Rose, 2002). Disclosing personal vulnerabilities and negative experiences is necessary to further build intimacy (Waring & Chelune, 1983). In other words, discussing problems in a positive and supportive manner can foster growth in a relationship.

Many of the intrapersonal aspects of problem discussion can lead to positive relationship outcomes (Rose et al., 2007; Waller & Rose, 2010), which is related to positive affect for individuals (Leach et al., 2013). It is well known that self-disclosure is related to higher levels of closeness (Slatcher, 2010) and intimacy (Waring & Chelune, 1983) within a relationship. The sharing of personal details is crucial to even initiate a close relationship (Sprecher et al., 2013). Self-disclosure can also have positive impacts on individuals. Interpersonal sharing can boost self-esteem, relationship esteem (feeling competent as a partner), and responsiveness (Sprecher & Hendrick, 2004). There are psychological benefits that come from positive interactions when

sharing personal details. As a person in a relationship learns that their relationship counterpart is nonjudgmental and supports the exchange of personal details, they are more likely to continue to disclose such information while feeling good about it (Rose et al., 2014). This therapeutic effect of sharing personal details provides a link between problem discussion and its positive outcomes.

Most social support studies examine populations that are experiencing or have experienced a significantly stressful event (e.g., cancer treatment), while very few studies examine the general population (Falconier & Kuhn, 2019). Even fewer studies examine positive support practices in the general population, as most research is aimed to identify problematic behaviors in stressful situations. Research with cancer patients has found mixed results regarding Bodenmann's positive coping strategies and their impact on psychological well-being. For instance, in couples undergoing treatment, common dyadic coping (Meier et al., 2019) and supportive dyadic coping (Chen et al., 2021) were positively associated with relationship quality and stress relief but negatively associated with psychological distress. Delegated support (i.e., taking over a partner's tasks) was found to be associated with increased depressive symptoms among cancer patients (Bodschwinna et al., 2021). These findings could be due to the overwhelming burden of cancer treatment; however, it raises questions about the effectiveness of positive dyadic coping.

Negative Social Support Behaviors

Though self-disclosure and mutual support can be beneficial for building relationship closeness and intimacy (Sprecher et al., 2013), what is good for the relationship is not always good for the individual. For instance, co-rumination is a dyadic social support pattern that may have adverse effects on individuals' mental health (Rose, 2002; Waller & Rose 2010). Co-

rumination is the excessive discussion of problems within a dyadic relationship (Rose, 2002). It blends the concepts of self-disclosure, which is the sharing of personal information with another, and rumination, which consists of obsessively thinking about negative subject matter (Rose, 2002). Many of the interpersonal aspects of co-ruination can lead to positive relationship outcomes (Rose et al., 2007; Waller & Rose, 2010); however, negative outcomes tend to fall on the individuals. Rumination can lead to anxiety (Olatinji et al., 2013), depression (Papageorgiou, 2003), and a host of other negative effects while co-rumination has been associated with higher depressive symptoms (Waller & Rose 2010). Intuitively, it seems that repeatedly rehashing negative aspects of one's life can lead to negative psychological effects.

Co-rumination is an example of interpersonal emotion regulation with negative impacts on psychological adjustment, providing evidence that some forms of interpersonal support can be maladaptive. Consistent with this idea, Dehle et al. (2001) found perceived social support and perceived social support adequacy to be unique predictors of marital quality and depressive symptoms, further exemplifying that social support can have detrimental effects and that people can perceive flawed support strategies.

Similarly, research regarding Bodenman's negative dyadic coping has found that negative coping behaviors from one's partner can negatively impact their well-being. Regan et al. (2014) found that the perception of a partner's negative dyadic coping was related to anxiety and depression in cancer patients, meaning that the support behaviors of their partners impacted patients' well-being and ability to cope with the ominous situation of cancer treatment (those who participate in stress-related communication tend to be depressed). These findings hold consistent when examining specified support behaviors. Hostile and ambivalent coping behaviors are associated with negative individual-level functioning (Falconier & Kuhn, 2019).

Though the distinction between positive and negative dyadic coping strategies is not always concrete, coping behaviors routed in negativity, ambivalence, or superficiality tend to lead to detrimental psychological effects (Chen et al., 2021).

Congruence of Social Support in Couples

Humans are inherently social beings; in fact, studies have found that brain development and learning are dependent on social-emotional interaction (Immordino-Yang et al., 2019). It is impossible to fully understand the nature of an individual without examining the people around them. While individual perspectives are important in social support research, to better capture the nature of a relationship, perspectives from all parties are needed (Kelly et al., 2001). Interdependence theory (Kelly et al., 2001) states that individuals who are in frequent contact will impact each other in various ways. To fully understand the impacts of social support within a couple, it is necessary to examine how each partner's social support behaviors interact or fit with the social support behaviors of their significant other. Revenson et al. (2005) suggest that couples who coordinate mutually supportive coping have better psychological outcomes, but that these coping strategies do not have to be uniform within a couple to obtain such outcomes. For instance, one partner may prefer relaxation and distractions in times of stress while the other prefers management of the stressful situation. Similarly, Bodenmann (1997) suggests that dyads who participate in positive dyadic coping have better psychological outcomes than those that participate in negative dyadic coping. Together, these theories suggest that couples in which both partners practice positive social support behaviors would have the best psychological outcomes. Here the impacts *congruence* and *incongruence* of social support and coping behaviors are theorized. The current study defines *congruence* as both couple members having similar social support behaviors (i.e., both high in positive social support, both high in negative social support)

and *incongruence* as partners having dissimilar social support behaviors (i.e., one partner high in positive social support while the other partner is low in positive social support).

Relatively few studies, however, have examined the impact of *congruence* or *incongruence* of social support in couples and its impact on psychological well-being. One study found that congruence in blunting (avoiding information regarding a stressful situation) between men with cancer and their caregivers was associated with better psychological outcomes in men (Barnoy et al., 2006). In other words, men who avoided stressful information regarding their cancer had less psychological distress when their wives also avoided said stressful information. It may be that men experience psychological distress when involved in situations in which they have little control, such as cancer treatment, and attempt to regain control using blunting. This attempt to regain control is more successful when partners also participate in blunting; however, this congruence in blunting was associated with negative psychological effects in female caregivers. In this case, having congruent coping behaviors was beneficial for male patients, but harmful for female caregivers.

Further, research has found more perceived congruency of common dyadic coping in couples to be associated with less psychological distress in female breast cancer patients, but not their male caregivers (Meier et al., 2019). Congruence of dyadic coping was a stronger predictor of psychological distress than the frequency of dyadic coping, suggesting that, for female cancer patients, having similar coping practices is more important than the extent that these practices are used (Meier et al., 2019). It is possible that congruency in coping, and social support behaviors, may have gender differences.

Another study found that in couples with multiple sclerosis, incongruence in problem-focused coping was associated with lower levels of depression and better psychological

adjustment in both partners (Pakenham, 1998). Contrary to the researcher's hypothesis, Pakenham (1998) found that both partners also experienced lower levels of depression and better psychological adjustment when discrepancies in emotion-focused coping were present. This suggests that there is value to differing coping practices, both practical and emotional based, within couples.

In summary, previous findings align with the perspectives of Revenson's congruence model of coping and Bodenmann's dyadic coping theory in that they suggest investigating congruence (or incongruence) in support and coping among couples provides valuable insights on psychological outcomes that individual-level research could not. However, past studies are limited in multiple ways. A large portion of studies examining dyadic coping and social support in couples consist of participants going through cancer treatment or other significant life stressors. Additionally, many past studies have used self-report data with varying social support constructs. Therefore, little is known about the effects of the congruence of positive and negative social support behaviors on psychological outcomes of romantic partners in non-distress situations. Furthermore, the congruence and incongruence effects of social support in couples on their psychological outcomes may vary depending on the types (e.g., emotional, problem-focused) and valances (i.e., positive or negative). Unfortunately, existing research is scarce to illuminate the complexity of the links between couples' social support and psychological adjustment.

The Current Study

The current study examined specific social support behaviors, which were categorized as positive (e.g., smiling, laughing, giving positive feedback) or negative (e.g., facial and verbal expression of distress or sadness, rehashing negative emotions/experiences). It was hypothesized

that negative support behaviors in one couple member would positively predict symptoms of depression and anxiety for their partner and positive support behaviors from one couple member would negatively predict symptoms of depression and anxiety in their partner. This would support interdependence theory (Kelley et al., 2001), demonstrating that the way in which social support is provided impacts psychological outcomes. Similarly, it was hypothesized that enacting negative support behaviors would positively predict one's own depressive and anxiety symptoms and that enacting positive support behaviors would negatively predict one's own depressive and anxiety symptoms.

The current study also hypothesized that a couple's congruity of support behaviors would negatively predict depression and anxiety in both couple members. For instance, a couple in which both members exhibit high levels of negative support behaviors would produce better psychological outcomes for its members than a couple in which one member exhibits high levels of negative support behaviors while the other exhibits high levels of positive support behaviors. This would support dyadic coping theory (Bodenmann, 1997), suggesting that coordinated social support strategies, like coordinated coping strategies, are beneficial for psychological well-being. Examining the congruency of social support behaviors provides a unique insight to evaluate the extent to which the alignment of these behaviors enhances psychological outcomes regardless of the valence in which they were provided. When examining incongruency in social support behaviors, there were two competing hypotheses. It is possible that positivity in one partner would provide a buffer from unfavorable psychological outcomes, even when their partner practices negative social support behaviors. Alternatively, negativity from one partner could increase unfavorable psychological outcomes, even when their partner practices positive social support behaviors.

Method

Participants

The sample used for this study originated from a larger 2011 study, conducted in the United States, involving social support and relationship quality in couples. The sample consisted of participants from 123 male-female couples. The data only offered a binary (i.e., male/female) response for participants to self-report their gender. Additionally, no information was collected regarding participant sexuality aside from the knowledge that they were involved in a male-female relationship. To be eligible for the study, couples were required to be involved in a romantic relationship for a minimum of 6 months. Participant ages ranged from 18 to 60 years (M = 26.91, SD = 8.46), while the length of relationships spanned approximately 1/2 to 27 years (M = 4.77, SD = 5.58). Of couples included in the study, 68% were dating and 32% were married. The sample ethnicity distribution included approximately 53.9% White (14.3% Hispanic, 13.1% Asian, 1.2% Black, and 8.5% other) while 9% did not report ethnicity. As compensation for participation in the study, 71 couples received $50, and 52 couples received research credit for courses in psychology. Posters, e-mails, and internet postings were used to recruit participants.

Procedure

Participants completed a series of questionnaires and video-recorded interactions in a laboratory setting. Participants completed questionnaires in a different room than their partners. The questionnaires included questions regarding relationship features, psychological health, and demographic information. Then, couples participated in a video-recorded interaction in which they were asked to recall a stressful or bothersome situation not involving their relationship (e.g., work/school troubles, issues with friends). Both couple members were given 6 minutes to discuss

the issue with their partner (12 minutes total). One couple member was randomly selected to discuss their issue first. The second couple member was instructed to respond to their partner as if conducting a normal conversation to best simulate interactions that would occur naturally. After the first 6-minute discussion, another 6 minutes were dedicated to the second couple member's issue.

Measures

Psychological Adjustment

Participants' psychological adjustment was measured using the six-item depression (e.g., "feeling hopeless about the future") and the six-item anxiety (e.g., "feeling tense or keyed up") subscales of the Brief Symptom Inventory (BSI; Derogatis & Fitzpatrick, 2004) found in Appendix A. Participants were asked to rate how often they felt statements were true on a four-point scale of 1 = *never*, 2 = *rarely*, 3 = *sometimes*, and 4 = *always*. Internal consistency was acceptable for male depression (α = .77), female depression (α = .85), male anxiety (α = .66), and female anxiety (α = .72)

Social Support Behaviors

Observational data were collected from couples' social support interactions. A modified version of the Brief Romantic Relationship Interaction Coding Scheme (BRRICS; Appendix B) was used to code couples' positive and negative affective behaviors (Humbad et al., 2011). The BRRICS positive affective behaviors included smiling, laughing, making humorous statements, and responses intended to make a partner feel understood and validated (i.e., outright jokes of the "one-liner variety," proposals that are clearly facetious solutions to the problem, statements emphasizing the humorous aspects of a situation or problem, paraphrasing the partner's statements, reflecting feelings, giving positive feedback, and expressing care, concern, or

understanding of the person's feelings). The negative affective behaviors included facial and verbal expressions of distress or sadness, numbing or avoiding emotional reactions, and rehashing negative emotions or experiences. A scale was created to exhibit positive and negative behaviors where scores ranged from 1 to 6, where 1 = *never*, 2 = 1–2 *instances*, 3 = *a few/several instances*, 4 = *moderate amounts—about half of the time*, 5 = *substantial amounts—over half the time but not the entire time*, and 6 = *constantly throughout the interaction*.

Social support interactions were coded by two undergraduate research assistants who were trained by a graduate researcher. Coders accomplished high reliability using training videos. Each coder rated 75% of the recorded interactions, with 50% of the interactions being rated by both coders. For interactions rated by both coders, composite scores were calculated by taking the average of the two scores. All dimensions achieved adequate interrater reliability. For men, intraclass correlations were .75 for positive behaviors and .74 for negative behaviors. For women, intraclass correlations were .77 for positive behaviors and .66 for negative behaviors.

Analysis

To capture the effects of interdependence within a romantic relationship, the current study utilizes dyadic data (i.e., data collected from two different sources; Kenny et al., 2006). In this case, each member of a couple serves as a source of data that forms a dyad. Because all couples included in the study consisted of one male and one female, the dyads are said to be distinguishable. Indistinguishable dyads consist of members who are drawn from the same population such as same-sex friends or coworkers. The status of a dyad as distinguishable or indistinguishable is determined by the researcher. For instance, a study examining social support in dyads of same-sex friends could treat the dyads as distinguishable with one friend being the support giver and the other being the support receiver. For this study, couples are treated as

distinguishable because a gender effect may exist in social support behaviors and psychological outcomes, as research has consistently stated gender differences in mental health (Matud et al., 2003).

One of the most commonly used techniques for analyzing dyadic data in a relational setting is the actor-partner interdependence model (APIM). As its name suggests, the APIM captures the interdependence of two dyad members. Two parameters are central to the APIM construction: actor effects and partner effects. Actor effects are the impact of a person's predictor variable on their own outcome variable and partner effects are the impact of a person's predictor variable on their partner's outcome variable (Kenny & Cook, 1999). In this study, actor effects are the effect of a person's social support behaviors on their own psychological outcomes and partner effects are the effect of a person's social support behaviors on their partner's psychological outcomes. A model that includes only actor and partner effects is known as the basic APIM.

To incorporate the effect of how couples' social support behaviors fit together, the current study uses moderation or interaction effect. Within the APIM framework, there are multiple types of dyadic moderators, the first of which is *within-dyad moderators*. Within-dyad effects are variables that differ between members of a dyad (Garcia, et al., 2015) and are the simplest form of dyadic moderation. For example, in this study, gender is a within-dyad effect because each couple consists of one male and one female. This type of moderation is common among distinguishable dyads. *Between-dyad moderators* are variables that vary across dyads but are consistent between two members of a dyad. In this study, the length of a couple's relationship is a between-dyad variable. The length of a relationship does not differ between partners but does differ from couple to couple. Lastly, *mixed moderators* are variables that vary between dyad

members and between dyads. Social support behaviors can be a mixed moderator because they can be different between partners and can vary from couple to couple.

To test the primary hypotheses of the current study, a moderated actor-partner interdependence model was used. The model estimated the effect of positive and negative social support behaviors on one's own depression and anxiety (actor effect) and one's partner's depression and anxiety (partner effects). Mixed moderators were estimated by multiplying the actor and partner scores for positive and negative support behaviors (actor-partner interactions). Four interaction variables were added to assess the moderation effects of congruency in couples' positive and negative support behaviors on partners' depression and anxiety (actor positive support behaviors*partner positive support behaviors, actor positive support behaviors*partner negative support behaviors, actor negative support behaviors*partner positive support behaviors, actor negative support behaviors*partner negative support behaviors). The model allows for the interdependence of partners in explanatory and dependent variables through correlations. Significant interactions would suggest that particular pairings of positive and negative social support behaviors within a couple would have an effect on depression or anxiety that exceeds the combination of their individual effects. Furthermore, gender differences in the actor, partner, and actor-partner interactions will be examined by including gender as a within-couple moderator. The aforementioned APIM was analyzed using R's "lavaan" package (Rosseel, 2012).

IRB approval can be found in Appendix C.

Results

Preliminary Analyses

Means, standard deviations, and correlations of the variables of interest can be found in Table 1. As expected, women's depression was significantly associated with men's depression. Similarly, men's and women's anxiety are weakly but significantly associated. Men's positive support behaviors were strongly correlated with women's positive support behaviors and men's negative support behaviors are strongly associated with women's negative support behaviors, meaning that couple members tend to have similar social support behaviors.

Women's negative social support behaviors were significantly associated with their depression symptoms. Men's negative social support behaviors were also significantly correlated with women's depression symptoms. Men's and women's positive support behaviors were not significantly correlated to any psychological adjustment. Additionally, men's and women's positive support behaviors had a significant negative association with their own negative support behaviors, meaning that generally, when one exhibits higher levels of negative support behaviors, they do not also exhibit higher levels of positive support behaviors.

Table 1

Means, Standard Deviations, and Correlations

Variable	*M*	*SD*	1	2	3	4	5	6	7	8
1. Woman Anxiety	1.96	0.48								
2. Woman Depression	1.84	0.56	.53**							
3. Man Anxiety	1.88	0.39	.21*	.23*						
4. Man Depression	1.79	0.48	.24**	.21*	.44**					
5. Woman Negative SSB	2.84	0.76	.16	.21*	-.01	.01				
6. Woman Positive SSB	3.75	0.82	-.06	-.12	.05	.11	-.64**			
7. Man Negative SSB	2.85	0.85	.12	.28**	.02	.12	.43**	-.44**		
8. Man Positive SSB	3.70	0.90	-.03	-.09	.06	.09	-.35**	.63**	-.70**	
9. Length of Relationship	4.77	5.58	-.10	-.17	-.20*	.06	.02	-.12	.24*	-.21*

Note. SSB is used to represent social support behaviors. * indicates $p < .05$. ** indicates $p < .01$.

Primary Analysis

Model Specification

Two APIMs were specified, predicting depressive symptoms and anxiety symptoms, respectively. The lavaan package (Rosseel, 2012) in *R* was used for the analyses. For both models, a saturated baseline model was first specified to include all actor, partner, and actor-partner interaction effects. Subsequent models were tested against this model by examining chi-square and fit indices changes. Then, a model containing no interaction terms was tested against the baseline model. A significant reduction in model fit would suggest that the actor-partner effects were significant. In other words, this model examined if the combination of social support behaviors between partners would predict their psychological outcomes. Based on the model fit,

it was decided whether actor-partner effects were included, or excluded, from the subsequent models. Finally, a series of models were tested with each actor and partner effect constrained to be equal across gender. A significant change in the model fit against the prior model would suggest a gender difference in these effects. If actor-partner effects were included in a given model, similar procedures would be conducted for gender differences in these effects. If model comparisons show no evidence of gender differences for a given path, it would be constrained to be equal in the final model.

Depression Symptoms. First, a saturated baseline model was estimated with all actor, partner, and actor-partner interaction effects included (Model 1; see Table 2). Then, when excluding the actor-partner interactions (Model 2), the model fit did not change significantly $\Delta\chi^2(8) = 9.711$, $p = .29$. Therefore, all interactions were constrained to be 0 in subsequent models, effectively removing them. The hypothesis regarding the combination of social support behaviors between partners in relation to their depression symptoms was not supported. Henceforth, Model 2 served as the basis for subsequent model comparisons. Constraining the positive support actor effect (Model 3) to be equal across gender did not significantly change the model fit $\Delta\chi^2(1) = 2.052$, $p = .15$ when compared to Model 2. However, the overall fit indices were impacted negatively, therefore, the positive support actor effect was allowed to vary across gender. Constraining the negative support actor effect to be equal across gender (Model 4) did not significantly change model fit $\Delta\chi^2 (1) = 1.363$, $p = .24$ when compared to Model 2. Overall fit indices remained in acceptable ranges. With no significant chi-square change and no substantially negative impact on fit indices, it was determined the negative support actor effect should be constrained to be equal across gender in the final model. Constraining the positive support partner effect to be equal across gender (Model 5) did not significantly change model fit

$\Delta\chi^2$ (1) = .283, p = .60. Overall fit indices remained in acceptable ranges. With no significant chi-square change and no substantially negative impact on fit indices, it was determined the positive support partner effect should be constrained to be equal across gender. Constraining the negative support partner effect to be equal across gender (Model 6) significantly changed model fit $\Delta\chi^2$ (1) = 4.636, p = .03 in comparison to Model 2. Additionally, model fit indices were negatively impacted. Thus, the negative support partner effect was allowed to vary across gender in the final model.

Table 2

Summary of Model Comparisons Predicting Depression Symptoms

Model	χ^2	*df*	Comparison	$\Delta\chi^2$	*p*	Δdf	CFI	TLI	RMSEA	SRMR
1. Saturated	0	0	-	-	-	-	-	-	-	-
2. Interactions removed	10.105	8	2 vs 1	9.711	.286	8	.931	.835	.042	.007
3. Equal actor effect positive	11.763	9	5 vs 2	2.052	.152	1	.888	.764	.050	.048
4. Equal actor effect negative	11.075	9	6 vs 2	1.363	.243	1	.916	.822	.043	.013
5. Equal partner effect positive	9.995	9	7 vs 2	.2834	.595	1	.960	.915	.030	.026
6. Equal partner effect negative	14.347	9	8 vs 2	4.636	.031	1	.783	.542	.069	.021
7. Equal actor effect negative, partner effect positive	11.092	10	9 vs 2	1.381	.501	2	.956	.916	.030	.012

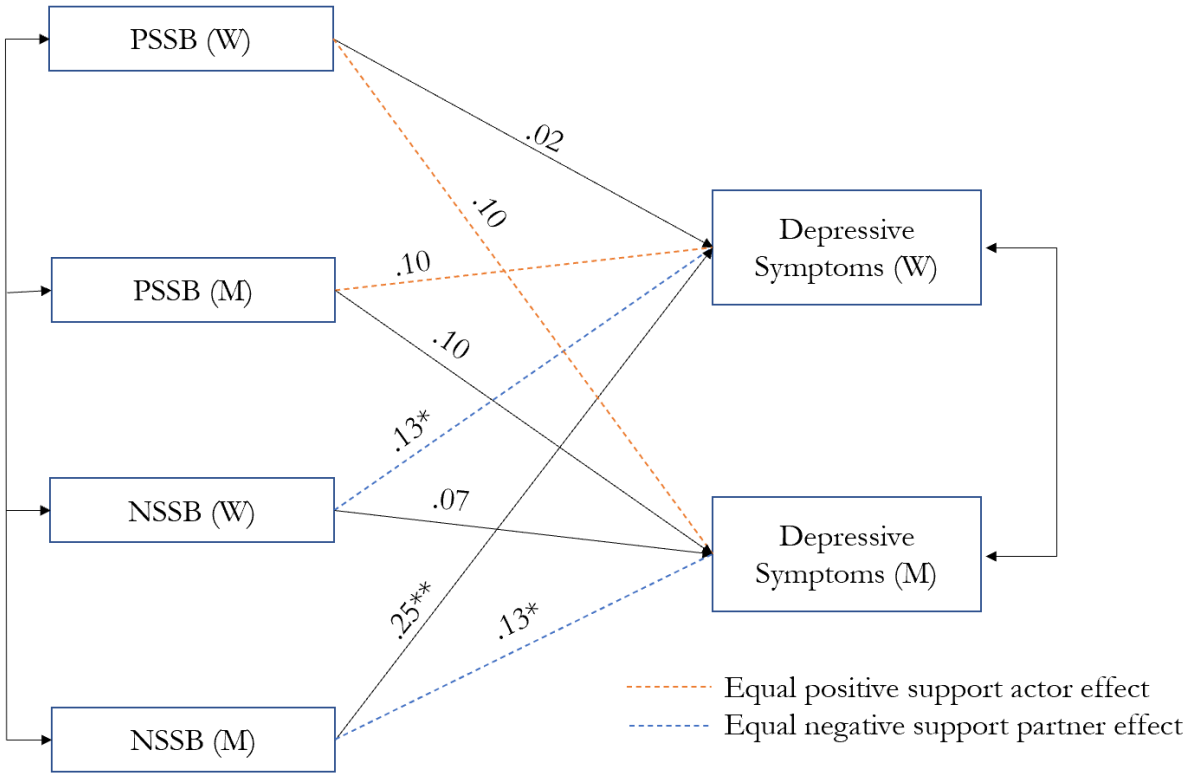
Subsequently, the final model predicting men's and women's depression (Model 7) constrained one actor and one partner effect to be equal $\chi^2(10)$ = 11.09, p = .35; CFI = .96; TLI = .92; RMSEA = .03. A chi-squared comparison test showed no significant difference between Model 7 and Model 2 $\Delta\chi^2$ (2) = 1.381, p = .50. In summary, the negative social support behavior actor effect was constrained to be equal across gender meaning women's negative support behaviors predicting their own depression was set equal to men's negative support behaviors predicting their own depression. Additionally, the positive social support behavior partner effect was constrained to be equal across gender meaning women's positive support behaviors

predicting men's depression was set equal to men's positive support behaviors predicting women's depression.

Regression coefficients for the final model can be found in Figure 1. Supporting the hypothesis, one's own negative social support behaviors positively predicted one's own depressive symptoms. Additionally, in support of the hypothesis, men's negative support behaviors positively predicted women's depressive symptoms; however, women's negative support behaviors did not predict men's depressive symptoms. Contrary to the hypothesis, one's own positive support behaviors did not predict one's own depressive symptoms. Similarly, one's own positive support behaviors did not predict their partner's depressive symptoms.

Figure 1

Regression Paths and Coefficients for APIM Predicting Depressive Symptoms



Note. PSSB is used to represent positive social support behaviors. NSSB is used to represent negative social support behaviors.

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

Anxiety. Similar model specification procedures were used for models predicting anxiety. First, a saturated baseline model was estimated with all actor, partner, and actor-partner interaction effects included (Model 1; see Table 3). Then, when excluding the actor-partner interactions (Model 2), the model fit did not change significantly $\Delta\chi^2(8) = 3.462$, $p = .90$. Therefore, all interactions were constrained to be 0 in subsequent models. After this point, Model 2 served as the basis for subsequent model comparisons. Constraining the positive support actor effect to be equal across gender (Model 3) did not significantly reduce model fit $\Delta\chi^2(1) = 0.115$,

p = .73 when compared to Model 2. Furthermore, model fit indices for Model 3 did not have any substantial changes in comparison to Model 2. Constraining the negative support actor effect to be equal across gender (Model 4) did not significantly reduce model fit $\Delta\chi^2(1) = 0.012$, p = .92 when compared to Model 2. Model fit indices did not have substantial changes from Model 2 to Model 4. Constraining the positive support partner effect to be equal across gender (Model 5) did not significantly reduce model fit $\Delta\chi^2(1) = 0.148$, p = .70 when compared to Model 2. Model fit indices remained in acceptable ranges. Constraining the negative support partner effect to be equal across gender (Model 6) did not significantly reduce model fit $\Delta\chi^2(1) = 0.999$, p = .32 when compared to Model 2. Model fit indices remained in acceptable ranges. Given that path constraints on each actor and partner effect showed no significant changes in model fit or model fit indices, the final model constrained all actor and partner effects to be equal across gender (Model 9) χ^2 (12) = 5.91, p = .92; CFI = 1.00; TLI = 11.68; RMSEA = .00. There was no significant chi-squared change when comparing Model 9 to Model 2 $\Delta\chi^2(4) = 2.452$, p = .65. Regression coefficients for this model can be found in Figure 2.

Table 3

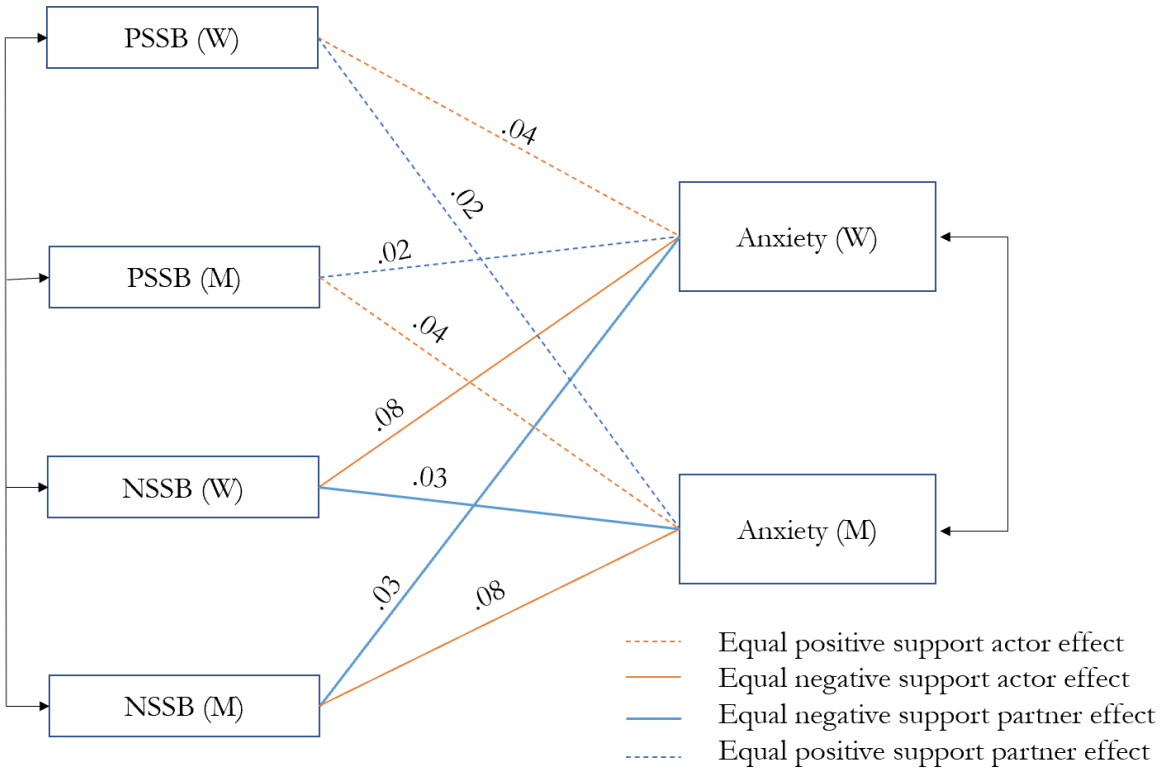
Summary of Model Comparisons Predicting Anxiety Symptoms

Models	χ^2	*df*	Comparison	$\Delta\chi^2$	Δdf	*p*	CFI	TLI	RMSEA	SRMR
1. Saturated	0	0					1	1	0	0
2. Interactions removed	3.462	8	2 vs 1	3.462	8	.902	1	12.949	0	.003
3. Equal actor effects	3.737	10	3 vs 2	0.275	2	.872	1	14.192	0	.008
4. Equal partner effects	4.548	10	4 vs 2	1.087	2	.581	1	12.483	0	.014
5. Equal actor effect positive	3.577	9	5 vs 2	0.115	1	.734	1	13.692	0	.004
6. Equal actor effect negative	3.473	9	6 vs 2	0.012	1	.915	1	13.935	0	.003
7. Equal partner effect positive	3.610	9	7 vs 2	0.148	1	.701	1	13.615	0	.004
8. Equal partner effect negative	4.461	9	8 vs 2	0.999	1	.317	1	11.622	0	.011
9. All actor and partner effects equal	5.913	12	9 vs 2	2.452	4	.653	1	11.684	0	.027

Overall, the hypotheses regarding anxiety models were not supported by the data. Negative social support behaviors did not predict one's own or one's partner's anxiety symptoms. Similarly, positive social support behaviors did not predict one's own or one's partner's anxiety symptoms. The length of relationship negatively predicted anxiety symptoms in men, suggesting that men who have been in relationships longer have fewer anxiety symptoms.

Figure 2

Regression Paths and Coefficients for APIM Predicting Anxiety Symptoms



Note. PSSB is used to represent positive social support behaviors. NSSB is used to represent negative social support behaviors.

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

Discussion

Various psychological theories highlight the importance of romantic partner relationships in the role of mental well-being (e.g., interdependence theory, dyadic coping theory, interpersonal emotion systems theory). Partners play a pivotal role in one's ability to conceptualize and regulate emotions (Wienke & Hill, 2009; Koball et al., 2010). Further dyadic, observational research is needed to capture the complexities of how couples interact and how those interactions affect the mental well-being of each member. The purpose of the current study was to examine social support behaviors between partners and their impact on each partner's psychological adjustment.

Social Support Behaviors

Positive Social Support

Results from this study concerning positive and negative social support behaviors highlight the complexity of romantic relationships and interactions between partners. Controlling for negative social support, no significant effects were found for positive social support behaviors when predicting depression and anxiety. When predicting depression, the positive support behaviors partner effects were not significant. Additionally, bivariate correlations showed that positive support behaviors were not related to depressive or anxiety symptoms within individuals or across partners. In aggregation, these findings suggest that positive support behaviors may have little impact on psychological adjustment within the context of romantic partners. These findings are consistent with research that has found inconsistent associations between positive dyadic coping and psychological adjustment (Bodschwinna et al., 2021; Chen et al., 2021; Meier et al., 2019).

It is possible that a partner's depression moderates the relationship between positive social support and partner depression. In other words, it could be that positive support protects non-depressed partners from experiencing increased depressive symptoms, but that it does not decrease depressive symptoms of already depressed partners. Furthermore, the relationship between positive support and psychological adjustment may be non-linear. It could be that a curvilinear relationship exists where only moderate levels of positive support significantly impact psychological adjustment.

Negative Social Support

Negative social support behaviors appeared to have a greater impact on depressive symptoms in couples when compared to positive support behaviors. The results suggest that one's negative support behaviors are significantly related to one's own depressive symptoms such that more negative behaviors are associated with more depressive symptoms. There are multiple ways to interpret this finding. From the perspective of dyadic coping (Bodenmann, 1997), practicing negative support behaviors could influence one's own psychological adjustment because it creates dysfunction in the way a couple cooperates to effectively manage their emotions. For example, negative support behaviors can increase conflict and decrease intimacy in the relationship, which can further contribute to feelings of stress and isolation. This can create a cycle of negative interactions that can be difficult to break, leading to ongoing distress for both couple members.

It was hypothesized that negative support behaviors from one member would be associated with increased depressive symptoms in their partner. This was true for men's negative support behaviors predicting women's depression, but not for women's negative support

behaviors predicting men's depression. Previous research suggests gender differences play a complex role in social support.

A potential explanation for the gender difference in the impacts of negative social support is the impact of social support in the context of gender socialization. Women are more likely to both seek and provide social support when compared to men (Metud et al., 2003). Additionally, women are more likely to benefit from their social relationships, as the relationship between social network size and psychological adjustment is stronger for women (Elliot, 2001). Overall, women rely on relationships as an integral tool for coping strategies, whereas men are socialized to avoid emotionally supportive interactions. This has multiple implications in the context of romantic relationships.

Men may lack the ability the effectively provide social support when compared to women. Mixed findings have been reported regarding gender and support tendencies. While some studies have found no gender differences in the use of dyadic coping strategies, most find that men are more likely to use negative dyadic coping than women (Wang & Umberson, 2023). Men may recognize negative support behaviors as maladaptive and feel shame or guilt after using them. Similarly, men may feel inadequate or unsupportive when their partner exhibits depressive symptoms, perceiving these symptoms as flaws in their ability to provide support (Addis & Mahalik, 2003). Additionally, men may be less likely to adapt their supportive behaviors to the needs of their partners in comparison to women and more likely to use negative supportive behaviors in harmful contexts (Neff & Karney, 2005). In other words, the effects of negative support on depression may be context dependent such that men use negative support behaviors in settings that are more detrimental to their partner's mental well-being. This is consistent with findings that lesbian women have been found to have lower conflict in their

relationships and perceive social support from their partner as more effective when compared to women in relationships with men (Meuwly et al., 2013).

Although gender socialization may enable women to provide more effective social support, it may also leave them more susceptible to the negative impacts of maladaptive support styles. Recent studies have suggested that the bidirectionality of the association between social support and psychological adjustment may be more apparent for women than for men (Landstedt et al., 2016), meaning that social interactions play an especially important role in women's psychological adjustment. Studies have shown that coping styles have a greater impact on women's psychological distress and relationship functioning compared to men (Falconier & Kuhn, 2019; Matud et al., 2019). Additionally, marital conflict holds a greater capacity to predict depression in women than in men (Elliot, 2001). Gender differences in the effects of negative support behaviors on depression may be the result of the varying roles social support plays in the context of gender socialization. It should be noted, however, that more information about an individual's gender identity and socialization would be needed to better understand the role of gender socialization in the relationship between social support and psychological adjustment.

The findings suggest that social support behaviors may be more impactful on couples' depressive symptoms than their anxiety symptoms as negative support behaviors also had no significant effects on psychological adjustment. There are key differences between depression and anxiety that should be noted when considering this result. Whereas cognitive symptoms of depression are characterized as experiencing feelings like sadness, hopelessness, and loss of interest, anxiety symptoms are characterized by feelings like excessive worry, fear, and or being on edge (American Psychiatric Association, 2013). While social support is associated with lower levels of both depression and anxiety, some research suggests the relationship between social

support and depression may be stronger than that between social support and anxiety (Cohen et al., 2000; Rankin et al., 2018). It could be that cognitive symptoms of depression (e.g., worthlessness, hopelessness, loss of interest) are more closely related to isolation and loneliness (i.e., lack of social support) when compared to symptoms of anxiety. Therefore, the interactive nature of social support would make support especially beneficial for decreasing or preventing depressive symptoms. It is also possible that different forms of social support are effective against varying psychological adjustment. It could be the case that the laboratory procedure elicited support behaviors that were mainly emotional in nature rather than other forms of support.

Congruity of Social Support

The current study predicted that congruity of social support behaviors would negatively predict depression and anxiety symptoms in both partners. Regarding couples with incongruent social support behaviors, the current study sought to test if participants who exhibited positive support behaviors protected their negative partner from depression and anxiety symptoms or if participants who exhibited negative support behaviors increased their partner's depression and anxiety symptoms. The hypothesis regarding the congruity of social support was not supported as no interactions between positive and negative support behaviors were found to be significant. Interaction effects have lower statistical power in comparison to main effects because estimating interaction effects involves estimating two correlation coefficients rather than one (Aiken et al., 2010). The nature of an interaction effect suggests that the effect of one variable on the outcome is dependent on variation in another variable. Because of this, interactions can often be masked by main effects (Hoyle, 2014).

Existing research on the congruity of social support in couples and its impact on the mental well-being of couple members has yielded mixed results (Barnoy et al., 2006; Meier et al., 2019; Pakenham, 1998). This relationship should be studied further as it could be context dependent. The majority of studies investigating the congruity of social support in couples examine couples in which at least one member is receiving treatment for a life-changing medical issue. This context is only one of many situations in which support behaviors can be studied within a romantic relationship. The focus on this specific population may be the result of conceptualizations of social support that frame it as something that only occurs when a partner is experiencing a negative-life event.

Limitations

One limitation of the current study is its cross-sectional design. No causal relationships can be inferred from the data. The impossibility of experimental design in social support and psychological adjustment research is one of the methodological issues of importance in this research area.

Additionally, this study attempts to summarize couples' social support behaviors using a twelve-minute interaction. This can be problematic for several reasons. As is true for most observational data, it is hard to say whether support behaviors that couples exhibit in a laboratory setting truly mirror their daily support behaviors. This measurement of social support behaviors also only captures these behaviors at one point in time. This limits the inferences that can be made about how partners impact each other's support behaviors. Longitudinal studies should be implemented to further examine the dynamics of social support in couples.

It is also possible that there are bidirectional effects between negative support behaviors and depressive symptoms. This is a well-documented phenomenon in couples' social support

literature (Almquist et al., 2016). The impacts of depression and depressive symptoms may make providing social support to a significant other more difficult. Depressed individuals are less likely to seek interpersonal coping strategies (D'luso et al., 2018). Moreover, those with higher depression symptoms tend to practice more negative interpersonal coping behaviors (Santini et al., 2015). It would be expected that those with higher depressive symptoms would practice more negative social support behaviors. This bidirectional effect, while notable, is beyond the scope of this study.

The current study discusses gender differences in the relationship between social support and psychological outcomes. It should be noted, however, that while this evidence provides support for a gender difference, more information is needed to fully establish said difference. Because the survey used to collect the data used in this study only offered male/female gender identification, it is possible that participants who fall outside of the gender binary were included in the male or female categories. To measure gender more accurately, the full range of gender diversity should be included.

Additionally, couples of all gender makeups would be needed to determine gender differences. For instance, if negative social support behaviors enacted by men are more harmful to their partner's depressive symptoms when compared to women, this finding should replicate when tested in male-male relationships and be absent when tested in female-female relationships. If the effect was not consistent across couples of diverse gender makeups, it would insinuate that the combination of genders in a relationship impacts the association between negative support behaviors and depressive symptoms.

Lastly, a more diverse sample would both strengthen the evidence found in the current study as well as increase its generalizability. Specifically, including information regarding

participants' sexuality, and including participants of all sexualities, would eliminate a potential lingering variable when examining social support in couples. While all participants included in the study were involved in a male-female relationship, this does not indicate that all participants were heterosexual. Future studies examining social support and psychological adjustment in couples should include information regarding individuals' sexuality, gender identity, and gender history.

Implications

The findings of this study can be applied in a variety of settings. Interventions aimed at decreasing depressive symptoms should acknowledge the important role significant others play in their partner's mental well-being, though it should be noted that this study did not assess clinical cut-offs for depression. Additionally, the current study highlights the negative psychological impacts associated with social support rooted in negative behavior. Partners should be mindful of their affective behavior while providing social support. Further research should examine how partners provide social support and their dynamics throughout time.

References

Addis, M. E., & Mahalik, J. R. (2003). Men, masculinity, and the contexts of help seeking. *American Psychologist*, *58*(1), 5–14. https://doi.org/10.1037/0003-066X.58.1.5

Aiken, L. S., West, S. G., & Reno, R. R. (2010). *Multiple regression: Testing and interpreting interactions* (Reprinted). SAGE.

Almquist, Y. B., Landstedt, E., & Hammarström, A. (2016). Associations between social support and depressive symptoms: Social causation or social selection—or both? *The European Journal of Public Health*, ckw120. https://doi.org/10.1093/eurpub/ckw120

Alsubaie, M. M., Stain, H. J., Webster, L. A. D., & Wadman, R. (2019). The role of sources of social support on depression and quality of life for university students. *International Journal of Adolescence and Youth*, *24*(4), 484–496. https://doi.org/10.1080/02673843.2019.1568887

American Psychiatric Association (Eds.). (2013). *Diagnostic and statistical manual of mental disorders: DSM-5* (5th ed). American Psychiatric Association.

Barnoy, S., Bar-Tal, Y., & Zisser, B. (2006). Correspondence in informational coping styles: How important is it for cancer patients and their spouses? *Personality and Individual Differences*, *41*(1), 105–115. https://doi.org/10.1016/j.paid.2005.12.013

Barrera, M. (1986). Distinctions between social support concepts, measures, and models. *American Journal of Community Psychology*, *14*(4), 413–445. https://doi.org/10.1007/BF00922627

Baruch-Feldman, C., Brondolo, E., Ben-Dayan, D., & Schwartz, J. (2002). Sources of social support and burnout, job satisfaction, and productivity. *Journal of Occupational Health Psychology*, *7*(1), 84–93. https://doi.org/10.1037/1076-8998.7.1.84

Berkman, L. F., Glass, T., Brissette, I., & Seeman, T. E. (2000). From social integration to health: Durkheim in the new millennium. *Social Science & Medicine, 51*(6), 843–857. https://doi.org/10.1016/S0277-9536(00)00065-4

Bodenmann, G. (1997). Dyadic coping: A systemic-transactional view of stress and coping among couples: Theory and empirical findings. *Revue Européene de Psychologie Appliquée*, *47*.

Bodschwinna, D., Ernst, J., Mehnert-Theuerkauf, A., Gündel, H., Weissflog, G., & Hönig, K. (2021). Dyadic coping and social support: Various types of support in hematooncological patients and their spouses—Associations with psychological distress. *Psycho-Oncology*, *30*(7), 1041–1050. https://doi.org/10.1002/pon.5631

Brissette, I., Cohen, S., & Seeman, T. E. (2000). Measuring social integration and social networks. In S. Cohen, L. G. Underwood, & B. H. Gottlieb (Eds.), *Social support measurement and intervention* (pp. 53–85). Oxford University Press. https://doi.org/10.1093/med:psych/9780195126709.003.0003

Brookings, J. B., & Bolton, B. (1988). Confirmatory factor analysis of the interpersonal support evaluation list. *American Journal of Community Psychology*, *16*(1), 137–147. https://doi.org/10.1007/BF00906076

Buhrmester, D. (1998). Need fulfillment, interpersonal competence, and the developmental contexts of early adolescent friendship. In W. M. Bukowski, A. F. Newcomb, & W. W. Hartup (Eds.), *The company they keep: Friendship in childhood and adolescence* (pp. 158–185). Cambridge University Press.

Buschmann, M., & Hollinger, L. (1994). Influence of social support and control on depression in the elderly. *Clinical Gerontologist*, *14*(4), 13–28. https://doi.org/10.1300/J018v14n04_03

Chen, M., Gong, J., Cao, Q., Luo, X., Li, J., & Li, Q. (2021). A literature review of the relationship between dyadic coping and dyadic outcomes in cancer couples. *European Journal of Oncology Nursing, 54*, 102035. https://doi.org/10.1016/j.ejon.2021.102035

Chow, C. M., & Ruhl, H. (2014). Friendship and romantic stressors and depression in emerging adulthood: Mediating and moderating roles of attachment representations. *Journal of Adult Development, 21*(2), 106–115. https://doi.org/10.1007/s10804-014-9184-z

Chow, C. M., & Ruhl, H. (2018). Congruity of observed social support behaviors and couple relationship quality: Congruity of couples. *European Journal of Social Psychology, 48*(1), 62–71. https://doi.org/10.1002/ejsp.2302

Cohen, S., Mermelstein, R., Kamarck, T., & Hoberman, H. M. (1985). Measuring the functional components of social support. In I. G. Sarason & B. R. Sarason (Eds.), *Social support: theory, research and applications* (pp. 73–94). Springer Netherlands. https://doi.org/10.1007/978-94-009-5115-0_5

Cohen, S., Underwood, L. G., & Gottlieb, B. H. (Eds.). (2000). *Social support measurement and intervention: A guide for health and social scientists*. Oxford University Press. https://doi.org/10.1093/med:psych/9780195126709.001.0001

Coyne, J. C., & Downey, G. (1991). Social factors and psychopathology: Stress, social support, and coping processes. *Annual Review of Psychology, 42*(1), 401–425. https://doi.org/10.1146/annurev.ps.42.020191.002153

Dehle, C., Larsen, D., & Landers, J. E. (2001). Social support in marriage. *The American Journal of Family Therapy, 29*(4), 307–324. https://doi.org/10.1080/01926180126500

Derogatis, L. R., & Fitzpatrick, M. (2004). The SCL-90-R, the Brief Symptom Inventory (BSI), and the BSI-18. In *The use of psychological testing for treatment planning and outcomes*

assessment: Instruments for adults (Vol. 3, 3rd ed. pp. 1–41). Lawrence Erlbaum Associates Publishers.

D'luso, D. A., Dobson, K. S., Beaulieu, L., & Drapeau, M. (2018). Coping and interpersonal functioning in depression. *Canadian Journal of Behavioural Science/Revue Canadienne Des Sciences Du Comportement*, *50*(4), 248–255. https://doi.org/10.1037/cbs0000112

Dixon-Gordon, K. L., Bernecker, S. L., & Christensen, K. (2015). Recent innovations in the field of interpersonal emotion regulation. *Current Opinion in Psychology*, *3*, 36–42. https://doi.org/10.1016/j.copsyc.2015.02.001

Elliott, M. (2001). Gender differences in causes of depression. *Women & Health*, *33*(3–4), 183–198. https://doi.org/10.1300/J013v33n03_11

Falconier, M. K., & Kuhn, R. (2019). Dyadic coping in couples: A conceptual integration and a review of the empirical literature. *Frontiers in Psychology*, *10*. https://www.frontiersin.org/articles/10.3389/fpsyg.2019.00571

Garcia, R. L., Kenny, D. A., & Ledermann, T. (2015). Moderation in the actor–partner interdependence model. *Personal Relationships*, *22*(1), 8–29. https://doi.org/10.1111/pere.12060

Gariépy, G., Honkaniemi, H., & Quesnel-Vallée, A. (2016). Social support and protection from depression: Systematic review of current findings in Western countries. *British Journal of Psychiatry*, *209*(4), 284–293. https://doi.org/10.1192/bjp.bp.115.169094

Gottlieb, B. H., & Bergen, A. E. (2010). Social support concepts and measures. *Journal of Psychosomatic Research*, *69*(5), 511–520. https://doi.org/10.1016/j.jpsychores.2009.10.001

Gunthert, K. C., & Wenze, S. J. (2012). Daily diary methods. In *Handbook of research methods for studying daily life* (pp. 144–159). The Guilford Press.

Hoyle, R. H. (Ed.). (2014). *Handbook of structural equation modeling*. The Guilford Press.

Humbad, M. N., Donnellan, M. B., Klump, K. L., & Burt, S. A. (2011). Development of the brief romantic relationship interaction coding scheme (Brrics). *Journal of Family Psychology*, *25*(5), 759–769. https://doi.org/10.1037/a0025216

Immordino-Yang, M. H., Darling-Hammond, L., & Krone, C. R. (2019). Nurturing nature: How brain development is inherently social and emotional, and what this means for education. *Educational Psychologist*, *54*(3), 185–204. https://doi.org/10.1080/00461520.2019.1633924

Kahn, J. H., & Garrison, A. M. (2009). Emotional self-disclosure and emotional avoidance: Relations with symptoms of depression and anxiety. *Journal of Counseling Psychology*, *56*(4), 573–584. https://doi.org/10.1037/a0016574

Kelley, H. H., Holmes, J. G., Kerr, N. L., Reis, H. T., Rusbult, C. E., & Van Lange, P. A. M. (2001). *An atlas of interpersonal situations* (1st ed.). Cambridge University Press. https://doi.org/10.1017/CBO9780511499845

Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). The analysis of dyadic data.

Kenny, D. A., & Cook, W. (1999). Partner effects in relationship research: Conceptual issues, analytic difficulties, and illustrations. *Personal Relationships*, *6*(4), 433–448. https://doi.org/10.1111/j.1475-6811.1999.tb00202.x

Koball, H. L., Moiduddin, E., Henderson, J., Goesling, B., & Besculides, M. (2010). What do we know about the link between marriage and health? *Journal of Family Issues*, *31*(8), 1019–1040. https://doi.org/10.1177/0192513X10365834

Lakey, B., Orehek, E., Hain, K. L., & VanVleet, M. (2010). Enacted support's links to negative affect and perceived support are more consistent with theory when social influences are isolated from trait influences. *Personality and Social Psychology Bulletin*, *36*(1), 132–142. https://doi.org/10.1177/0146167209349375

Landstedt, E., Gustafsson, P. E., Johansson, K., & Hammarström, A. (2016). Longitudinal associations between social relationships at age 30 and internalising symptoms at age 42: Findings from the Northern Swedish Cohort. *International Journal of Public Health*, *61*(1), 75–81. https://doi.org/10.1007/s00038-015-0691-x

Langford, C. P. H., Bowsher, J., Maloney, J. P., & Lillis, P. P. (1997). Social support: A conceptual analysis. *Journal of Advanced Nursing*, *25*(1), 95–100. https://doi.org/10.1046/j.1365-2648.1997.1997025095.x

Leach, L. S., Butterworth, P., Olesen, S. C., & Mackinnon, A. (2013). Relationship quality and levels of depression and anxiety in a large population-based survey. *Social Psychiatry and Psychiatric Epidemiology*, *48*(3), 417–425. https://doi.org/10.1007/s00127-012-0559-9

Lee, D. S., Orvell, A., Briskin, J., Shrapnell, T., Gelman, S. A., Ayduk, O., Ybarra, O., & Kross, E. (2020). When chatting about negative experiences helps—and when it hurts: Distinguishing adaptive versus maladaptive social support in computer-mediated communication. *Emotion*, *20*(3), 368–375. https://doi.org/10.1037/emo0000555

Marroquín, B. (2011). Interpersonal emotion regulation as a mechanism of social support in depression. *Clinical Psychology Review*, *31*(8), 1276–1290. https://doi.org/10.1016/j.cpr.2011.09.005

Matud, M. P., Ibáñez, I., Bethencourt, J. M., Marrero, R., & Carballeira, M. (2003). Structural gender differences in perceived social support. *Personality and Individual Differences, 35*(8), 1919–1929. https://doi.org/10.1016/S0191-8869(03)00041-2

Meier, F., Cairo Notari, S., Bodenmann, G., Revenson, T. A., & Favez, N. (2019). We are in this together — Aren't we? Congruence of common dyadic coping and psychological distress of couples facing breast cancer. *Psycho-Oncology*, *28*(12), 2374–2381. https://doi.org/10.1002/pon.5238

Meuwly, N., Feinstein, B. A., Davila, J., Nuñez, D. G., & Bodenmann, G. (2013). Relationship quality among swiss women in opposite-sex versus same-sex romantic relationships. *Swiss Journal of Psychology*, *72*(4), 229–233. https://doi.org/10.1024/1421-0185/a000115

Neff, L. A., & Karney, B. R. (2005). Gender differences in social support: A question of skill or responsiveness? *Journal of Personality and Social Psychology*, *88*(1), 79–90. https://doi.org/10.1037/0022-3514.88.1.79

Okabayashi, H., Liang, J., Krause, N., Akiyama, H., & Sugisawa, H. (2004). Mental health among older adults in Japan: Do sources of social support and negative interaction make a difference? *Social Science & Medicine, 59*(11), 2259–2270. https://doi.org/10.1016/j.socscimed.2004.02.024

Olatunji, B. O., Naragon-Gainey, K., & Wolitzky-Taylor, K. B. (2013). Specificity of rumination in anxiety and depression: A multimodal meta-analysis. *Clinical Psychology: Science and Practice, 20*(3), 225–257. https://doi.org/10.1037/h0101719

Pakenham, K. I. (1998). Couple coping and adjustment to multiple sclerosis in care receiver-carer dyads. *Family Relations*, *47*(3), 269. https://doi.org/10.2307/584977

Papageorgiou, C. (2003). An empirical test of a clinical metacognitive model of rumination and depression. *Cognitive Therapy and Research*, *27*(3), 261–273. https://doi.org/10.1023/A:1023962332399

Rankin, J. A., Paisley, C. A., Mulla, M. M., & Tomeny, T. S. (2018). Unmet social support needs among college students: Relations between social support discrepancy and depressive and anxiety symptoms. *Journal of Counseling Psychology*, *65*(4), 474–489. https://doi.org/10.1037/cou0000269

Regan, T. W., Lambert, S. D., Kelly, B., McElduff, P., Girgis, A., Kayser, K., & Turner, J. (2014). Cross-sectional relationships between dyadic coping and anxiety, depression, and relationship satisfaction for patients with prostate cancer and their spouses. *Patient Education and Counseling*, *96*(1), 120–127. https://doi.org/10.1016/j.pec.2014.04.010

Rehman, U. S., Ginting, J., Karimiha, G., & Goodnight, J. A. (2010). Revisiting the relationship between depressive symptoms and marital communication using an experimental paradigm: The moderating effect of acute sad mood. *Behaviour Research and Therapy*, *48*(2), 97–105. https://doi.org/10.1016/j.brat.2009.09.013

Revenson, T. A., Abraído-Lanza, A. F., Majerovitz, S. D., & Jordan, C. (2005). Couples coping with chronic illness: What's gender got to do with it? In T. A. Revenson, K. Kayser, & G. Bodenmann (Eds.), *Couples coping with stress: Emerging perspectives on dyadic coping.* (pp. 137–156). American Psychological Association. https://doi.org/10.1037/11031-007

Rose, A. J. (2002). Co–rumination in the friendships of girls and boys. *Child Development*, *73*(6), 1830–1843. https://doi.org/10.1111/1467-8624.00509

Rose, A. J., Carlson, W., & Waller, E. M. (2007). Prospective associations of co-rumination with friendship and emotional adjustment: Considering the socioemotional trade-offs of co-

rumination. *Developmental Psychology*, *43*(4), 1019–1031. https://doi.org/10.1037/0012-1649.43.4.1019

Rose, A. J., Schwartz-Mette, R. A., Glick, G. C., Smith, R. L., & Luebbe, A. M. (2014). An observational study of co-rumination in adolescent friendships. *Developmental Psychology*, *50*(9), 2199–2209. https://doi.org/10.1037/a0037465

Rosseel, Y. (2012). Lavaan: An *r* package for structural equation modeling. *Journal of Statistical Software*, *48*(2). https://doi.org/10.18637/jss.v048.i02

Santini, Z. I., Koyanagi, A., Tyrovolas, S., Mason, C., & Haro, J. M. (2015). The association between social relationships and depression: A systematic review. *Journal of Affective Disorders*, *175*, 53–65. https://doi.org/10.1016/j.jad.2014.12.049

Sarason, I. G., Levine, H. M., Basham, R. B., & Sarason, B. R. (1983). Assessing social support: The social support questionnaire. *Journal of Personality and Social Psychology*, *44*(1), 127–139. https://doi.org/10.1037/0022-3514.44.1.127

Slatcher, R. B. (2010). When Harry and Sally met Dick and Jane: Creating closeness between couples. *Personal Relationships*, *17*(2), 279–297. https://doi.org/10.1111/j.1475-6811.2010.01276.x

Sprecher, S., & Hendrick, S. S. (2004). Self-disclosure in intimate relationships: Associations with individual and relationship characteristics over time. *Journal of Social and Clinical Psychology*, *23*(6), 857–877. https://doi.org/10.1521/jscp.23.6.857.54803

Sprecher, S., Treger, S., & Wondra, J. D. (2013). Effects of self-disclosure role on liking, closeness, and other impressions in get-acquainted interactions. *Journal of Social and Personal Relationships*, *30*(4), 497–514. https://doi.org/10.1177/0265407512459033

Uchino, B. N., Cacioppo, J. T., & Kiecolt-Glaser, J. K. (1996). The relationship between social support and physiological processes: A review with emphasis on underlying mechanisms and implications for health. *Psychological Bulletin*, *119*(3), 488–531. https://doi.org/10.1037/0033-2909.119.3.488

Verhofstadt, L. L., Buysse, A., & Ickes, W. (2007). Social support in couples: An examination of gender differences using self-report and observational methods. *Sex Roles*, *57*(3–4), 267–282. https://doi.org/10.1007/s11199-007-9257-6

Waller, E. M., & Rose, A. J. (2010). Adjustment trade-offs of co-rumination in mother–adolescent relationships. *Journal of Adolescence*, *33*(3), 487–497. https://doi.org/10.1016/j.adolescence.2009.06.002

Wang, Y., & Umberson, D. (2023). Dyadic coping and marital quality in same-sex and different-sex marriages. *Journal of Social and Personal Relationships*, *40*(3), 996–1017. https://doi.org/10.1177/02654075221123096

Waring, E. M., & Chelune, G. J. (1983). Marital intimacy and self-disclosure. *Journal of Clinical Psychology*, *39*(2), 183–190. https://doi.org/10.1002/1097-4679(198303)39:2<183::AID-JCLP2270390206>3.0.CO;2-L

Weiss, R. (1974). The provisions of social relationships. In *Doing unto others* (pp. 17–26). Z. Rubin (Ed.).

Whisman, M. A., & Kaiser, R. (2008). Marriage and relationship issues. In *Risk Factors in Depression* (pp. 363–384). Elsevier. https://doi.org/10.1016/B978-0-08-045078-0.00016-2

Wienke, C., & Hill, G. J. (2009). Does the "marriage benefit" extend to partners in gay and lesbian relationships?: Evidence from a random sample of sexually active adults. *Journal of Family Issues, 30*(2), 259–289. https://doi.org/10.1177/0192513X08324382

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment, 52*(1), 30–41. https://doi.org/10.1207/s15327752jpa5201_2

Appendices

Appendix A: Brief Symptoms Inventory

Brief Symptoms Inventory – Depression and Anxiety Subscales (Derogatis & Melisaratos, 1983)

The following statements describe how people sometimes feel. For each statement (e.g., “Feeling no interest in things”), please indicate how often you feel the way described by each statement from 1 (Never) to 4 (Always).

1 Nervousness or shakiness inside**
2 Thoughts of ending your life*
3 Suddenly scared for no reason**
4 Feeling lonely*
5 Feeling blue*
6 Feeling no interest in things*
7 Feeling fearful**
8 Feeling hopeless about the future*
9 Feeling tense or keyed up**
10 Spells of terror or panic**
11 Feeling so restless you could not sit still**
12 Feelings of worthlessness*

**denotes depressive symptoms subscale, **denotes anxiety subscale*

Appendix B: Observed Support Behaviors Coding

Modified Brief Romantic Relationship Interaction Coding Scheme (BRRICS) (Humbad et al., 2011)

Items 1-8
1= Never
2 = 1-2 instances
3 = A few/several instances
4 = Moderate-amounts-about half of the time
5 = Substantial amounts—over half the time but not the entire time
6= Constantly throughout the interaction

Item 9 to 12
1= Extremely Low
2 = Low
3 = Neither High or Low
4 = High
5 = Extremely High

Woman as Discloser	**Rating**	**Man as Discloser**	**Rating**
1. Woman Positive Affect		1. Woman Positive Affect	
2. Woman Negative Affect		2. Woman Negative Affect	
3. Man Positive Affect		3. Man Positive Affect	
4. Man Negative Affect		4. Man Negative Affect	
5. Woman's Disclosure		5. Man's Disclosure	
6. Man's Responsiveness		6. Woman's Responsiveness	
7. Woman's criticism		7. Woman's criticism	
8. Man's criticism		8. Man's criticism	
9. Man's Overall Involvement			
10. Woman's Overall Involvement			
11. Overall Satisfaction			
12. Overall Conflict			

Items	**Descriptions**
Positive Affect	Smiling, laughing, humorous statements, and statements that make the partner feel understood and validated. Examples: outright jokes of the "one liner variety," proposals that are clearly facetious solutions to the problem, statements emphasizing the humorous aspects of a situation or problem, paraphrasing the partner's statements, reflecting feelings, giving positive feedback, and expressing care, concern, or understanding of the person's feelings. Does NOT include nervous laughter or smiling, or humor with a sarcastic or hostile undertone.

Negative Affect	Facial and verbal expression of distress or sadness, *numbing* to avoid emotional *reactions.* Prolonged negative emotional expression. Rehashing negative emotions/experiences.
Disclosure	Tells what the problem is, offer details, talks openly, and asks for suggestions/help.
Responsiveness	Asks questions about the details of the problem, asks questions about the disclosure's feelings/thoughts, offer affection (hug, touch), and reassures the partner. Gives advice, help, or sympathy. Cheer up the partner.
Criticism	Points out the partner's faults or put the partner down. Criticize the partner. Says mean or harsh things to the partner. Tease the partner.
Involvement in the interaction	Show interests and engagement during the interaction.
Overall Satisfaction	Rate how much you feel this couple is satisfied and happy with their marriage to one another.
Overall Conflict	Rate how much you feel this couple is conflictual and often quarrel with one another.

Appendix C: IRB Approval

Date: 5-17-2023

IRB #: UHSRC-FY22-23-61
Title: Dyadic Analysis of Positive and Negative Social Support Behaviors and Psychological Outcomes in Romantic Couples
Creation Date: 10-11-2022
End Date:
Status: Approved
Principal Investigator: Lucas Parnell
Review Board: University Human Subjects Review Committee
Sponsor:

Study History

Submission Type Initial	**Review Type** Exempt	**Decision** Exempt

Key Study Contacts

Member Lucas Parnell	**Role** Principal Investigator	**Contact** lparnel1@emich.edu
Member Lucas Parnell	**Role** Primary Contact	**Contact** lparnel1@emich.edu
Member Chong Man Chow	**Role** Co-Principal Investigator	**Contact** cchow@emich.edu