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HEALTH IN DYADIC RELATIONSHIPS.**

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'TIS BETTER TO GIVE *AND* TO RECEIVE: SOCIAL SUPPORT, STRESS, AND MENTAL
HEALTH IN DYADIC RELATIONSHIPS.

by

STEPHANIE HANSARD

Under the Direction of Mathew Gayman, PhD

ABSTRACT

Research Questions: How do levels of perceived support within dyadic social networks interact to predict mental health outcomes for both network members? I examine whether one's significant other's level of perceived social support moderates the relationship between one's own perceived social support and one's own depressive and anxiety symptoms. I also consider whether stress may moderate the support-mental health relationship.

Method: I use Actor-Partner Interdependence Modeling investigate how each respondent's own perceived social support and each respondent's significant other's perceived social support predict each respondent's levels of depressive and anxiety symptoms. I use a sample of 982 respondent dyads, as well as a subsample of 450 intimate partner dyads to investigate these relationships.

Results: Among intimate partner dyads, each partner's level of perceived support is negatively associated with each partner's level of depressive and anxiety symptoms. Perceiving that one is highly supported by one's intimate partner predicts lower levels of depressive and anxiety symptoms. This relationship is stronger when one's intimate partner also perceives that they are highly supported. Stress moderates the relationship between one's own social support and depressive and anxiety symptoms, but not the relationship between one's significant other's social support and depressive anxiety symptoms.

Conclusions: In the context of intimate partner relationships, both the support a person receives from his or her partner and the support that person provides to his or her partner is associated with that person's levels of depressive and anxiety symptoms. Thus, while it is beneficial for a person to receive high levels of support, it is better to give *and* to receive.

INDEX WORDS: Social Support, Depression, Anxiety, Mental Health, Networks, Dyads

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by

STEPHANIE HANSARD

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

in the College of Arts and Sciences

Georgia State University

2017

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2017

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HEALTH IN DYADIC RELATIONSHIPS

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May 2017

DEDICATION

This project is dedicated to the highly supportive social network in which I am so lovingly embedded. To the teachers who have shaped my early career trajectory; especially Brenda Hoke and Yvonne Newsome. To my friends, who have offered me emotional and instrumental support throughout the dissertation process. Special thanks to Stephanie Hall and Kiersten Kummerow-Brown, along with many others. To my family, who always let me know I am a worthwhile person, always express confidence in me, and are always willing to talk over my problems should I want to. And finally, to my own intimate partner, Colin, who is my most important source of support. Thank you, sweetheart, for always letting me be myself and for rallying beside me in times of stress.

ACKNOWLEDGEMENTS

I wish to acknowledge the many people who have helped me to complete this project. First, I wish to thank Mathew Gayman, who supervised my doctoral research. Without his years of training and mentorship, this project would not have been possible. I want to thank Erin Ruel, both her service on my committee and for the training and support she has provided me in statistical analysis and academic writing. I also want to thank Eric Wright for his assistance with this project and for his advice on network analysis. Finally, I would like to thank Randi Garcia, who generously advised me in using Actor-Partner Interdependence Modeling.

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1 INTRODUCTION

1.1 Introduction

Sociologists since Durkheim have investigated the relationship between social support for mental health. Durkheim studied the effects of social network size and embeddedness on suicide rates (Durkheim [1897] 2006). Sociologists have since studied the mental health consequences related primarily to perceived social support. Research has consistently shown higher levels of perceived social support are associated with better mental health (Cobb 1976; Thoits 1995). However, most contemporary research on the relationship between social support and mental health has focused on only one member of a social network (Granovetter 1983). In this study, I argue that fully understanding the relationship between social support and mental health requires study of the perspectives of multiple network members.

In this study, I apply Social Network Theory (Tönnies 1957) and Exchange Theory (Emerson 1976) to examine the relationship between levels of perceived social support and mental health within dyadic social networks. I argue that a person's own perceived social support interacts with the perceived support of other members of the person's network to predict that person's mental health. In addition, I posit that unequal levels of perceived support within a social network may have important mental health consequences for network members.

In a dyadic social network, one person may perceive high levels of social support while the other person perceives low levels. Disparate levels of perceived support within a dyadic network could be harmful to the mental health of both dyad members. The potential negative mental health consequences for the person who perceives low levels of social support are clearer. He or she may perceive that he or she is receiving both low support and *less* support relative to the other dyad member. But I argue the person receiving higher levels of support may also

experience negative mental health consequences, particularly if he or she is not providing high levels of support to his or her partner. For example, although he or she is receiving high levels of social support, he or she may experience negative emotions – like guilt or powerlessness - for receiving more than he or she gives (Liang, Krause, and Bennet 2001).

Disparate levels of perceived social support may impact mental health indirectly through social stress. The stress process generally describes social support as moderating the relationship between stress and mental health. Yet it is also possible that experiencing social stress moderates the relationship between perceiving disparate levels of social support and mental health. For example, increased risk for depression associated unequal levels of perceived support may be greater among those who report higher levels of social stress. Thus, this study also assesses the potential moderating role of perceived social stressors in the relationship between social support and mental health. Prior research has shown that perceiving social support as equal within relationships is related to both decreased stress and better mental health. For example, Jou and Fukada (2002) found that perceiving exchange of support within social networks as equitable was associated with both lower rates of depressive symptoms and lower rates of stress among Japanese university students. However, my review of the extant literature suggests no prior studies have assessed whether social stress moderates the relationship between disparate levels of social support and mental health. This study assesses this potential relationship.

The impact of disparate social support on mental health may vary based on the nature of the relationship (e.g., intimate partner, parent-child, etc.). Various relationship types involve different norms for exchange of support (Gouldner 1960). Dyad members may thus have different expectations about the support they give and receive depending on relationship type.

For example, perceiving that one receives less support than one gives may be more harmful to mental health in an intimate partner relationship than in a parent-child relationship.

Current Study

Although disparate levels of perceived support within social networks may have important mental health implications for multiple network members, little is known about this relationship. The current study provides a unique investigation into the dynamic and nuanced ways social support is perceived within social networks and its mental health consequences. Specifically, I use the Actor-Partner Interdependence Model to examine a community-based sample of respondent dyads in which each network member answered questions about perceived social support and mental health. This allows me to examine not only the direct association between level of social support and mental health for both members of dyadic networks, but also the interaction of each dyad member's social support on that member's mental health. I also examine the potential for social stress to moderate the relationship between social support and mental health. Finally, I consider the importance of the nature of the relationship between dyad members in explaining the association between disparate levels of social support and mental health.

1.2 REVIEW OF THE LITERATURE

1.2.1 Support Within Social Networks

Social Network Theory evolved from Durkheim's work on social support and social solidarity (Durkheim [1897] 2006; Berkman, Glass, Brissette, and Seeman 2000). Durkheim describes the association between embeddedness in social networks and suicide, concluding that belonging to more cohesive social networks was associated with lower rates of suicide. These

findings led to over a century of research on the influence of social networks on mental health. One way in which social networks benefit mental health through perceived social support. Perceived social support is one's perception "that [one] is loved and cared for [...] that [one] is esteemed and valued [...] that [one] belongs to a network of communication and mutual obligation" (Cobb 1976: 300-301). Perceived social support has consistently been found to predict better mental health (Cobb 1976; Thoits 1995; Hefner and Eisenberg 2009).

Early Social Network Theory research focused on the size and density of social networks in shaping access to social support (Tönnies 1957) and emphasized the subjective experience of one individual at the center of a network (the Ego) (Granovetter 1983). Thus, while the concept of social support originated in the context of social networks, most contemporary social support research has been egocentric. This study aims to extend prior research by examining perceptions of support exchange and mental health from the perspectives of both members of dyadic relationships.

1.2.2 Disparate Levels of Perceived Support Within Dyads

Social Exchange Theory (Emerson 1976) provides a useful framework for understanding how disparate levels of perceived social support within a dyad might impact mental health. Individuals maintain relationships by exchanging social resources for social rewards (Emerson 1976:339), and research has shown that perceived equality of resources exchanged (or expected) within dyads leads to more subsequent exchange, cohesion, and stability (Gouldner 1960; Yoon, Thye, and Lawler 2013).

Studies show that disparate levels of perceived support tend to be associated with worse mental health; while similar levels of support between network members tend to be associated with better mental health (Buunk et al. 1993; Chandola, Marmot, and Seigris 2007; Dunkle

1985; Jou and Fukada 2002; Liang et al. 2001; Väänänen et al. 2005; Wolf and Agree 2004). Furthermore, the association between disparate levels of perceived support and worse mental health appears to hold for those who receive more support than they give and those who give more support than they receive (Chandola et al. 2007). It is possible that the perceived social support of others within one's social network interacts with one's own level of perceived social support to impact mental health. In other words, one's own perceived social support may impact mental health differently depending upon one's significant other's level of perceived social support. One explanation for this is that having disparate levels of social support from one's significant other is associated with worse mental health.

Experiencing support within one's relationships as equitable may reinforce the idea that "one belongs to a network of [...] mutual obligation," thus increasing the effects of perceived social support on mental health (Cobb 1976: 300). For example, Buunk and colleagues (1993) found that perceiving one provided as much social support as one received from colleagues at work was associated with better mental health (measured as positive affect). On the other hand, feeling that one gave more support than one received, or feeling that one received more support than one gave, was associated with negative affect (Buunk et al. 1993).

One explanation for this association is that giving more support than one receives leads to resentment, while receiving more support than one gives is associated with guilt. For example, in a study of Japanese university students, Jou and Fukada (2002) found that students who perceived that they exchanged support equally with others in their network had better physical and mental health (measured in terms of positive affect). However, students who perceived that they gave more support than they received experienced higher levels of burden. Students who

perceived that they received more support than they gave experienced higher levels of indebtedness. Both of these conditions were associated with higher levels of negative affect.

It is reasonable to anticipate that giving more support than one receives could lead to negative mental health. For example, a study in which adults were asked about reciprocity in relationships with partners, children, and trusted others showed that perceiving a lack of reciprocity in these relationships was associated with worse physical and mental health (Chandola et al. 2007. Reciprocity in this study was measured using several constructs of perceived fairness in the target relationship, including “a balance of give and take,” feeling “appreciated for providing help,” and feeling a “mutual understanding” with one’s partner (Chandola et al. 2007: 405).

Even in contexts of caregiving, in which levels of perceived support are often imbalanced, perceiving that a care recipient reciprocates one’s support is associated with better mental health (Leblanc and Wight 2000). For example, in a study of caregivers of persons with AIDS, Leblanc and Wight (2000) found that feeling that the person with AIDS provided reciprocal support was associated with lower levels of depressive symptoms among caregivers. Specifically, caregivers who reported that the person with AIDS appreciated the caregiver’s help, would do the same for the caregiver if their roles were reversed, cared about the caregiver’s wellbeing, and helped the caregiver when possible reported lower levels of depressive symptoms than caregivers who did not perceive such reciprocal support (Leblanc and Wight 2000).

While it may be less apparent, it is also possible that receiving more support than one gives could lead to worse mental health, especially among individuals who give less support relative to their network members. For example, Wolf and Agree (2004) found that among older women with disabilities, perceiving reciprocal (equal) support with their primary caregivers was

associated with lower incidence of depression for the care recipient. Specifically, older women who reported that they reciprocated their caregiver's support by providing advice and talking over the caregiver's problems with them were significantly less likely to report being depressed.

These findings are consistent with the findings of a study by Dunkle (1985) which found that older men and women who lived with a caregiver experienced lower levels of depression if they felt they contributed to the caregiver's household in nonmonetary ways. They found that elders who reported helping with housework and childcare, providing advice, remembering birthdays and special occasions, and entertaining others reported lower levels of depression compared with elders who did not report making such contributions. Together, these studies support the argument that perceiving that one provides support to others within one's social network is beneficial to one's mental health.

These studies which have considered disparate perceptions of support within social networks have measured disparate support in different ways. They have generally evaluated the equity or inequity of support exchange by asking a single respondent about his/her perceptions of support *exchange*. For example, a study measured whether support within social networks was "reciprocal" by asking each respondent whether they received more support than they gave, or whether they received as much support as they gave (Väänänen et al. 2005). Using this as a measure of reciprocal support within each respondent's social network, results indicate that, among women, perceiving that one gives more support than one receives is associated with worse health. However, no effect of perceived disparity of social support was found for men (Väänänen et al. 2005).

Other studies have constructed measures of parity or disparity by asking a focal respondent how often he/she gave support and how often he/she received support. In one such

study, respondents were asked how often each of their adult children provided instrumental or emotional support to them and how frequently they provided childcare for each of their adult children's children (Geurts et al. 2012). From these two measures, the authors determined whether parents' support was reciprocated by their children. They found that providing child care for adult children was more likely to be met with a return of support if the adult child was a son. However, this study was limited in that adult children's perceptions of support were not included in this measure; only parents' perceptions were considered. Additionally, this study did not assess the effects of social support on mental health. Thus, an alternative measure of whether support is exchanged equally within a social network may involve comparing reported levels of received support from the perspectives of multiple members of the same network. This would provide a more nuanced understanding of how exchange of support is perceived by various network members. In addition, these studies do not consider the mental health consequences of disparate perceptions of support (Guerts 2012; Väänänen et al. 2005).

Together, prior research demonstrates that perceived equality or reciprocity of support is related to better mental health. Studies also indicate that disparate levels of social support are associated with worse mental health both for those who give more support than they receive and for those who receive more support than they give. Although the studies described above provide important insight into the nature of social support and its mental health consequences, they are limited in that they measure the perceived support and mental health outcomes of only one network member. This is consistent with an egocentric understanding of social networks; however, it does not allow a direct assessment of how one network member's perceived support is associated with another network member's mental health outcomes (Granovetter 1983). These studies also do not directly assess how network members' levels of perceived social support may

interact to impact mental health. Specifically, although some studies (Jou and Fukada 2002; Leblanc and Wight 2000; Wolf and Agree 2004) ask respondents whether they give more support than they receive (or vice versa), they do not measure the significant other's perceived level of support, and thus cannot directly assess whether the one network member's level of perceived support moderates (or conditions) the relationship between the other network member's level of support and mental health.

The current study advances prior research by using data which measure social support and mental health from both network members' perspectives. This study also directly assesses whether one's significant other's level of perceived support moderates the relationship between one's own social support and one's own mental health. Finally, by using the Actor-Partner Interdependence Model (APIM), this study controls for autocorrelation between dyad members' levels of perceived support. That is, APIM controls for the variability in one dyad member's level of perceived support which may be explained by the other dyad member's level of perceived support. These contributions will lead to a clearer picture of how dyad members' levels of perceived support may interact to shape both dyad members' mental health outcomes.

1.2.3 Support, Stress, and Mental Health

Traditionally, the stress process model views social support as a moderator in the relationship between stress and mental health (Pearlin et al. 1981). For example, the potential negative mental health consequences associated with greater stress exposure may be weaker at higher levels of social support (Gayman et al. 2014; Kessler and McLeod 1985; Thoits 1995; Thoits 2010; Turner 1983). Although social support is recognized as an important moderating factor in the stress-health relationship, social stress may also moderate the relationship between social support and mental health. Experiencing chronic and eventful stress may reduce the

impact of social support on mental health outcomes (Lincoln, Chatters, and Taylor 2005).

Chronic and eventful stress may also increase an individual's need for support, causing even higher levels of support to be inadequate (Lincoln, Chatters and Taylor 2005; Mitchell and Moos 1984).

The relationships among stress, social support, and mental health are well-established. Pearlin and colleagues (1981) described the stress process model, by which social stress is translated into negative physical and mental health outcomes through various linking mechanisms. The stress process also describes how coping resources, including social support, may buffer (moderate) the effects of social stress on physical and mental health (Pearlin et al. 1981). Researchers applying the stress process model have found support for the buffering effects of social support on the relationship between both chronic and eventful stress on mental health (Thoits 1995; Thoits 2010; Wheaton 1985; Wethington and Kessler 1986).

Social support impacts the stress-mental health relationship in two distinct ways – by interacting with social stress to moderate the effects of stress on mental health, and by directly benefiting mental health in response to social stress (Wheaton 1985). The buffering hypothesis describes social support as benefitting mental health primarily through reducing the effects of stress on mental health (Wheaton 1985). According to this hypothesis, those who have higher levels of social support will experience less harm to their mental health as a result of stress compared to those who have lower levels of social support (Wheaton 1985). On the other hand, the main effect model describes social support as benefitting mental health directly, so that persons with higher levels of social support will have better mental health regardless of social stress (Thoits 1995; Wethington and Kessler 1986). For example, Wethington and Kessler (1986) find that those who have higher levels of social support have better physical and mental health,

regardless of stress levels. They also find that the harmful effects of stress on health are not buffered by social support (Williams, Ware, and Donald 1981).

Both the buffering hypothesis and the main effects model describe social support as an intervening variable in a direct relationship between social stress and health. However, it is also possible that social stress modifies a direct relationship between social support and mental health. Stressful life events may alter the amount of social support available in one's social network (Thoits 1982). For example, social stress could reduce the positive effects of social support on mental health (Lincoln, Chatters, and Taylor 2005). Alternatively, experiencing stressful life events may increase the amount of available social support, thus reducing the negative impact of stress on mental health (McFarlane et al. 1983).

1.2.4 Relationship Type

The importance of equal levels of perceived support within dyadic relationships for mental health may vary based on relationship type. Different social norms surrounding exchange of support apply to different types of relationships (Gouldner 1960). For example, we generally expect our relationships with friends and romantic partners to be fairly reciprocal (Dean, Kolody, and Wood 1990). However, we do not necessarily have the same expectations of parent-child relationships or caregiver-client relationships. Thus, experiencing unequal levels of support may be more harmful to mental health in some contexts than others.

Additionally, social support from some sources may have a stronger impact on mental health outcomes than social support from other sources. Social support from one's spouse may be more beneficial than support from friends, which may be more beneficial than support from adult children (Dean, Kolody, and Wood 1990). Therefore, experiencing disparate levels of support in

a relationship with one's spouse or intimate partner may be more harmful to mental health than experiencing disparate levels of support in a friendship.

Social support from multiple sources, including family, friends, and intimate partners, is associated with better mental health. However, perceived social support from different sources may impact mental health in different ways (Betera 2005; Okabayashi et al. 2004; Reid and Taylor 2015). For example, a study of social support and social negativity among U.S. adults found that higher levels of perceived social support from relatives was associated with fewer episodes of anxiety and mood disorders. However, neither higher levels of perceived social support from friends nor from spouses was associated with fewer episodes of anxiety or mood disorders (Bertera 2005). This may be due to the fact that we choose our friends and intimate partners, but not our family, and thus we may only choose to have (and maintain) relationships with friends and intimate partners who are supportive (Allan 2008).

However, the impact of social support from intimate partners on mental health may be particularly important because of the salience and centrality of such network ties to one's everyday life. Other studies find that social support from spouses and intimate partners has the greatest impact on mental health (Okabayashi et al. 2004; Reid and Taylor 2015). A study of Japanese older adults examined the relationship between social support from spouses, children, and other friends and relatives and mental health outcomes (wellbeing, depressive symptoms, and cognitive decline). Results showed that among those who had a living spouse, perceived social support from the spouse had the strongest association with better mental health outcomes, while support from adult children and others had weaker associations. Among those who had children but no living spouse, only support from children was associated with better mental health outcomes (Okabayashi et al. 2004). Another study among women at risk for post-partum

depression found that, among married and cohabiting women, intimate partner support had a stronger association with lower levels of post-partum depression compared with support from family and friends (Reid and Taylor 2015). However, among women who were neither married nor cohabiting, support from family and friends and intimate partner support were equally important.

Collectively, these studies show that support from different sources is differentially associated with mental health outcomes. Although these studies consider social support within specific social contexts (e.g. older adults, mothers at risk for post-partum depression), they illustrate that the impact of social support on mental health varies based upon the type of relationship in which support is received. Each of the studies described above considers social support from the perspective of one support recipient – for example, the parent, but not the child, or the mother but not her partner. The present study will use perceptions of support and mental health outcomes from both dyadic network members to investigate whether the association between perceived support and depressive and anxiety symptoms varies by relationship type.

1.2.5 Research Questions

In this study, I address the following research questions: 1) How are one's own and one's significant other's perceptions of support associated with one's depressive and anxiety symptoms? 2) Do one's significant other's perceptions of support influence the relationship between one's own perceived social support and depressive and anxiety symptoms? 3) Does the strength of the relationship between one's own and one's significant other's levels of perceived support with depressive and anxiety symptoms vary at different levels of social stress? And, 4) Do the associations among perceptions of social support, social stress, and depressive and anxiety symptoms differ based upon dyad members' relationship type?

2 METHOD

2.1 Analytic Sample

The data used in this study are from the Physical Challenges and Health Study – a two-wave panel study based on a community sample of Miami-Dade County Florida residents (Turner, Lloyd and Taylor 2006). Wave 1 interviews were conducted between 2000 and 2001. The original sample contained a deliberate oversampling of adults with physical disabilities, who were matched on age, race-ethnicity, and gender with non-disabled adults in the sample. Therefore, of the 1,986 adults interviewed at Wave 1, 900 had been screened as having a physical disability. However, during the interview process, only 559 individuals confirmed having a physical disability at the time of the interview (Turner, Lloyd and Taylor 2006). The matching strategy used to oversample for persons with physical disabilities resulted in a sample which was older on average than the overall population of Miami-Dade County.

Approximately three years later (between 2004 and 2006), a second wave of data collection was undertaken. Of the 1986 respondents interviewed at Wave 1, 1,495 focal respondents (82.5%) were re-interviewed at Wave 2. At Wave 2, each focal respondent was asked to identify a significant other (SO) within their social network who could also be interviewed. Specifically, they were asked the following: “With your permission and with his/her agreement, we also want to interview your spouse/partner about their feelings, experiences, and well-being. The significant other may be your spouse or partner whenever possible. However, it may also be a person nominated by you as the person you see and interact with most often (i.e., family member or friend).” The type of relationship of focal respondents to significant others (e.g. mother, father, wife, husband, daughter, son, friend, coworker, etc.) was also recorded. Each focal respondent-SO dyad was linked based on the focal respondent’s case id

number. Preliminary analyses show that of the 1,495 focal respondents interviewed at Wave 2, 1,009 (68%) identified a significant other. Preliminary analyses have been conducted to check for significant differences between those respondents who identified a significant other and those who did not in terms of study measures and demographics.

The final analytic sample for this study is comprised of 982 focal respondent-SO dyads (1964 individuals) for which complete data are available on all study measures. I used listwise deletion to drop cases in which either the focal respondent or the significant other have missing data for any study measures. The only exception was physical disability status, which was measured only for focal respondents at Wave 1. Preliminary analyses show no significant differences between those who are retained in the analytic sample and those who are dropped due to missingness on study measures. Descriptive statistics for the full analytic sample are shown in table 1. **Table 1. Descriptive statistics for entire analytic sample (N=1964)**

Table 1. Descriptive Statistics for Entire Analytic Sample (N=1964).

		N	%	Mean	Std. Dev.	Range
Depressive Symptoms				10.21	8.94	0-49
Anxiety Symptoms				7.28	3.05	0-20
Social Support				68.03	9.62	0-96
Chronic Stress				10.30	4.63	0-30
Eventful Stress				1.08	1.53	0-13
Age				53.10	17.85	18-96
Household Income				53,452.22	39997.448	4999- 150999
Gender	<i>Men</i>	825	42%			
	<i>Women</i>	1135	48%			
Ethnicity	<i>White</i>	352	17.90%			
	<i>African American</i>	663	33.80%			
	<i>Cuban</i>	436	22.20%			
	<i>Other Hispanic</i>	424	21.60%			
Disability Status*	<i>Disability</i>	347	17.7%			
	<i>No Disability</i>	645	32.80%			
Relationship Type	<i>Intimate Partner</i>	1030	52.40%			
	<i>Other</i>	934	47.60%			

Note: Physical disability status is only measured for focal respondents at Wave 1. Percentages total 50% rather than 100%.

2.2 Intimate Partner Subsample

In order to test whether the associations among social support, stress, and mental health vary based upon relationship type, I created a subsample of respondent dyads composed of intimate partners (N=515 dyads; 1030 individuals). Descriptive statistics for the intimate partner subsample are shown in table 2.

Table 2. Descriptive Statistics for Intimate Partner Subsample (N=1030).

		N	%	Mean	Std. Dev.	Range
Depressive Symptoms				9.55	8.79	0-48
Anxiety Symptoms				7.33	3.04	0-20
Social Support				67.57	9.50	0-96
Intimate Partner Support				21.36	5.23	0-24
Chronic Stress				10.29	4.61	0-27
Eventful Stress				1.03	1.49	0-13
Age				57.30	15.01	18-96
Household Income				57202.43	41747.58	4999-150999
Gender	<i>Male</i>	519	50.40%			
	<i>Female</i>	511	49.60%			
Ethnicity	<i>White</i>	253	24.60%			
	<i>African American</i>	257	25.0%			
	<i>Cuban</i>	256	24.90%			
	<i>Other Hispanic</i>	211	20.50%			
Disability Status	<i>Disability</i>	166	16.1			
	<i>No Disability</i>	352	34.2			

Note: Physical disability status is only measured for focal respondents at Wave 1. Percentages total 50% rather than 100%.

□

2.3 Measures

2.3.1 Mental health outcomes

Depressive symptoms (CES-D): Depressive symptoms are measured using the Center for Epidemiologic Studies - Depression scale. This is a twenty-item scale in which respondents are asked how often in the past month (“Not at all, Occasionally, Frequently, or Almost all the time”) they have experienced certain thoughts and feelings. The scale includes items such as “You felt depressed,” “You felt that you could not shake off the blues,” and “Your sleep was

restless.” It also included reverse-coded items, such as “You felt happy,” “You felt hopeful about the future,” and “You felt that you were just as good as other people.” All items were recoded so that scores on each item ranged from 0 “Not at all” to 3 “Almost all the time” and so that higher numbers represent higher levels of depressive symptoms. Each respondent’s score represents the sum of their responses to all 20 items. Possible scores on this item range from 0-60. Reliability for this scale is $\alpha=.80$ for the analytic sample.

Anxiety: Anxiety symptoms were measured using a five-item scale in which respondents are asked how often in the past month (“Not at all, Occasionally, Frequently, or Almost all the time”) they have experienced certain thoughts and feelings. Items on this scale are “I felt worried over possible misfortunes,” “I felt over-excited,” “I felt tense,” “I felt anxious,” “I felt nervous.” All items were recoded so that scores on each item ranged from 0 “Not at all” to 3 “Almost all the time” and so that higher numbers represent higher levels of anxiety symptoms. Each respondent’s score represents the sum of their responses to all 5 items. Possible scores on this item range from 0-15. Reliability for this scale is $\alpha=.87$ for the analytic sample.

2.3.2 Social support

All respondents were asked questions regarding perceived social support from both family and friends. Family support was measured using a scale of 8 items including “My family lets me know I am a worthwhile person” and “I know my family would be there for me should I really need them.” Original response categories on these items ranged from 1 “Very true for you” to 4 “Not at all true for you.” I have recoded these categories such that they now range from 0 “Not at all true for you” to 3 “Very true for you,” with higher scores indicating higher levels of perceived support. Scores on this scale range from 0 to 24. Respondents were then asked the same eight questions about their friends, with responses coded in the same way. Scores on this

scale range from 0 to 24. Higher scores represent higher levels of perceived support. I measure overall social support by combining family support and friend support. The sum of each respondent's score on family support and friend support are summed to create a new measure of overall support. Levels of overall social support have a possible range of 0-48. Reliability across all 16 items in both scales is $\alpha = .88$ for the analytic sample.

2.3.3 Intimate partner support

In some analyses using the intimate partner subsample, I use a measure of intimate partner support to predict mental health outcomes. This measure is the sum of six items which ask respondents how much their spouse or intimate partner supports them. Respondents answered questions including "I have a husband/wife/partner who would always take the time to talk over my problems should I want to" and "My husband/wife/partner often lets me know that he/she thinks I am a worthwhile person." Values on this scale range from 0 to 24. Reliability across the six scale items is .86 for all respondent dyads who are intimate partners.

2.3.4 Stress

Chronic stress: Chronic stress is measured using a scale composed of ten items measuring stress associated with daily life and work. Respondents are asked how true ("Not true," "Somewhat true," "Very true") each statement is for them "at this time." Scale items include "You're trying to take on too many things at once," "Too much is expected of you by others," "Your supervisor is always watching what you do at work," and "Your job leaves you feeling both mentally and physically tired." All items were recoded so that scores on each item ranged from 0 "Not true" to 2 "Very true." Higher scores on the scale represent higher levels of stress.

Each respondent's score represents the sum of their responses to all 5 items. Possible scores on this item range from 0-20. Reliability for this scale is $\alpha=.78$ for the analytic sample.

Eventful stress: Eventful stress was measured using a scale of thirty-two recent stressful life events which happened either to the respondent or to the respondent's romantic partner or parent. Respondents were asked whether the first 23 items on the scale had happened to them or to their romantic partner or parent in the past year. Respondents were asked whether the final 9 items on the scale had happened to them personally (not to their romantic partner or parent). Items on the scale include "Did someone die?" "Did someone have a major financial crisis?" and "Did someone fail school or a training program?" Items which respondents experienced personally include "A close relationship ended," "Moved to a worse neighborhood or residence," and "Had your house or car broken into." Each respondent's score on this scale is a count of the total events they reported having experienced. Possible scores on this scale range from 0-32.

2.3.5 Additional covariates

Relationship type is a dyad-level measure indicating the relationship dyad members share. Relationship types were generated by respondents, who were asked what their relationship was to the significant other they nominated. From the respondent-generated responses, I created the categories "Intimate partner," "Parent" "Sibling" "Child" "Other relative" Non-relative." The category "Intimate partner" includes dyads in which the significant other is the focal respondent's spouse, boyfriend, or girlfriend. The category "Parent" includes dyads in which the significant other is the focal respondent's parent or stepparent. The category "Sibling" includes step-siblings and half-siblings. The category "Child" includes step-children.

Age is a measure of each respondent's age in years.

Sex is an interviewer-generated measure of whether each respondent is “male” or “female.”

Socioeconomic status is an indexed measure combining each respondent’s years of educational attainment and annual household income.

Race-ethnicity is measured based on the race-ethnic makeup of Miami-Dade County Florida. Respondents were asked whether they identified as “Non-Hispanic white,” “African American,” “Cuban,” “Other Hispanic” or “Other.” Approximately 25 percent of the sample identified as each Non-Hispanic white, African American, Cuban, and Other Hispanic. Fewer than 60 individuals identified as “Other.” These individuals are not included in the analytic sample.

Physical disability status was measured by asking each respondent “Do you have a physical or health problem that limits or interferes with the amount or kind of day to day work or recreational activities you can engage in?” Respondents who answered “yes” were categorized as having a physical disability. Respondents who answered “no” were categorized as having no physical disability. Twenty-eight percent of the analytic sample for this study has a physical disability.

2.4 Explanation of Actor-Partner Interdependence Modeling

The Actor-Partner Interdependence Model (APIM) is a statistical technique for predicting one dyad member’s level on an outcome measure based upon both dyad members’ measures on a predictor. In this study, I use the APIM to predict each respondent’s mental health outcomes based upon both their level of social support and their significant other’s level of social support. The APIM is especially useful in analyzing dyadic data since dyadic data often violate the assumption of independence in the General Linear Model. The APIM controls for the correlation

(interdependence) between the actor's predictor measure and the partner's predictor measure.

The APIM also calculates the correlation of error terms for each actor-partner dyad. In this study, I will be able to control for the interdependence between dyad member's levels of social support in predicting mental health outcomes.

Figure 1. illustrates how the APIM will be used to predict mental health outcomes based on social support. Arrow (a) at the top of the model shows the Actor Effect of each focal respondent's social support on their own depressive symptoms. Arrow (b) shows the Partner Effect of each focal respondent's social support on each significant other's depressive symptoms. Arrow (c) at the bottom of the model shows the Actor Effect of each significant other's social support on their own depressive symptoms. Arrow (d) shows the Partner Effect of each significant other's social support on each focal respondent's depressive symptoms. The curved line on the left of the model (e) shows the interdependence between each focal respondent's social support and their significant other's social support. The curved arrows on the right of the model (f) show the correlation of the error terms for each focal respondent's depressive symptoms and their significant other's depressive symptoms.

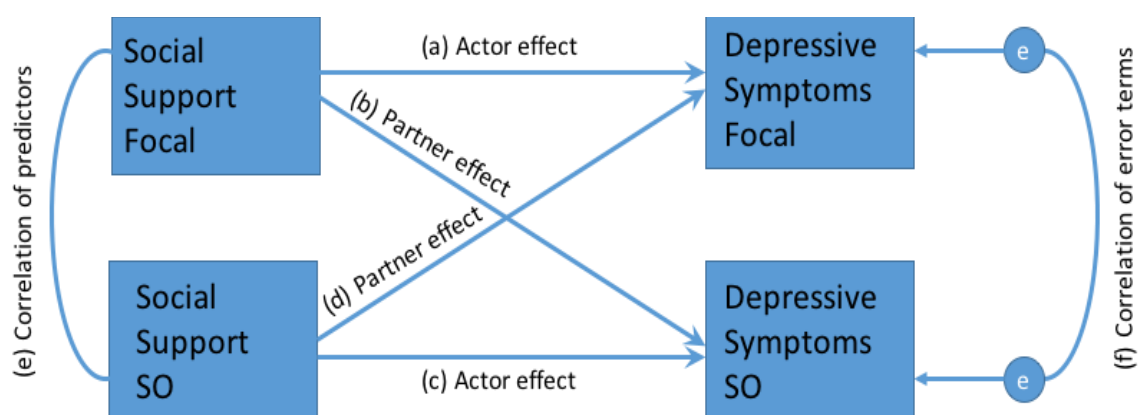


Figure 1. Conceptual Model of a Basic Actor-Partner-Interdependence Model.

2.4.1 Data structure

In order to conduct the analyses for this study, I restructured the original data for each individual into pairwise (or actor-partner) data for each dyad. First, I used STATA to merge the two data sets for focal respondents and significant others by matching them based on case id. This generated a dyadic data set in which each case represented a focal respondent-SO dyad. Next, I used a web-based application to transform the dyadic data set into a pairwise actor-partner data set (Lederman and Kenny 2016). The application uses the R software program to convert dyadic data into either pairwise data or individual data.

In the pairwise actor-partner data set generated by the web-based application, each case represents one member of a dyad (identified as the “actor”) and includes data for the other member of that individual’s dyad (identified as the “partner”). Thus, each dyad member’s data is recorded twice: once as an “actor” and once as the “partner” of the other dyad member.

Therefore, it is important to understand when interpreting the analyses in this study that each respondent - regardless of whether they are a “focal respondent” or a “significant other - is treated as the “Actor” in each analysis. This pairwise data structure enabled me to conduct analyses appropriate for answering my research questions (Garcia, Kenny, and Ledermann 2015).

2.4.2 Test for distinguishability

In order to conduct APIM analyses, it is first necessary to test whether dyad members are empirically distinguishable from one another. Different modeling techniques are appropriate for models in which dyad members have distinguishable roles within the dyad compared with those in which dyad members do not have distinguishable roles. For example, in parent-child dyads, the relationship between “respect for authority” and “relationship satisfaction” would likely

differ for parents compared with children. On the other hand, in a study on identical twins, the relationship between “respect for authority” and “relationship satisfaction” would *theoretically* not differ for those designated “Twin A” and those designated “Twin B.”

Although I had no theoretical reason to anticipate that respondents in my sample would differ based on whether they were designated “focal respondent” or “significant other,” it was necessary to test this question empirically in order to rule out alternative interpretations of the results. One approach to testing for distinguishability is to test whether the relationship between the main independent variable and the dependent variable (including both actor and partner effects) have different error variances based on the role of the dyad member.

In this study, I tested whether the relationship between social support and depressive symptoms (including both actor and partner effects) had different error variances depending on whether the dyad member was a “focal respondent” or a “significant other” nominated by a focal respondent. Here, I conducted a mixed hierarchical linear model in which I regressed depression on an interaction of actor’s social support by role and an interaction of partner’s social support by role. I found that the error variances did not differ significantly based upon whether the dyad member was a focal respondent or a significant other. The error variance for the actor and partner effects when dyads were treated as indistinguishable was 13975.45 and the error variance when dyads were treated as distinguishable was 13968.81. A chi square test for the differences in error variance is not significant at the .05 level ($p=.1568$). Therefore, I retained the null hypothesis that dyad members are not distinguishable from one another based upon whether they are designated as focal respondents or significant others. All APIM analyses in this study are specified appropriately for indistinguishable dyads.

2.5 Plan of Analysis

My first research question is whether both dyad members' levels of perceived social support are associated with each dyad members' levels of depressive symptoms. In order to evaluate this, I conducted a mixed regression analysis using the Actor-Partner Interdependence Model. Shown in Figure 1, the model represents the effect of both focal respondent's perceived social support and significant other's perceived social support on Focal Respondent's depressive symptoms. The same model also reflects the effect of both the focal respondent's perceived social support and significant other's perceived social support on each significant other's depressive symptoms.

My second research question is whether the unequal levels of perceived support between dyad members is associated with higher levels of depressive symptoms. In order to assess the relationship between unequal levels of perceived support and depressive symptoms, I conduct an APIM analysis which regresses depressive symptoms on the interaction term of actor support and partner support. Illustrated in Figure 2., this model treats each respondent's partner's level of perceived support as a moderator in the relationship between the respondent's social support and depressive symptoms.

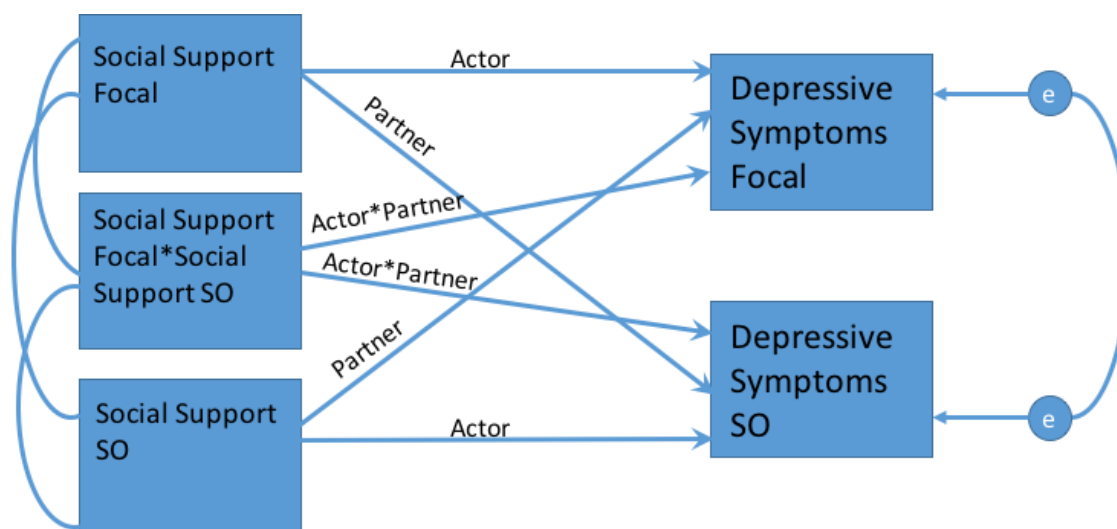


Figure 2. Conceptual Model of an Actor-Partner-Interdependence Model with Interaction Effects.

I hypothesize that the negative relationship between each respondent's perceived social support and depressive and anxiety will be stronger when their significant other's level of perceived social support is also high. Figure 3 illustrates the hypothesized relationship between the interaction of actor and partner perceived social support and depressive symptoms. The broken line shows the relationship between actor's social support and depressive symptoms when partner's social support is low. The solid line shows the relationship between actor's social support and depressive symptoms when partner's support is high.

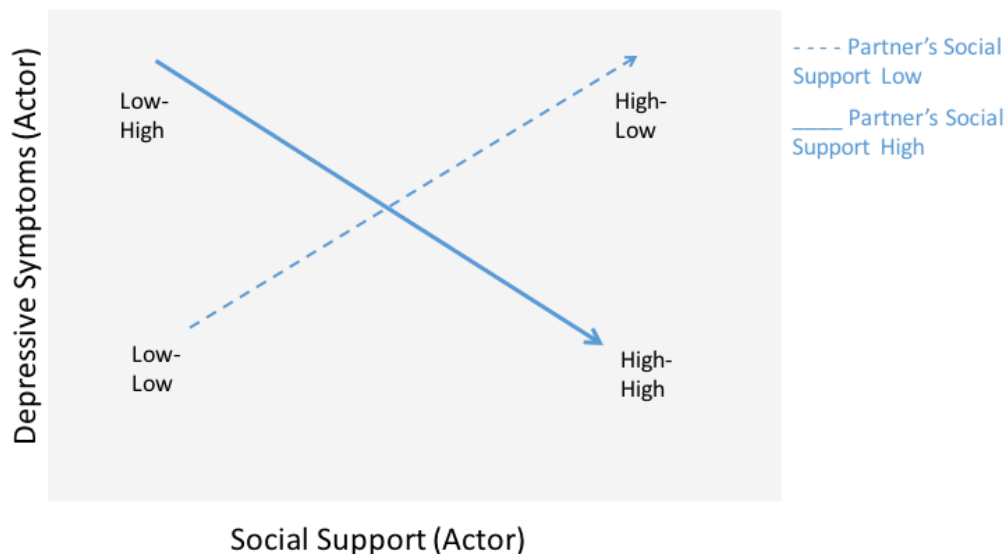


Figure 3. Hypothesized Interaction of Actor and Partner Support.

My third research question is whether stress moderates the relationship between social support and depressive symptoms. Depicted in Figure 4., I conduct an APIM analysis which regresses each respondent's depressive symptoms on the interaction between term of actor's social support and actor's chronic stress and partner's social support and partner's chronic stress. This model treats chronic stress as a moderator in the relationship between (un)equal levels of social support and depression. I hypothesize that the relationship between unequal levels of perceived social support and higher levels of depressive symptoms will be stronger when chronic stress is high. I will also conduct the same analysis using eventful stress rather than chronic stress as a moderating factor.

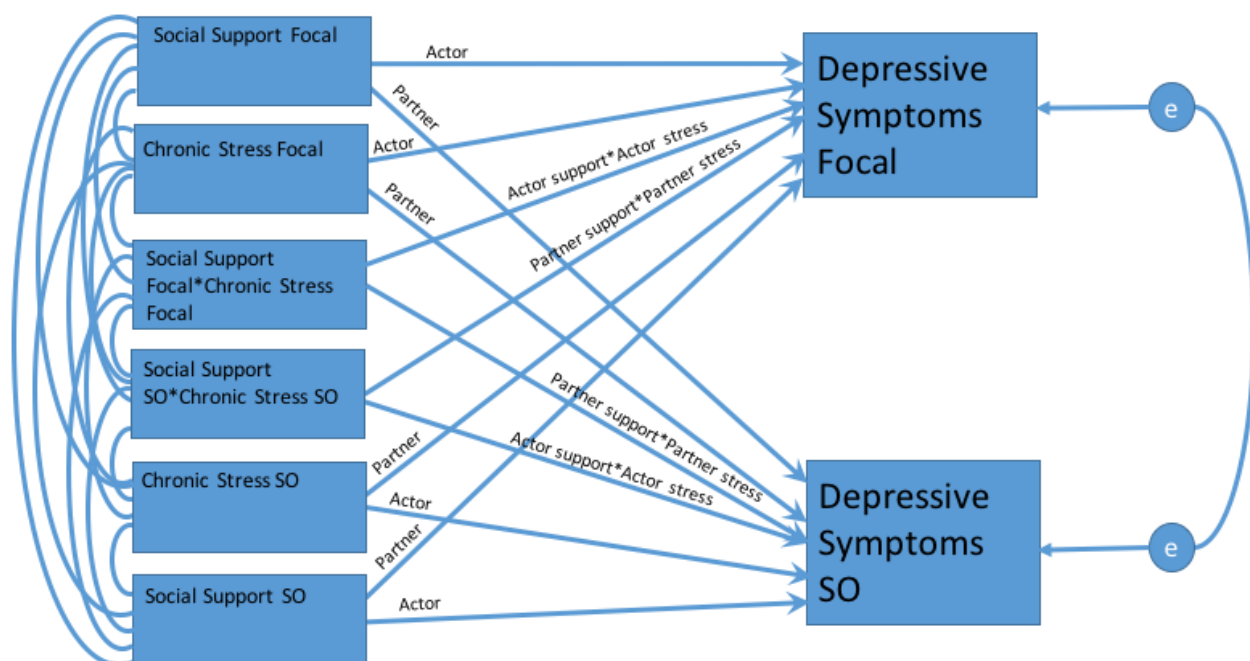


Figure 4. Conceptual Model of an Actor-Partner-Interdependence Model with Interaction Effects.

Finally, my fourth research question is whether the relationships among social support, stress, and depressive and anxiety symptoms vary based upon the type of relationship between dyad members. Specifically, I hypothesize that the relationship between both dyad members' level of support and depressive and anxiety symptoms will be stronger when dyad members are intimate partners and weaker when dyad members are not intimate partners. I also hypothesize that the moderating effects of both chronic and eventful stress on the relationship between social support and depressive and anxiety symptoms will be stronger when dyad members are intimate partners and weaker when dyad members are not intimate partners. I test this relationship using a subsample of respondent dyads composed of intimate partners to repeat the measures described above.

Figure 5. depicts the hypothesized moderation effect of chronic stress on the relationship between unequal levels of perceived social support and depressive symptoms. The broken lines

depict the relationship between actor's perceived social support and depressive symptoms when partner's perceived social support is. The solid lines depict the relationship between actor's perceived social support and depressive symptoms when partner's perceived social support is high. Separate lines for high and low partner support depict the hypothesized differences in the relationship between actor and partner social support and depressive symptoms depending upon whether the actor and partner are intimate partners.

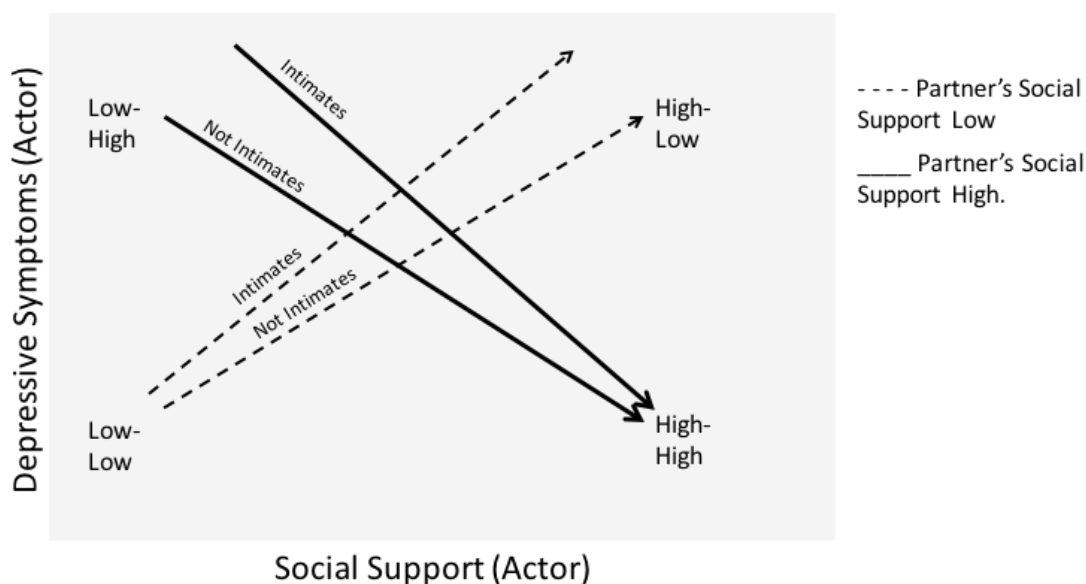


Figure 5. Hypothesized Moderating Effect of Relationship Type on Social Support and Depressive Symptoms.

3 RESULTS

3.1 Actor and Partner Support and Mental Health

To test my first research question, I used Actor-Partner Interdependence Modeling (APIM) to predict both depressive symptoms and anxiety symptoms from each dyad member's level of perceived social support. The results of these analyses are shown in table 3. The results, show that the coefficient of the relationship between a respondent's own social support and depressive symptoms (actor effect) is $-.13$ ($p < .001$). The coefficient of the relationship between

a respondent's significant other's social support and the respondent's depressive symptoms is $-.0537$ ($p=.096$). The significant actor effect shows that as each respondent's own social support increases by one the respondent's level of depressive symptoms decreases by $.13$. However, the respondent's significant other's social support does not significantly predict the respondent's depressive symptoms. These analyses control for the correlation between the respondent's social support and the significant other's social support and for the correlation of the error terms (22.16 , $p=2.19$), as well as for demographic controls. The results of this model partially support my hypothesis that higher levels of both actor's and partner's social support are associated with lower levels of depressive symptoms.

Table 3 also shows results for the relationships between each respondent's own social support and their significant other's social support predict that respondent's anxiety symptoms. The results show that neither a respondent's own social support ($R=.01$, $p=.126$) nor the respondent's significant other's social support has a significant effect on the respondent's anxiety symptoms. These analyses control for the correlation between the respondent's social support and the significant other's social support and for the correlation of the error terms (-7.06 , $p<.001$), as well as for demographic controls. These results are not consistent with my hypothesis that both respondents' own social support and significant other's social support would predict each respondent's anxiety symptoms. Only actor support is associated with lower depressive symptoms. Actor support is not associated with lower levels of anxiety symptoms. Partner support is not associated with either lower levels of depressive symptoms or lower anxiety symptoms.

Table 3. Social Support Predicting Depressive Symptoms and Anxiety Symptoms

		R	P
Depressive Symptoms	Social Support (Actor effect)	-.13***	.000
	Social Support (Partner effect)	-.05	.096
Anxiety Symptoms	Social Support (Actor effect)	-.01	.126
	Social Support (Partner effect)	0	0

Notes:

APIM modeling controls for autocorrelation of predictors as well as correlation of error terms.

All outcome and predictor variables are grand-mean-centered for ease of interpretation.

All models include the following covariates: age, gender, race-ethnicity, household income, and physical disability status.

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3.2 Support Interaction and Mental Health

My second research question is whether one's significant other's perceptions of support influence the relationship between one's own perceived social support and depressive and anxiety symptoms. To answer this question, I conducted APIM models in which I predicted each respondent's own depressive symptoms and anxiety symptoms using a two-way interaction of their own perceived social support and their significant other's perceived social support. The results of these analyses are shown in table 4. The results show that there is no significant interaction between a respondent's social support and the respondent's significant other's social support in predicting the respondent's depressive symptoms. Indeed, the coefficient of this interaction is equal to zero. These results are not consistent with my hypothesis that, when one's significant other's level of social support is higher, the relationship between one's own social support and one's own level of depressive symptoms would be stronger.

Table 4 also shows results for analyses testing whether the relationship between a respondent's own social support and the respondent's anxiety symptoms is stronger when the respondent's significant other's social support is also higher. The results show that there is no

significant interaction between a respondent's social support and the respondent's significant other's social support in predicting the respondent's anxiety symptoms. The coefficient of this interaction is also equal to zero. These results are not consistent with my hypothesis that each respondent's social support and their significant other's social support interact to predict the respondent's anxiety symptoms.

Table 4. Interaction of Actor-Partner Support predicting Depressive Symptoms and Anxiety Symptoms.

		R	P
Depressive Symptoms	Social Support (Actor effect)	-.12***	.000
	Social Support (Partner effect)	-.05	.95
	Social Support (Actor x Partner)	0	0
Anxiety Symptoms	Social Support (Actor effect)	-.02	.126
	Social Support (Partner effect)	0	0
	Social Support (Actor x Partner)	0	0

Notes:

APIM modeling controls for autocorrelation of predictors as well as correlation of error terms.

All outcome and predictor variables are grand-mean-centered for ease of interpretation.

All models include the following covariates: age, gender, race-ethnicity, household income, and physical disability status.

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3.3 Stress and the Relationship Between Support and Mental Health

To test my third research question, I conducted APIM analyses predicting each respondent's depressive and anxiety symptoms from a series of two-way interactions of 1) their own chronic stress and their own perceived social support, 2) their own chronic stress and their significant other's perceived social support, 3) their significant other's chronic stress and their own perceived social support, and 4) their significant other's chronic stress and their significant other's perceived social support. Results of these analyses are shown in table 5. Results of these analyses show that a respondent's own chronic stress has no significant effect on the relationship

between a respondent's own social support and the respondent's depressive symptoms ($R=.01$, $p=.117$). The second interaction term shows that respondent's own chronic stress also has no significant effect on the relationship between a respondent's significant other's social support and the respondent's depressive symptoms ($R=.01$, $p=.173$). The third interaction term shows that a respondent's significant other's chronic stress has no effect on the relationship between the respondent's own social support and the respondent's depressive symptoms. Finally, the fourth interaction term shows that a respondent's significant other's chronic stress has no effect on the relationship between the significant other's social support and the respondent's own depressive symptoms. These results are not consistent with my hypothesis that chronic stress moderates the relationship between a respondent's own social support and the respondent's depressive symptoms and between a respondent's significant other's social support and the respondent's depressive symptoms.

Table 5 also shows results of analyses which test whether chronic stress moderates the effects of a respondent's own support and the respondent's significant other's support on anxiety symptoms. Shown in table 5, results show that a respondent's chronic stress has no significant effect on the relationship between a respondent's own social support and the respondent's anxiety symptoms. The second interaction term predicting anxiety shows that a respondent's own chronic stress also has no significant effect on the relationship between a respondent's significant other's social support and the respondent's own anxiety symptoms. The third interaction term predicting anxiety shows that a respondent's significant other's chronic stress also has no effect on the relationship between a respondent's own social support and the respondent's anxiety symptoms. Finally, the fourth interaction term predicting anxiety shows that a respondent's significant other's chronic stress has no effect on the relationship between the

significant other's social support and the respondent's anxiety symptoms.

These results are not consistent with my hypothesis that chronic stress moderates the relationship between a respondent's own social support and the respondent's anxiety symptoms and between a respondent's significant other's social support and anxiety symptoms. Neither a respondent's own chronic stress nor their significant other's chronic stress was associated with the relationship between either person's levels of perceived social support and either person's depressive or anxiety symptoms.

I also conducted the same analyses described in table 5 using eventful stress as a moderator of the relationship between each respondent's own perceived social support and their significant other's perceived social support and their depressive symptoms and anxiety symptoms (Table 6). Consistent with chronic stress, results of these analyses show that a respondent's own eventful stress has no significant effect on the relationship between a respondent's own social support and the respondent's depressive symptoms ($R=-.04$, $p=.063$). The second interaction term in table 6 shows that a respondent's own eventful stress also has no significant effect on the relationship between a respondent's significant other's social support and the respondent's depressive symptoms ($R=.03$, $p=.214$). The third interaction term in table 6 shows that a respondent's significant other's eventful stress has no effect on the relationship between the respondent's own social support and the respondent's depressive symptoms ($R=.02$, $p=.248$). Finally, the fourth interaction term in table 6 shows that a respondent's significant other's eventful stress has no effect on the relationship between the significant other's social support and the respondent's own depressive symptoms ($R=.02$, $p=.404$). These results are not consistent with my hypothesis that eventful stress moderates the relationship between a

respondent's own social support and the respondent's depressive symptoms and between a respondent's significant other's social support and the respondent's depressive symptoms.

Table 5. Chronic Stress Moderating the Relationship Between Social Support and Depressive and Anxiety Symptoms.

		R	P
Depressive Symptoms	Chronic Stress (actor) x Social Support (actor)	.01	.117
	Chronic Stress (actor) x Social Support (partner)	-.01	.173
	Chronic Stress (partner) x Social Support (actor)	0	0
	Chronic Stress (partner) x Social Support (partner)	0	0
Anxiety Symptoms	Chronic Stress (actor) x Social Support (actor)	0	0
	Chronic Stress (actor) x Social Support (partner)	0	0
	Chronic Stress (partner) x Social Support (actor)	0	0
	Chronic Stress (partner) x Social Support (partner)	0	0

Notes:

APIM modeling controls for autocorrelation of predictors as well as correlation of error terms.

All outcome and predictor variables are grand-mean-centered for ease of interpretation.

All models include the following covariates: age, gender, race-ethnicity, household income, and physical disability status.

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I conducted identical analyses testing whether eventful stress moderates the effects of a respondent's own support and the respondent's significant other's support on anxiety symptoms. Shown in table 6, results of these analyses show that a respondent's eventful stress has no significant effect on the relationship between a respondent's own social support and the respondent's anxiety symptoms ($R=-.01$, $p=.115$). The second interaction term predicting anxiety shows that a respondent's own eventful stress also has no significant effect on the relationship between a respondent's significant other's social support and the respondent's own anxiety symptoms ($R=.02$, $p=.06$). The third interaction term predicting anxiety shows that a respondent's significant other's eventful stress also has no effect on the relationship between a respondent's own social support and the respondent's anxiety symptoms. Finally, the fourth interaction term predicting anxiety shows that a respondent's significant other's eventful stress

has no effect on the relationship between the significant other's social support and the respondent's anxiety symptoms. These results are not consistent with my hypothesis that eventful stress moderates the relationship between a respondent's own social support and the respondent's anxiety symptoms and between a respondent's significant other's social support and anxiety symptoms.

Table 6. Eventful Stress Moderating the Relationship Between Social Support and Depressive and Anxiety Symptoms

		R	P
Depressive Symptoms	Eventful Stress (actor) x Social Support (actor)	-.04	.063
	Eventful Stress (actor) x Social Support (partner)	.03	.214
	Eventful Stress (partner) x Social Support (actor)	.02	.248
	Eventful Stress (partner) x Social Support (partner)	.02	.404
Anxiety Symptoms	Eventful Stress (actor) x Social Support (actor)	-.01	.115
	Eventful Stress (actor) x Social Support (partner)	.02	.059
	Eventful Stress (partner) x Social Support (actor)	0	0
	Eventful Stress (partner) x Social Support (partner)	0	0

Notes:

APIM modeling controls for autocorrelation of predictors as well as correlation of error terms.

All outcome and predictor variables are grand-mean-centered for ease of interpretation.

All models include the following covariates: age, gender, race-ethnicity, household income, and physical disability status.

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3.4 Analyses using Intimate Partner Subsample

My final research question is whether the relationships among social support, stress, and mental health outcomes vary based upon whether dyad members are intimate partners. To investigate this research question, I conducted the same models described above among a subsample of respondent dyads who were spouses or intimate partners (e.g. husbands, wives, or other romantic partners). This set of analyses tests the hypothesis that the relationships among social support, chronic stress, eventful stress, and depressive symptoms and anxiety symptoms differ based upon relationship types. Results of these analyses are shown in tables 7, 8, 9, and 10.

Additionally, I repeated the analyses among the intimate partners subsample using a separate measure of intimate partner support. This measure uses support specifically provided by the respondent's intimate partner, rather than by the respondent's family and friends. Tables 11, 12, 13, and 14 show the results of analyses predicting depressive symptoms and anxiety symptoms from both intimate support among respondent dyads who are intimate partners.

3.4.1 Social support between intimate partners

Table 7 shows the results of social support (which combines support from friends and family) predicting depressive symptoms among intimate partner dyads. Results show that a respondent's own social support significantly predicts lower levels of depressive symptoms for that respondent ($R = -.15, p < .000$). However, as in the general sample, the relationship between a respondent's intimate partner's social support and that respondent's depressive symptoms is not significant ($R = -.07, p = .074$). These analyses control for the correlation between the respondent's social support and the intimate partner's social support and for the correlation of the error terms, as well as for demographic controls. The results of these analyses partially support my hypothesis that both a respondent's own social support and a respondent's significant other's social support predict the respondent's level of depressive symptoms. Only the respondent's own level of social support is associated with that respondent's level of depressive symptoms. The respondent's partner's social support is not associated with the respondent's level of depressive symptoms.

Table 7 also shows the results for analyses testing whether a respondent's own social support and the respondent's intimate partner's social support predict that respondent's anxiety. Consistent with depressive symptoms, the results show that a respondent's own social support is not significantly associated with the respondent's anxiety symptoms ($R = -.02, P = .312$). The

relationship between a respondent's intimate partner's social support and the respondent's anxiety symptoms is also not significant ($R=-.01$, $P=.616$). These analyses control for the correlation between the respondent's social support and the intimate partner's social support and for the correlation of the error terms, as well as for demographic controls. These results show that neither a respondent's own social support nor the respondent's intimate partner's social support predict each respondent's level of anxiety symptoms.

Table 7. Social Support Predicting Depressive Symptoms and Anxiety Symptoms.

Intimate Partner Subsample		R	P
Depressive Symptoms	Social Support (Actor effect)	-.15***	.000
	Social Support (Partner effect)	-.07	.074
Anxiety Symptoms	Social Support (Actor effect)	-.02	.312
	Social Support (Partner effect)	-.01	.656

Notes:

APIM modeling controls for autocorrelation of predictors as well as correlation of error terms.

All outcome and predictor variables are grand-mean-centered for ease of interpretation.

All models include the following covariates: age, gender, race-ethnicity, household income, and physical disability status.

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The analyses shown in table 8 test whether a respondent's own social support and the respondent's intimate partner's social support interact to predict the respondent's depressive symptoms. The results show that there is no significant interaction between a respondent's own social support and a respondent's significant other's social support for predicting the respondent's depressive symptoms ($R= -.01$, $P=.208$). These results are not consistent with my hypothesis that each respondent's social support and their intimate partner's social support interact to predict the respondent's depressive symptoms.

Table 8 also shows results for analyses which test whether a respondent's own social support and the respondent's intimate partner's social support interact to predict that respondent's anxiety symptoms. The results show no interaction between a respondent's social

support and the respondent's intimate partner's social support in predicting the respondent's anxiety symptoms ($R=0.00$). These results are not consistent with my hypothesis that each respondent's social support and their intimate partner's social support interact to predict the respondent's anxiety symptoms.

Table 8. Interaction of Actor-Partner Social Support predicting Depressive Symptoms and Anxiety Symptoms.

Intimate Partner Subsample		R	P
Depressive Symptoms	Social Support (Actor effect)	-.15**	.002
	Social Support (Partner effect)	-.07	.071
	Social Support (Actor x Partner)	-.01	.208
Anxiety Symptoms	Social Support (Actor effect)	-.02	.312
	Social Support (Partner effect)	-.01	.654
	Social Support (Actor x Partner)	0	0

Notes:

APIM modeling controls for autocorrelation of predictors as well as correlation of error terms.

All outcome and predictor variables are grand-mean-centered for ease of interpretation.

All models include the following covariates: age, gender, race-ethnicity, household income, and physical disability status.

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Next, I tested whether chronic stress moderates the effects of a respondent's own social support and the respondent's intimate partner's social support on depressive symptoms. Results of these analyses are shown in table 9. As described above, I did this using APIM analyses predicting each respondent's depressive and anxiety symptoms from a series of two-way interactions of 1) their own chronic stress and their own perceived social support, 2) their own chronic stress and their intimate partner's perceived social support, 3) their intimate partner's chronic stress and their own perceived social support, and 4) their intimate partner's chronic stress and their intimate partner's perceived social support. Shown in table 9, results of these analyses show that a respondent's chronic stress does not moderate the relationship between with the respondent's own social support and the respondent's depressive symptoms ($R= .01$; $p=.420$).

Results also show that a respondent's chronic stress also does not moderate the relationship between the respondent's intimate partner's social support and the respondent's depressive symptoms ($R=-.01$, $P=.398$). A respondent's intimate partner's chronic stress does not moderate the relationship between a respondent's own social support and the respondent's depressive symptoms ($R=-.01$, $P=.393$). Finally, a respondent's intimate partner's chronic stress does not moderate the relationship between the intimate partner's social support and the respondent's depressive symptoms. These results are not consistent with my hypothesis that chronic stress would moderate the relationships between both a respondent's social support and a respondent's intimate partner's social support and the respondent's depressive symptoms.

Table 9 also shows the results of APIM analyses testing whether chronic stress moderates the effects of a respondent's own social support and the respondent's partner's social support on anxiety symptoms. Results of these analyses show that a respondent's chronic stress does not moderate the relationship between with the respondent's own social support and the respondent's anxiety symptoms. Results also show that respondent's chronic stress also does not moderate the relationship between the respondent's intimate partner's social support and the respondent's anxiety symptoms. A respondent's intimate partner's chronic stress does not moderate the relationship between a respondent's own social support and the respondent's anxiety symptoms. Finally, a respondent's intimate partner's chronic stress does not moderate the relationship between the intimate partner's social support and the respondent's anxiety symptoms. These results are not consistent with my hypothesis that chronic stress would moderate the relationships between both a respondent's social support and a respondent's intimate partner's social support and the respondent's anxiety symptoms.

Table 9. Chronic Stress Moderating the Relationship Between Social Support and Depressive and Anxiety Symptoms.

Intimate Partner Subsample		R	P
Depressive Symptoms	Chronic Stress (actor) x Social Support (actor)	.01	.420
	Chronic Stress (actor) x Social Support (partner)	-.01	.398
	Chronic Stress (partner) x Social Support (actor)	-.01	.393
	Chronic Stress (partner) x Social Support (partner)	0	0
Anxiety Symptoms	Chronic Stress (actor) x Social Support (actor)	0	0
	Chronic Stress (actor) x Social Support (partner)	0	0
	Chronic Stress (partner) x Social Support (actor)	0	0
	Chronic Stress (partner) x Social Support (partner)	0	0

Notes:

APIM modeling controls for autocorrelation of predictors as well as correlation of error terms.

All outcome and predictor variables are grand-mean-centered for ease of interpretation.

All models include the following covariates: age, gender, race-ethnicity, household income, and physical disability status.

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Similar analyses to those shown in table 9 were conducted to test whether eventful stress moderates the effects of a respondent's own social support and the respondent's intimate partner's social support on depressive symptoms. Shown in Table 10, results of these analyses show that a respondent's eventful stress does not moderate the relationship between with the respondent's own social support and the respondent's depressive symptoms ($R=-.03$, $P=.424$). A respondent's eventful stress also does not moderate the relationship between the respondent's intimate partner's social support and the respondent's depressive symptoms ($R=.03$, $P=.204$). A respondent's intimate partner's eventful stress does not moderate the relationship between a respondent's own social support and the respondent's depressive symptoms ($R= .03$, $P=.157$). Finally, a respondent's intimate partner's eventful stress does not moderate the relationship between the intimate partner's social support and the respondent's depressive symptoms. These results are not consistent with my hypothesis that eventful stress would moderate the

relationships between both a respondent's social support and a respondent's intimate partner's social support and the respondent's depressive symptoms.

Table 10 also shows analyses testing whether eventful stress moderates the effects of a respondent's own social support and the respondent's intimate partner's social support on anxiety symptoms. Results of these analyses show that when a respondent reports high levels of eventful stress, the respondent's own social support is associated with lower anxiety symptoms ($R=-.03$, $P=.019$). In other words, when one is experiencing stressful life events, higher levels of social support are associated with lower levels of anxiety symptoms. A respondent's eventful stress does not moderate the relationship between their intimate partner's social support on the respondent's anxiety symptoms ($R=.02$, $P=.050$). A respondent's intimate partner's eventful stress does not moderate the relationship between the respondent's social support and the respondent's anxiety symptoms ($R=-.01$, $P=.562$). Finally, the respondent's intimate partner's eventful stress does not moderate the relationship between their intimate partner's social support and the respondent's anxiety symptoms. These results partially support my hypothesis that eventful stress will moderate the relationship between both a respondent's social support and the respondent's intimate partner's social support and the respondent's anxiety symptoms.

Table 10. Eventful Stress Moderating the Relationship Between Social Support and Depressive and Anxiety Symptoms.

Intimate Partner Subsample		R	P
Depressive Symptoms	Eventful Stress (actor) x Social Support (actor)	-.03	.424
	Eventful Stress (actor) x Social Support (partner)	.03	.204
	Eventful Stress (partner) x Social Support (actor)	.03	.157
	Eventful Stress (partner) x Social Support (partner)	0	0
Anxiety Symptoms	Eventful Stress (actor) x Social Support (actor)	-.03*	.019
	Eventful Stress (actor) x Social Support (partner)	.02	.050
	Eventful Stress (partner) x Social Support (actor)	-.01	.562
	Eventful Stress (partner) x Social Support (partner)	0	0

Notes:

APIM modeling controls for autocorrelation of predictors as well as correlation of error terms.

All outcome and predictor variables are grand-mean-centered for ease of interpretation.

All models include the following covariates: age, gender, race-ethnicity, household income, and physical disability status.

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3.4.2 Intimate partner support

Next, I repeated the analyses shown in tables 7, 8, 9, and 10 using an alternative measure of support. The analyses shown in tables 11, 12, 13, and 14 use a measure of intimate partner support rather than social support from family and friends. Analyses using intimate partner support show stronger associations between support and mental health outcomes compared with analyses using social support from family and friends. The results of the analyses shown in Table 11 predict depressive symptoms using intimate support (support received from one's spouse or intimate partner) among respondent dyads who are spouses or intimate partners. The results show that higher levels of a respondent's own intimate support predict lower levels of depressive symptoms for that respondent ($R=-.36$, $P=.000$). These results also show that a respondent's intimate partner's intimate support is not associated with the respondent's depressive symptoms ($R=-.06$, $P=.369$). These analyses control for the correlation between the respondent's intimate support and the partner's intimate support and for the correlation of the error terms, as well as for demographic controls. These results show partial support for my hypothesis that both the

respondent's own intimate support and the respondent's partner's intimate support predict each respondent's level of depressive symptoms.

Table 11 also shows results for analyses which test whether a respondent's own intimate support and their intimate partner's intimate support predict that respondent's anxiety symptoms. The results show that a respondent's own intimate support is associated with lower levels of anxiety symptoms ($R=-.10$, $P=.003$). A respondent's intimate partner's intimate support is not associated with the respondent's anxiety symptoms ($R=.02$, $P=.558$). These analyses control for the correlation between the respondent's intimate support and the partner's intimate support, and for the correlation of the error terms, as well as for demographic controls. These results partially support my hypothesis that both the respondent's own intimate support and the respondent's partner's intimate support predict each respondent's level of anxiety symptoms.

Table 11. Intimate Support predicting Depressive Symptoms and Anxiety Symptoms.

Intimate Partner Subsample		R	P
Depressive Symptoms	Intimate Support (Actor effect)	-.36***	.000
	Intimate Support (Partner effect)	-.06	.369
Anxiety Symptoms	Intimate Support (Actor effect)	-.10**	.003
	Intimate Support (Partner effect)	.02	.558

Notes:

APIM modeling controls for autocorrelation of predictors as well as correlation of error terms.

All outcome and predictor variables are grand-mean-centered for ease of interpretation.

All models include the following covariates: age, gender, race-ethnicity, household income, and physical disability status.

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The analyses shown in Table 12 test whether a respondent's own intimate support and the respondent's intimate partner's intimate support interact to predict that respondent's depressive symptoms. The results of these analyses show that, when a respondent's intimate partner's intimate support is higher, the negative association between the respondent's own intimate

support and the respondent's depressive symptoms is stronger ($R=-.02$, $P=.201$). In other words, a person's perception that she is supported by her intimate partner is associated with lower levels of depressive symptoms, and when her intimate partner also perceives higher levels of support from her, the association is even stronger. These results, shown in Figure 6, are consistent with my hypothesis that a respondent's own intimate support and a respondent's intimate partner's intimate support interact to predict the respondent's depressive symptoms.

Table 12 also shows the results of analyses testing whether a respondent's own intimate support and the respondent's intimate partner's intimate support interact to predict that respondent's anxiety symptoms. The results of these analyses show that, when a respondent's intimate partner's intimate support is high, the negative association between a respondent's own intimate support and the respondent's own anxiety symptoms is stronger ($R=-.01$, $P=.003$). These results, shown in figure 7, support my hypothesis that each respondent's own intimate support and each respondent's intimate partner's intimate support will interact to predict the respondent's anxiety symptoms.

Table 12. Interaction of Actor-Partner Intimate Support Predicting Depressive Symptoms and Anxiety Symptoms.

Intimate Partner Subsample		R	P
Depressive Symptoms	Intimate Support (Actor effect)	-.38***	.000
	Intimate Support (Partner effect)	.03	.741
	Intimate Support (Actor x Partner)	-.02*	.021
Anxiety Symptoms	Intimate Support (Actor effect)	-.10**	.003
	Intimate Support (Partner effect)	.02	.558
	Intimate Support (Actor x Partner)	-.01**	.003

Notes:

APIM modeling controls for autocorrelation of predictors as well as correlation of error terms.

All outcome and predictor variables are grand-mean-centered for ease of interpretation.

All models include the following covariates: age, gender, race-ethnicity, household income, and physical disability status.

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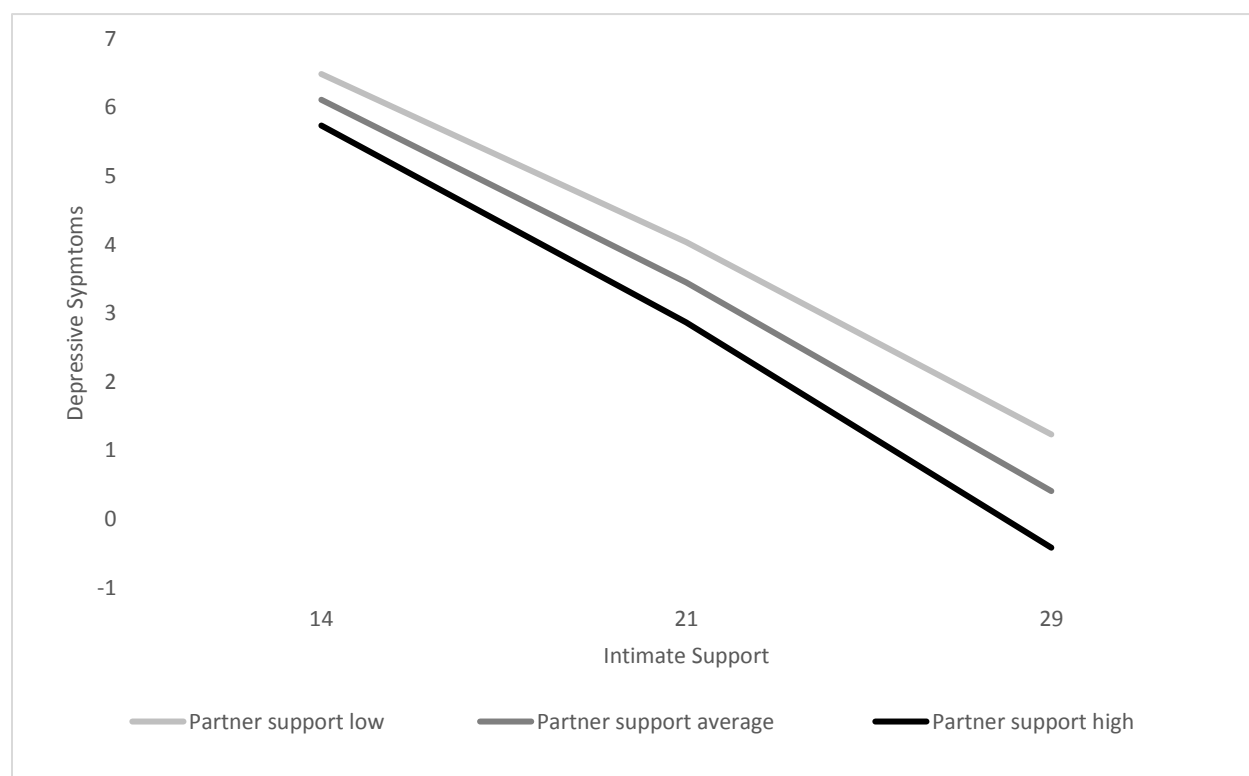


Figure 6. Interaction of Actor and Partner Support Predicting Depressive Symptoms.

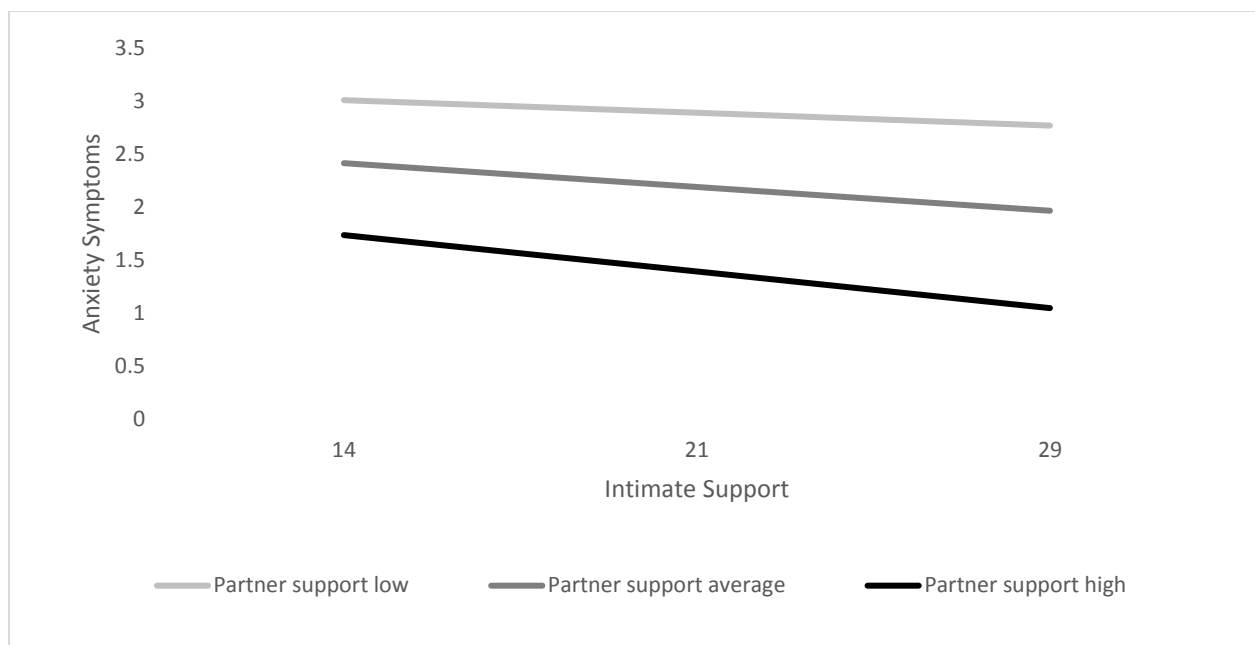


Figure 7. Interaction of Actor and Partner Support Predicting Depressive Symptoms.

Next, I conducted analyses to test whether chronic stress moderates the effects of a respondent's own intimate support and the respondent's intimate partner's intimate support on depressive symptoms. I did this using APIM analyses predicting each respondent's depressive and anxiety symptoms from a series of two-way interactions of 1) their own chronic stress and their own perceived intimate support, 2) their own chronic stress and their intimate partner's perceived intimate support, 3) their intimate partner's chronic stress and their own perceived intimate support, and 4) their intimate partner's chronic stress and their intimate partner's perceived intimate support. Results of these analyses shown in table 13, show that a respondent's chronic stress does not moderate the relationship between the respondent's own intimate support and the respondent's depressive symptoms ($R = .03$; $p = .713$). A respondent's chronic stress also does not moderate the relationship between the respondent's intimate partner's intimate support and the respondent's depressive symptoms ($R = -.02$, $P = .358$). A respondent's intimate partner's chronic stress does not moderate the relationship between a respondent's own intimate support

and the respondent's depressive symptoms ($R=.02$, $P=.499$). Finally, a respondent's intimate partner's chronic stress does not moderate the relationship between the intimate partner's intimate support and the respondent's depressive symptoms ($R=.01$, $P=.724$). These results are not consistent with my hypothesis that chronic stress would moderate the relationships between both a respondent's intimate support and a respondent's intimate partner's intimate support and the respondent's depressive symptoms.

Table 13 also shows the results of analyses testing whether chronic stress moderates the effects of a respondent's own intimate support and the respondent's intimate partner's intimate support on anxiety symptoms. Results of these analyses show that a respondent's chronic stress does not moderate the relationship between with the respondent's own intimate support and the respondent's anxiety symptoms ($R=.01$, $P=.353$). A respondent's chronic stress also does not moderate the relationship between the respondent's intimate partner's intimate support and the respondent's anxiety symptoms ($R=-.01$, $P=.154$). A respondent's intimate partner's chronic stress does not moderate the relationship between a respondent's own intimate support and the respondent's anxiety symptoms. Finally, a respondent's intimate partner's chronic stress does not moderate the relationship between the intimate partner's intimate support and the respondent's anxiety symptoms ($R=.01$, $P=.411$). These results are not consistent with my hypothesis that chronic stress would moderate the relationships between both a respondent's intimate support and a respondent's intimate partner's intimate support and the respondent's anxiety symptoms.

Table 13. Chronic Stress Moderating the Relationship Between Intimate Support and Depressive and Anxiety Symptoms.

Intimate Partner Subsample		R	P
Depressive Symptoms	Chronic Stress (actor) x Intimate Support (actor)	.03	.713
	Chronic Stress (actor) x Intimate Support (partner)	-.02	.358
	Chronic Stress (partner) x Intimate Support (actor)	.02	.499
	Chronic Stress (partner) x Intimate Support (partner)	.01	.724
Anxiety Symptoms	Chronic Stress (actor) x Intimate Support (actor)	.01	.353
	Chronic Stress (actor) x Intimate Support (partner)	-.01	.154
	Chronic Stress (partner) x Intimate Support (actor)	0	0
	Chronic Stress (partner) x Intimate Support (partner)	.01	.411

Notes:

APIM modeling controls for autocorrelation of predictors as well as correlation of error terms.

All outcome and predictor variables are grand-mean-centered for ease of interpretation.

All models include the following covariates: age, gender, race-ethnicity, household income, and physical disability status.

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Finally, I repeated the analyses described in table 13 using eventful stress instead of chronic stress to test whether eventful stress moderates the effects of a respondent's own intimate support and the respondent's partner's intimate support on depressive symptoms. Shown in table 14, results of these analyses show that when a respondent reports high levels of eventful stress, the relationship between the respondent's own intimate support and the respondent's depressive symptoms is weaker ($R=.13$, $P=.04$). In fact, when a respondent's eventful stress is high, the association between the respondent's intimate support and depressive symptoms is positive, meaning that higher intimate support is associated with higher levels of depressive symptoms. These findings suggest a "rallying effect" may be taking place. Figure 8 shows effects of eventful stress on the relationship between intimate support and depressive symptoms.

Table 14 also shows results of analyses testing whether eventful stress moderates the effects of a respondent's own intimate support and the respondent's partner's intimate support on

anxiety symptoms. Results show that when a respondent reports high levels of eventful stress, the relationship between the respondent's own intimate support and the respondent's anxiety symptoms is weaker ($R=.08$, $P=.001$). In other words, a respondent perceiving high levels of intimate support is associated with lower levels of anxiety symptoms for that respondent.

However, when the respondent is experiencing eventful stress, receiving more intimate support is associated with more anxiety symptoms. As described above (in relation to depression), this could be the result of a "rallying effect." That is, experiencing eventful stress may cause the respondent to feel more anxious and to receive more support from her intimate partner. A respondent's eventful stress does not moderate the relationship between their intimate partner's intimate support on the respondent's anxiety symptoms ($R=-.04$, $P=.072$). A respondent's intimate partner's eventful stress does not moderate the relationship between the respondent's intimate support and the respondent's anxiety symptoms ($R=-.02$, $P=.471$). Finally, the respondent's intimate partner's eventful stress does not moderate the relationship between their intimate partner's intimate support and the respondent's anxiety symptoms. These results, shown in Figure 9, partially support my hypothesis that eventful stress will moderate the relationship between both a respondent's intimate support and the respondent's intimate partner's intimate support and the respondent's anxiety symptoms.

Table 14. Eventful Stress Moderating the Relationship Between Intimate Support and Depressive and Anxiety Symptoms.

Intimate Partner Subsample		R	P
Depressive Symptoms	Eventful Stress (actor) x Intimate Support (actor)	.13*	.040
	Eventful Stress (actor) x Intimate Support (partner)	-.04	.576
	Eventful Stress (partner) x Intimate Support (actor)	-.05	.517
	Eventful Stress (partner) x Intimate Support (partner)	.05	.101
Anxiety Symptoms	Eventful Stress (actor) x Intimate Support (actor)	.08**	.001
	Eventful Stress (actor) x Intimate Support (partner)	-.04	.072
	Eventful Stress (partner) x Intimate Support (actor)	-.02	.471
	Eventful Stress (partner) x Intimate Support (partner)	0	0

Notes:

APIM modeling controls for autocorrelation of predictors as well as correlation of error terms.

All outcome and predictor variables are grand-mean-centered for ease of interpretation.

All models include the following covariates: age, gender, race-ethnicity, household income, and physical disability status.

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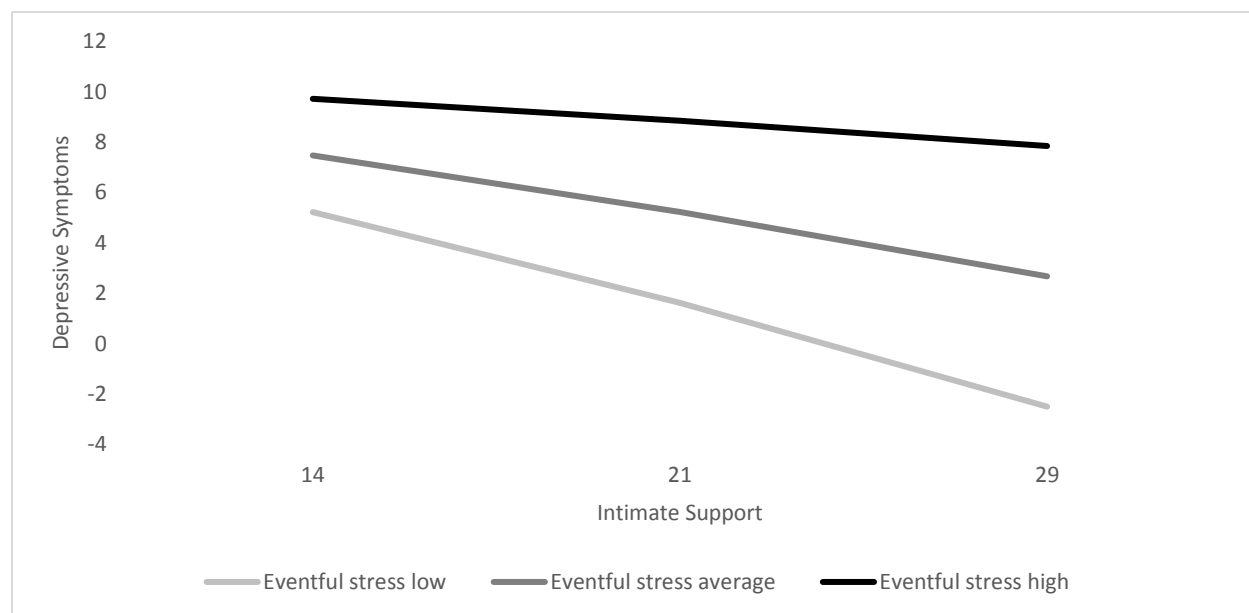


Figure 8.. Eventful Stress Moderates the Relationship Between Intimate Support and Depressive Symptoms.

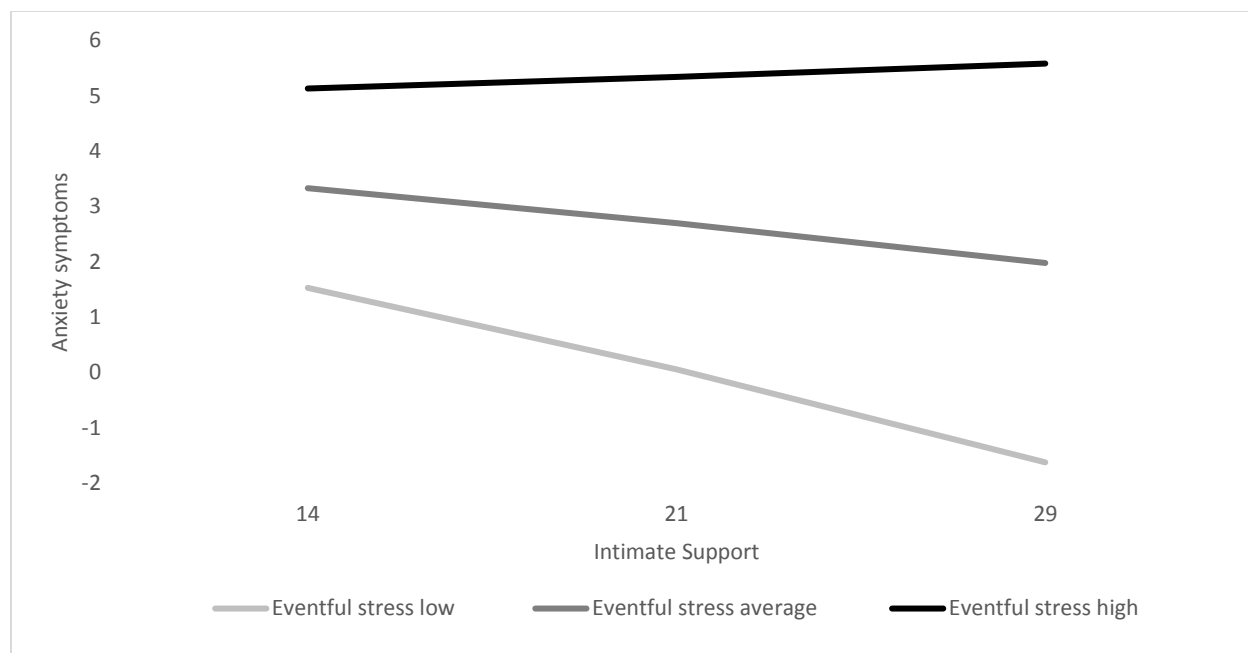


Figure 9. Eventful Stress Moderates the Relationship Between Intimate Support and Anxiety Symptoms.

4 DISCUSSION

In this study, I investigate whether the perceived social support of others in one's social network also impact one's mental health. I examined whether one's own social support and one's significant other's social support impact one's mental health (measured in terms of depressive symptoms and anxiety symptoms). I also tested whether chronic and eventful stress moderate the relationships between social support and mental health outcomes. By using the Actor-Partner Interdependence Model, I used data for respondent dyads to predict each dyad member's mental health outcomes from each dyad member's social support and stress. Since APIM controls for autocorrelation among predictors and correlation of errors, I was able to test the effect of each

dyad member's social support on their own mental health and the effect of their significant other's social support on their mental health simultaneously (Kenny et al. 2006).

Findings suggest that one's own social support is important for one's own mental health, even when the social support perceived by others in one's social network is controlled. Finally, my findings show that when one experiences stressful life events, one's intimate partner may "rally" by providing additional support, leading to both more support and worse mental health outcomes.

My first research question was "How are one's own and one's significant other's perceptions of support associated with one's depressive and anxiety symptoms?" I hypothesized that each respondent's own perceived social support would be associated with lower levels of depressive symptoms and anxiety symptoms. I also hypothesized that each respondent's significant other's social support would be associated with lower levels of depressive symptoms and anxiety symptoms. I found mixed support for this hypothesis. As expected, each respondent's own perceived social support is related to lower levels of depressive symptoms. Among intimate partner dyads, each respondent's own perceived social support and intimate support are associated with lower levels of anxiety symptoms. However, none of my analyses showed a significant association between a respondent's significant other's social support and the respondent's depressive symptoms or anxiety symptoms. These findings are consistent with a large body of past research which has demonstrated the importance of perceived social support for mental health (Cobb 1976; Thoits 1995). However, they do not support my hypotheses that the perceived social support of one's network members influences one's mental health.

My second research question was, "Do one's significant other's perceptions of support influence the relationship between one's own perceived social support and depressive and

anxiety symptoms?" I hypothesized that a respondent's significant other's perceived social support would moderate the relationship between the respondent's social support and depressive symptoms or anxiety symptoms. My findings show limited support for this hypothesis. Results displayed in Table 12 show that, among respondent dyads who are intimate partners, a respondent's intimate support moderates the relationship between a respondent's own intimate support and the respondent's level of depressive symptoms. Specifically, I found that when one's intimate partner feels perceives higher levels of intimate partner support, the negative association between one's own intimate partner support and depressive symptoms is stronger. Results displayed in Table 12 also show the same pattern for anxiety symptoms among dyads who are intimate partners. Together, these results support the argument that reciprocity of social support is important for mental health (Chandola et al. 2007; Jou and Fukada 2002; Leblanc and Wight 2000). Although intimate partner's level of social support does not directly impact a respondent's own mental health, when the intimate partner feels more supported by the respondent, the mental health benefits of the respondent's perceived intimate support are stronger. However, these findings apply specifically to respondent dyads who are intimate partners, and not to dyads with other types of relationships.

My third research question was, "How is the relationship between one's own and one's significant other's levels of perceived support and depressive and anxiety symptoms moderated by social stress?" I hypothesized that stress would moderate the relationships between both one's own and one's significant other's social support and one's mental health. Specifically, I hypothesized that when stress levels were higher, the relationship between one's own social support and one's own mental health would be stronger, and that the relationship between one's significant other's social support would also be stronger. I found limited support for this

hypothesis. Analyses show that chronic stress does not moderate the relationship between support and mental health. However, eventful stress does moderate the relationship between stress and mental health in some cases.

4.1 Eventful Stress and Rallying

Eventful stress moderates the relationship between a respondent's intimate support and depressive symptoms (table 14). However, contrary to my hypothesis, when eventful stress was high, higher levels of respondent's intimate support were associated with higher levels of depressive symptoms. These findings are consistent with a "rallying effect," whereby a person who experiences a stressful life event receives more support from those close to them (Lincoln et al. 2005; Wang and Repetti 2014). A recent study used Actor-Partner Interdependence Modeling to analyze the relationships among marital support, work stress, and depressive symptoms and neuroticism (Wang and Repetti 2014). This study finds that experiencing stress and mental health symptoms may modify the amount of social support available. Using videos of husband-wife interactions and self-reports of work stress, depressive symptoms, and neuroticism, results showed that husbands offer wives more support when the wife experiences high levels of work stress. They also find that wives offer husbands more support when the husband experiences depressive symptoms and neuroticism.

Alternatively, experiencing stress may reduce the amount of social support a person perceives. For example, although perceived social support has been found to be associated with lower depressive symptoms among African American adults, perceived social support did not moderate the effects of financial strain or of traumatic life events on depressive symptoms (Lincoln et al. 2005). Structural equation modeling revealed that experiencing financial strain

(but not experiencing traumatic life events) was associated with lower levels of social support from relatives.

Eventful life stress also moderates the relationship between the respondent's own intimate support and anxiety symptoms (table 14). However, the moderating effect of eventful stress on the relationship between social support and anxiety symptoms shows the reverse pattern (table 10). In this model, experiencing eventful stress is associated with a stronger negative relationship between social support and anxiety symptoms. This suggests that rallying in the face of eventful stress may only occur specifically in the context of intimate partner relationships, rather than in the context of broader family and friend networks.

4.2 Intimate Partner

My final research question was "Do the associations among perceptions of social support, social stress, and mental health outcomes differ based upon whether dyad members are intimate partners?" I hypothesized that the relationships among respondents' own perceived support, respondents' significant other's perceived support, stress, and mental health outcomes would be substantively similar regardless of relationship type. However, I also hypothesized that the relationships would be stronger among dyads who were intimate partners than among those with other relationship types.

The results of my analyses largely support this hypothesis, in that significant others' perceived support was only found to moderate the relationship between respondents' perceived support and respondent's mental health among respondent dyads who were intimate partners (see table 10 and table 14). Similarly, eventful stress only moderates the relationship between perceived support and mental health outcomes among respondent dyads who are intimate partners (see table 12). These relationships did not occur among the general sample.

Notably, higher levels of eventful stress made the relationship between *intimate support* and both depressive symptoms and anxiety symptoms *weaker* (table 14). However, higher levels of eventful stress made the relationship between *social support* and anxiety symptoms *stronger* (table 10). This suggests that when stressful life events occur, a person may experience a higher level of support from her or his intimate partner, resulting in a “rallying effect.” However, this may not be true of social support more generally. Social support from non-intimates may buffer the effects of eventful stress, while intimate partner support may increase in response to eventful stress.

The results of this study point to the importance of social networks in shaping mental health outcomes. One’s mental health is influenced not only by the support one perceives, but also by the perceptions of others within one’s social network. My findings related to intimate partners specifically highlight the importance of mutually supportive intimate relationships for one’s mental health outcomes. Currently, most mental health interventions are targeted toward individuals in the form of individual medical and therapeutic interventions. However, it may be beneficial to incorporate intimate partners and other members of one’s social network in certain mental health interventions. It may also be beneficial to provide more support and resources to those whose intimate partners or significant others experience depression and anxiety.

4.3 Directions for Future Research

This study examines perceptions of perceived social support, but not perceptions of provided social support. I have attempted to assess reciprocal exchange of support using a measure of support provided by one’s intimate partner among intimate-partner dyads. However, this accounts only for how much support one’s partner believes one provides. It does not assess

one's own perceptions of provided support. Future research should examine perceptions of support provided, as well as support received, in order to fully address questions of reciprocity.

Longitudinal data would be ideal for assessing the moderating effects of stress on the relationship between support and mental health outcomes. Future research should use repeated measures data to assess whether social support buffers the effects of stress on mental health over time. The use of cross-sectional data in this study may partially explain why chronic stress did not moderate the relationship between support and mental health outcomes. Using APIM with repeated measures of chronic stress, support, and mental health outcomes could reveal a relationship among chronic stress, support, and mental health that is not evident using data from a single point in time.

5 CONCLUSION

In closing, the current study uses Actor-Partner Interdependence Models to demonstrate the effects of one's own social support, one's significant other's social support, and one's mental health outcomes. My findings demonstrate that one's own social support predicts lower levels of both depressive symptoms and anxiety symptoms. I also find that, among intimate partners, one's partner's perceived intimate-partner support interacts with one's own intimate partner support to predict even lower levels of depressive symptoms and anxiety symptoms. In other words, a person's mental health outcomes are better when they feel more supported by their intimate partner and their intimate partner feels more supported by them. Both giving and receiving social support is important for mental health.

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