Poor Support Provision within Intimate Relationships:

Distinct Predictors, Explanatory Factors, and Consequences

Shanuki. D. Jayamaha

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Abstract

Intimate partners are a primary source of support in adulthood (Cutrona, 1996). When individuals have positive, *supportive* close relationships they are able to cope more effectively with life's challenges, and thus have improved psychological and physical wellbeing, and relationship satisfaction, closeness and security (see Feeney & Collins, 2015; Uchino, Cacioppo, & Kiecolt-Glaser, 1996). Yet, it is not always easy for people to support intimate partners, especially when they have their own needs and difficulties to contend with (Coyne & DeLongis, 1986; Coyne, Ellard, & Smith, 1990). Despite a vast literature on social support, very little is known about the characteristics of individuals (i.e., support *providers*) that restrict (or enhance) the support they can provide to partners (i.e., support *recipients*) in times of need. Moreover, even less research has identified the underlying factors that account for *why* these support-impeding characteristics create specific responses to partners' support needs and in turn undermine support provision within relationships.

This thesis addresses these important gaps in understanding by presenting three articles examining the distinct support provision processes associated with attachment anxiety, self-esteem and depressive symptoms. Each article tests whether the specific needs and difficulties closely tied to greater attachment anxiety, lower self-esteem, and elevated depressive symptoms account for *why* these dispositional characteristics are associated with providing lower support to intimate partners. Chapter Two presents two dyadic behavioural observation studies investigating whether chronic concerns about relational value interfere with the support individuals higher in attachment anxiety are able to provide to their intimate partner. The results demonstrated that during couples' support-relevant discussions, individuals higher in attachment anxiety felt less valued and appreciated when partners reported greater distress. Lower relational value, in turn, was associated with individuals higher in attachment anxiety exhibiting greater negative support behaviour, which in turn

predicted declines in *partners'* relationship quality over time. Chapter Three presents two dyadic studies exploring whether support-related efficacy beliefs associated with self-esteem shape the support delivered during couples' support-relevant exchanges and whether this esteem-related support shapes the self-evaluations of the other partner. The results demonstrated that individuals lower in self-esteem experienced lower efficacy during couples' support discussions and thus delivered lower esteem support to their partners. Lower esteem support, in turn, was associated with *partners* experiencing lower efficacy within couples' discussions and lower self-esteem across time. Lastly, Chapter Four presents three dyadic studies examining whether elevated depressive symptoms exacerbate the stress that could be experienced when in a position to provide support to partners, and whether this greater stress reduces people's emotional support behaviours to close others. The results illustrated that elevated depressive symptoms were associated with experiencing greater stress during couples' support-relevant discussions and on days when *partners* needed greater support. Greater stress, in turn, was associated with lower emotional support provision as reported by both dyad members.

Taken together, the studies presented across this thesis demonstrate how the unique needs and difficulties associated with attachment anxiety, self-esteem and depressive symptoms give rise to unique support processes that have important outcomes for the health and wellbeing of partners. The final chapter outlines how these distinct processes advance understanding of social support, should apply to other important processes in intimate relationships, and have important theoretical and practical implications.

To my loving parents

Shanika and Sunil

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THE UNIVERSITY OF AUCKLAND
NEW ZEALAND

School of Graduate Studies
AskAuckland Central
Alfred Nathan House
The University of Auckland
Tel: +64 9 373 7599 ext 81321
Email: postgradinfo@auckland.ac.nz

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Please indicate the chapter/section/pages of this thesis that are extracted from a co-authored work and give the title and publication details or details of submission of the co-authored work. Chapter Two: Attachment Anxiety, Concerns About Relational Value, and Negative Support Behaviours Jayamaha, S. D., Girme, Y. U., & Overall, N. C. (2017). When attachment anxiety impedes support provision: The role of feeling unvalued and unappreciated. Journal of Family Psychology, 31(2), 181-191. DOI: 10.1037/fam0000222

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Yuthika U. Girme	Contributed to Research Design (Study 2), Data Collection and Funding (Study 2), and Behavioural Coding (Study 2); Provided Feedback on Drafts and Revisions
Nickola C. Overall	Contributed to Research Design (Studies 1 and 2), Data Collection (Study 1) Funding (Studies 1 and 2) and Development of Behavioural Coding Scheme; Supervision of Theoretical Development, Analyses, Write-Up and Revisions

Certification by Co-Authors

The undersigned hereby certify that:

- the above statement correctly reflects the nature and extent of the PhD candidate's contribution to this work, and the nature of the contribution of each of the co-authors; and
- that the candidate wrote all or the majority of the text.

Name	Signature	Date
Yuthika U. Girme		19 Dec 2018
Nickola C. Overall		19 Dec 2018

THE UNIVERSITY OF AUCKLAND
Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND

School of Graduate Studies
AskAuckland Central
Alfred Nathan House
The University of Auckland
Tel: +64 9 373 7599 ext 81321
Email: postgradinfo@auckland.ac.nz

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- that the candidate wrote all or the majority of the text.

Name	Signature	Date
Nickola C. Overall		19 Dec 2018

THE UNIVERSITY OF AUCKLAND
TE WHARE WANANGA O TAMAKI MAKAURAU
NEW ZEALAND

School of Graduate Studies
AskAuckland Central
Alfred Nathan House
The University of Auckland
Tel: +64 9 373 7599 ext 81321
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The undersigned hereby certify that:

- the above statement correctly reflects the nature and extent of the PhD candidate's contribution to this work, and the nature of the contribution of each of the co-authors; and
- that the candidate wrote all or the majority of the text.

Name	Signature	Date
Nickola C. Overall		19 Dec 2018
Matthew D. Hammond		19 Dec 2018
Yuthika U. Girme		19 Dec 2018
Garth J. O. Fletcher		19 Dec 2018

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CHAPTER ONE: INTRODUCTION AND OVERVIEW OF STUDIES

Positive, *supportive* relationships predict improved health and wellbeing, at least in part because support from close others can help people to successfully navigate life's challenges (Cutrona, 1996; Feeney & Collins, 2014; Uchino et al., 1996). However, people do not just receive support in close relationships, they also must provide support to their intimate partner in times of need. But, providing support can be challenging, difficult, and stressful (Rafaeli & Gleason, 2009), and thus not everyone is able to respond to their partner's need for comfort and care in supportive ways. Yet, the huge literature on social support has primarily focused on the effects of support provision and much less attention has been given to what predicts support. In particular, very little is known about the characteristics of support providers that restrict (or enhance) the support they can provide to intimate partners in times of need, and more importantly the underlying factors that account for why these characteristics undermine the support process within close relationships. The major aim of this thesis is to demonstrate *how*, *when* and *why* attachment anxiety, self-esteem, and depressive symptoms undermine versus facilitate support provision within intimate relationships.

Support Provision within Intimate Relationships

A large body of literature indicates that receiving support from close others helps individuals thrive and have improved health and wellbeing, in part because support from intimate partners helps people to cope effectively with stressful life events and achieve their personal goals (Cutrona, 1996; Feeney & Collins, 2015; Overall, Fletcher & Simpson, 2010; Sullivan, Pasch, Johnson & Bradbury, 2010; Uchino et al., 1996). Receiving support from intimate partners also fosters greater relationship quality and security because support-relevant exchanges offer an opportunity for intimate partners to demonstrate responsiveness to their partner's needs, thereby enhancing feelings of closeness and satisfaction (e.g., Collins

& Feeney, 2004; Overall et al., 2010; Sullivan et al., 2010). On the whole, support is not only essential to personal health and wellbeing but also to the development and maintenance of healthy and satisfying close relationships. Thus, it is not surprising that support and caregiving is considered to be a primary element of adult intimate relationships (Weiss, 1980). Indeed, intimate partners are frequently called on to provide support, comfort, and care to one another in times of need, and most individuals tend to rely heavily on their intimate partner as an important—if not their most important—source of support and care in adulthood (Cutrona, 1996; Weiss, 1980).

Unfortunately, providing support to partners can be difficult, challenging and stressful, and thus not everyone is able to respond to their partner's needs in supportive ways (Collins, Ford, Guichard, Kane, & Feeney, 2010; Feeney & Collins, 2001; Rafaeli & Gleason, 2009). Individuals must recognize their partners' support needs and care seeking, be available to respond to their partners' needs, and provide the necessary or desired support (Cutrona, 1990). Accordingly, it is not always easy for partners to support each other. However, despite a mass of research devoted to understanding the effects of support provision in relationships, very little is known about the processes that lead to individuals providing poorer support when their partner is most vulnerable. Instead, the huge literature on social support has primarily focused on the benefits of support provision for recipients, rather than identifying *how*, *when* and *why* dispositional characteristics of individuals undermine support provision – an important, but difficult, component of intimate relationships.

The reason providing support to partners in times of need is so difficult is because support provision requires a complex set of skill, abilities and resources. In particular, support provision requires individuals to possess situationally appropriate skills and abilities, and have the cognitive and emotional resources to use these in the way required (Collins et al., 2010; Feeney & Collins, 2001, 2003). Indeed, providing support to intimate partners is often

not easy because people also have to deal with and manage their own needs, emotions, and difficulties when providing support (Coyne & DeLongis, 1986; Coyne et al., 1990). Understandably, attending to another person's need for support, comfort, and care requires temporary suspension of one's own needs, and support behaviour must be attuned to the partner's needs, rather than one's own needs (Shaver, Mikulincer, & Shemesh-Iron, 2010). Thus, providing support to partners is likely to be especially challenging when individuals have their own difficulties or needs to contend with and manage.

Consistent with this proposition, prior research has found that individuals with their own personal difficulties and needs tend to provide lower support to partners. The few relevant studies investigating support provider dispositions primarily focus on attachment anxiety, self-esteem, and depressive symptoms. For instance, prior research has provided evidence that greater attachment anxiety is linked with poorer support provision (e.g., Collins & Feeney, 2000; Feeney, 1996; Feeney & Collins, 2001; Feeney, Collins, Van Vleet, & Tomlinson, 2013; Feeney & Hohaus, 2001; Kunce & Shaver, 1994). Individuals with lower self-esteem also tend to be poorer support providers than individuals with higher self-esteem (Feeney & Collins, 2003; Gurung, Sarason, & Sarason, 1997). There is also existing evidence that individuals with greater depressive symptoms provide lower support to their partners (Feeney & Collins, 2003; Gurung et al., 1997; Pasch, Bradbury, & Davila, 1997). Thus, there is growing evidence that individual dispositions can undermine support provision.

However, despite the evidence that greater attachment anxiety, lower self-esteem and greater depressive symptoms may undermine support provision in intimate relationships, prior research has not examined the specific factors that account for *why* these characteristics of support providers undermine the support they provide to partners during times of need. Rather, prior research suggests that these three dispositions are associated with poorer support within close relationships for similar reasons. For example, existing literature

suggests that individuals with greater attachment anxiety, lower self-esteem, and elevated depressive symptoms tend to be more focused on their own needs and vulnerabilities during interpersonal support situations. Being self-focused and self-preoccupied in support contexts understandably interferes with focusing on and attending to the close other's need for support, which should thus reduce effective and responsive support towards the close other in need (e.g., Feeney & Collins, 2001; Feeney & Thrush, 2010; Julal & Carnelley, 2012; Kunce & Shaver, 1994; Mikulincer, Gillath, Halevy, Avihou, Avidan, & Eshkoli, 2001; Mikulincer, Shaver, Bar-On, & Sahdra, 2014; Millings & Walsh, 2009; Mor & Winquist, 2002). Inward attention to one's own vulnerabilities and needs may also heighten feelings of distress during support-relevant situations, which is also likely to interfere with focusing clearly on close other's need for support, derailing individuals from empathizing with close others and engaging in effective caregiving (Collins et al., 2010; Collins & Read, 1994).

Why might individuals with greater attachment anxiety, lower self-esteem and greater depressive symptoms be more self-focused and experience greater distress? Speculation across the existing literature suggests that such self-focus and distress arises from a pre-occupation with needs and difficulties specifically associated with these dispositions. For instance, individuals with greater attachment anxiety may be self-focused and thus provide lower support because they are focusing on their unmet attachment needs and strong desire for acceptance and closeness (Feeney, 1996; Feeney & Collins, 2003; Feeney, Collins, Van Vleet, & Tomlinson, 2013; Kunce & Shaver, 1994; Mikulincer & Shaver, 2012). By contrast, individuals lower in self-esteem might be more self-focused and distressed due to doubts in their self-worth and competence, which possibly feeds into individuals' feelings of efficacy as support providers (Feeney & Collins 2003; Mikulincer et al., 2001; Mikulincer et al., 2014). On the other hand, individuals with elevated depressive symptoms who are suffering from acute personal emotional difficulties, rather than chronic relational- and self-

difficulties, may already be cognitively and emotionally taxed and thus lack the personal capacity, energy and resources necessary to provide support to close others in times of need (Gailliot, 2010).

In sum, the small existing literature examining dispositions that undermine support provision suggests that specific needs and difficulties associated with attachment anxiety, self-esteem and depressive symptoms promote a greater self-focused orientation and personal distress in support provision contexts, which undermines support to close others in times of need. However, no prior research has specifically examined whether the proposed needs, difficulties, beliefs, and vulnerabilities associated with attachment anxiety, self-esteem and depressive symptoms play an active role during couples' support-relevant exchanges and, more importantly, whether these help explain *how* and *why* these three dispositional characteristics are associated with poorer support provision when individuals are in a position to provide support to intimate partners. Thus, the major aim of this thesis is to examine whether the specific needs and difficulties closely tied to greater attachment anxiety, lower self-esteem, and elevated depressive symptoms account for why these dispositional characteristics are associated with providing lower support to intimate partners.

To fulfil this primary aim, I present three empirical chapters that present studies examining the processes associated with each three disposition identified by prior research to undermine support provision: attachment anxiety, self-esteem and depressive symptoms. In my first set of studies, I investigate whether chronic concerns about relational value interfere with the support individuals higher in attachment anxiety are able to provide to their intimate partner (Chapter Two). In my second set of studies, I examine whether support-related efficacy beliefs associated with self-esteem shape the support delivered during couples' support-relevant exchanges and whether this esteem-related support shapes the self-evaluations of the other partner (Chapter Three). Finally, in my third set of studies, I test

whether suffering from one's own emotional difficulties—indexed by elevated depressive symptoms—exacerbates the stress that could be experienced when in a position to provide support to partners, and whether this greater stress reduces people's emotional support behaviours to close others when they need it the most (Chapter Four). In the following sections, I provide the foundation of these research questions by briefly highlighting the associations between: (a) attachment anxiety, concerns about relational value, and negative support behaviours, (b) self-esteem, efficacy, and esteem-related support behaviours, and (c) depressive symptoms, stress, and emotional support (also see Table 1.1). I then present the deeper theoretical and empirical foundations of each research question in more detail in the following chapters.

Attachment Anxiety, Concerns About Relational Value, and Negative Support Behaviours

Attachment anxiety develops when people have experienced inconsistent caregiving during times of need, which creates a craving for closeness and intimacy coupled with an intense fear of rejection and relationship loss (Bowlby, 1969, 1973, 1980). As outlined in Table 1.1, individuals high in attachment anxiety have an intense desire for closeness, acceptance, sustaining attachment bonds, and being valued and appreciated (Bowlby, 1982; Mikulincer & Shaver, 2003). Unfortunately, this mix of craving for closeness, fearing rejection and preoccupation with being valued undermines close relationships by producing destructive and disproportionate reactions to key relationship challenges (Simpson & Rholes, 2012). For example, when conflict threatens their relationship, more anxious individuals feel greater distress and lower acceptance and regard (Campbell, Simpson, Boldry, & Kashy, 2005; Overall, Girme, Lemay, & Hammond, 2014; Simpson, Rholes, & Phillips, 1996; Tran & Simpson, 2009). Anxious individuals' concerns about their partner's regard also impede

Table 1.1 *Specifying the Distinct Needs and Difficulties and Associated Key Disposition-Related Factors Underlying the Links between Attachment Anxiety, Self-Esteem, and Depressive Symptoms and Poorer Support Provision*

Disposition	**Core Needs and Difficulties**	**Key Underlying Factor in Support Provision Context**	**Support Behaviour**
High Attachment Anxiety	• intense desire for closeness, acceptance and being valued • chronically worrying about being abandoned and rejected • hypersensitive to cues of rejection vs. social approval	relational value (being appreciated and valued)	*Negative Support Behaviour:* critical and blaming (e.g., criticizes or derogates support recipient; accuses or blames recipient; expresses anger, frustration, irritation, or displeasure); controlling and invalidating (e.g., rejects and invalidates recipient's point of view; insists or demands that the recipient think, feel or behave in a certain way; talks from a position of authority and treats recipient as inferior; takes a domineering and/or non-negotiative stance)
Low Self-Esteem	• feelings of unworthiness and inadequacy • low levels of interpersonal competence and feelings of capability • low confidence about abilities, expect to perform more poorly, and are less likely to attribute success to ability	support-related efficacy	*Esteem Support:* affirming support recipient's competence; communicating respect and confidence in the recipient's skills and abilities; expressing trust in recipient's ability to deal with and overcome the problem/situation; encouraging recipient to persist even when it is difficult; expressing that the recipient is worthy and has value despite the difficulties they are experiencing and their relative success/failure to deal with or overcome the situation
Elevated Depressive Symptoms	• feelings of depressed mood, helplessness, and hopelessness • feelings of guilt and worthlessness • loss of appetite, sleep disturbance	stress	*Emotional Support:* expressing or communicating love, care, concern and empathy; reassuring and comforting the recipient; expressing understanding and empathy of the recipient's difficulties; communicating respect and confidence in the recipient's skills and abilities to bolster beliefs in recipient's ability to cope, manage and overcome the issue

their ability to handle conflict in constructive ways (e.g., Simpson et al., 1996; Tran & Simpson, 2009) and motivate self-focused attempts to obtain reassurance that they are valued by their partners, which undermines their partner's satisfaction (e.g., Overall et al., 2014).

It is because conflict threatens core concerns of relational value that prior research has tended to focus on the ways attachment anxiety shapes conflict interactions. Yet, concerns of relational value should also play an important role in people's responses within couples' support interactions. In particular, providing responsive support enhances appreciation for the support provider and encourages relationship closeness (e.g., Collins & Feeney, 2004; Overall et al., 2010; Sullivan et al., 2010). Thus, when partners need support, more anxious individuals have the opportunity to confirm their relational value and facilitate the closeness they crave. Indeed, more anxious individuals report exactly these kind of egoistic motives for providing support, including trying to gain love and recognition or avoid rejection (Feeney & Collins, 2003; Feeney et al., 2013). However, despite wanting to enhance their relational value by providing support to their partner, the existing data show that more anxious individuals instead report and exhibit less positive and more negative support behaviours (e.g., Collins & Feeney, 2000; Feeney, 1996; Feeney & Collins, 2001; Feeney & Hohaus, 2001; Feeney et al., 2013; Kunce & Shaver, 1994).

Prior research postulates that individuals higher in attachment anxiety provide poorer support to partners because they find it difficult to set aside their own attachment needs and thus tend to focus on their attachment-oriented needs in support provision contexts, which intensifies feelings of personal distress and draws attention away from attending to the close other's needs and in turn impairs support provision (Mikulincer & Shaver, 2012). Thus, for those higher in attachment anxiety, support provision and caregiving is not primarily centered on the needs of the person for whom they are providing care and support but rather

around their own needs for security, resulting in ineffective and unresponsive support behaviours.

Although prior research has provided evidence that greater attachment anxiety is linked with poorer support provision, and authors of these prior studies have postulated that this might be due to attachment-related needs and vulnerabilities, prior investigation have not examined the degree to which anxious concerns of relational value actually promote these detrimental support behaviours. In particular, although it is well-established that more anxious individuals respond in destructive ways when they encounter situations that heighten doubts about a partner's love and acceptance (e.g., Campbell et al., 2005; Overall & Sibley, 2009; Simpson et al., 1996), this fundamental pattern has never been applied to understanding the negative behaviour exhibited by more anxious individuals during support situations. Yet, relational value remains a central concern to anxious individuals even in support interactions when their partner needs support, and this will result in times when anxious individuals feel less valued and appreciated within support interactions. Most importantly, it is exactly when more anxious individuals feel less valued and appreciated by their partner that they should exhibit negative and damaging support behaviours. Accordingly, in Chapter Two of this thesis, I test whether it is when felt relational value (i.e., feeling unvalued and unappreciated) in support provision contexts is undermined that individuals higher in attachment anxiety exhibit negative support behaviour (see Table 1.1). I also test whether these destructive behaviours undermine *partners'* relationship evaluations over time.

Self-esteem, Efficacy and, Esteem-Related Support Behaviours

In contrast to attachment anxiety, low self-esteem should be associated with poorer support provision via other disposition-related factors that are more closely related to the specific difficulties and vulnerabilities associated with low self-esteem. Self-esteem refers to one's overall evaluation of the self (Leary & Baumeister, 2000). Self-esteem is tightly

connected to people's close relationships both because social acceptance builds self-esteem and also because self-esteem has a powerful impact on relationship functioning. For instance, people with low self-esteem underestimate their partners' regard and protect themselves from expected rejection by reducing closeness, derogating their relationship, and behaving in critical and destructive ways (Murray, Holmes, & Griffin, 2000; Wood & Forest, 2016). The destructive responses associated with low self-esteem undermine the relationship wellbeing of both partners. Accordingly, people lower in self-esteem have less satisfying and stable romantic relationships (Fincham & Bradbury, 1993; Hendrick, Hendrick, & Adler, 1988; Murray, Holmes, & Griffin, 1996), and their *partners* also report lower satisfaction, closeness and commitment (Erol & Orth, 2013; Mund, Finn, Hagemeyer, Zimmermann, & Neyer, 2015; Murray et al., 2000; Robinson & Cameron, 2012).

Self-esteem is also associated with support provision within intimate relationships. Prior research suggests that individuals lower in self-esteem report they provide lower support to close others, whereas those higher in self-esteem report providing greater support (e.g., Feeney & Collins 2003; Gurung et al., 1997). One key reason self-esteem should predict support provision is because self-esteem is associated with feeling of support-related efficacy. Efficacy involves perceptions of individuals' ability to achieve situationally relevant goals (Bandura, 1997). People low versus high in self-esteem vary in their experience of self-efficacy. High self-esteem individuals rate themselves more favourably on efficacy-related attributes, such as being capable and talented, whereas low self-esteem individuals are less confident about their abilities, expect to perform more poorly, and are less likely to attribute success to their ability (Baumeister, 2013; Brown, 2014; also see Table 1.1).

Efficacy is critical to motivate approach behaviour during potentially and difficult challenging situations (Bandura, 1997), such as when intimate partners need support. Greater support-related efficacy promotes the delivery of support whereas lacking efficacy stymies

support provision, particularly when providing support is difficult or unsuccessful (Steffen, McKibbin, Zeiss, Gallagher-Thompson, & Bandura, 2002). Thus, given that self-esteem reflects a person's confidence in one's own worth and abilities and thus provides the foundation for feelings of efficacy, self-efficacy should play a key role in the degree to which low versus high self-esteem individuals are able to provide support to their intimate partner.

Prior research provides support for this proposition. In particular, high self-esteem individuals report providing more support to their partners because they feel competent and capable (Feeney & Collins, 2003). By contrast, low self-esteem individuals report *not* providing support because they lack the skills and capability to do so, and such lower feelings of efficacy predict lower partner support (Feeney & Collins, 2003). Moreover, partners of low self-esteem individuals detect this lack of support-related efficacy. People seek less support from low (versus high) self-esteem others because they perceive low (versus high) self-esteem others lack the efficacy to provide support (Cavallo, Zee, & Higgins, 2016).

Efficacy is also important in understanding the effects of support provision for support recipients. A central reason why support can promote recipients' coping, health and wellbeing is that support can facilitate support recipients' efficacy and thus their ability to formulate and enact plans to manage challenges and achieve goals (Feeney, 2004, 2007; Feeney & Collins, 2015; Feeney & Thrush, 2010; Girme, Overall, & Simpson, 2013). However, direct and overt support can undermine recipients' self-efficacy and thus exacerbate distress (Bolger & Amarel, 2007; Bolger, Zuckerman, & Kessler, 2000; Girme et al., 2013; Howland & Simpson, 2010). These harmful effects are understood to arise because overt support conveys that recipients do not have the capability to deal effectively with the problem on their own and thus undermines recipients' felt efficacy.

These complex benefits and costs of support indicate that support will be optimal when it fosters efficacy by conveying to recipients that they are capable of overcoming

stressors and achieving important goals. *Esteem support* is a particular type of support that primarily focuses on facilitating recipients' efficacy (see Table 1.1). Esteem support focuses on instilling recipients with efficacy regarding their skills and abilities, including affirming recipients' competence, expressing confidence and trust in recipients' ability to deal with and overcome the problem, and encouraging recipients to persist even when it is difficult (Barbee & Cunningham, 1995; Cutrona & Suhr, 1992; Overall et al., 2010; Pasch & Bradbury, 1998). There is growing evidence that esteem support is particularly relevant to promoting support recipients' efficacy. For instance, support recipients and support providers judge esteem support to be the most helpful at improving recipients' feelings of self-worth and confidence in their ability to cope with stressful events (Cohen & Wills, 1985; Holmstrom & Burleson, 2011; McLaren & High, 2015; also see Freeman & Rees, 2009, 2010; Holmstrom, Russell, & Clare, 2015 for self-efficacy in athletes and job seekers).

These links between (1) self-esteem and support provider self-efficacy and (2) esteem support and recipients' self-efficacy both suggest that self-esteem may be related to a specific set of support processes in relationships. Yet, no prior research has (a) assessed how self-esteem and efficacy shape the support delivered during couples' actual support interactions, (b) identified the characteristics that promote the provision of esteem support, or (c) simultaneously examined efficacy as both a predictor and an outcome of partner support. In Chapter Three, I address each of these gaps by examining whether individuals lower in self-esteem feel less able to provide support (lower support-related efficacy), which in turn is associated with providing lower esteem-related support that should be most effective at bolstering efficacy in another (see Table 1.1). Moreover, I test whether lower esteem support, in turn, facilitates lower efficacy in partners within couples' support-relevant interactions and lower efficacy and self-esteem across time. Thus, a major goal of this chapter is to show that

the specific support links for self-esteem shown in Table 1.1 have specific self-efficacy and esteem consequences for recipients.

Depressive Symptoms, Stress and, Emotional Support

Prior research has suggested that depressive symptoms are associated with poorer support provision in the same ways that chronic personal difficulties, such as high attachment anxiety and low self-esteem, predict lower support to intimate partner. However, as outlined in Table 1.1, I propose that elevated depressive symptoms undermine support provision within intimate relationships due to state-oriented support processes that are more closely related to acute personal difficulties. For example, compared to the relational and self-related chronic concerns arising from attachment anxiety and self-esteem, depressive symptoms are characterized by feelings of depressed mood, helplessness, hopelessness, and worthlessness along with a range of broader deficits that reduce activity and energy, such as sleep disturbance (Kohout, Berkman, Evans, & Cornoni-Huntley, 1993; Radloff, 1977). Rather than assessing general beliefs in the self or relationships, measures of depressive symptoms assess the degree to which symptoms are currently acute or present in people's lives, such as asking individuals to rate how often they experienced symptoms associated with depression over the past week (Radloff, 1977).

Nonetheless, as with attachment anxiety and self-esteem, elevated depressive symptoms are associated with poorer relationship functioning. A sizable body of literature shows that depressive symptoms predict relational dissatisfaction (see Whisman, 2001 for a review), and longitudinal research has indicated that depressive symptoms lead to declines in marital satisfaction and wellbeing across time (e.g., Davila, Bradbury, Cohan, & Tochluk, 1997; Fincham, Beach, Harold, & Osborne, 1997). Moreover, detrimental relational behaviours of individuals with elevated depressive symptoms possibly account for why the presence of depressive symptoms in one person is often associated with lower relationship

satisfaction and wellbeing in his or her partner (Coyne, 1976; Kouros & Mark Cummings, 2011; Whisman & Uebelacker, 2009). For example, depressive symptoms are associated with more negative conflict behaviours, such as verbal aggression and hostile communication (e.g., Marchand & Hock, 2000) and greater demand-withdraw behaviours (Byrne, Carr, & Clark, 2004; Papp, Kouros, & Cummings, 2009).

There is also existing evidence that individuals with greater depressive symptoms provide lower support to their partners. Gurung and colleagues (1997) found that individuals with elevated depressive symptoms were less supportive toward their romantic partners in interactions, including exhibiting lower expressions of positive feelings for each other, lower sensitivity to each other's needs, and lower responsiveness. Pasch and colleagues (1997) also found that individuals with greater negative affectivity—greater depressive symptomology and neuroticism—exhibited lower levels of emotional support when discussing a personal issue their partner wanted to change. People with elevated depressive symptoms also report that they generally feel unable to be responsive to their partners' needs because they find it too difficult to cope with the situation and their partners' responses (Feeney & Collins, 2003).

Prominent theoretical models propose that depressive symptoms are associated with interpersonal difficulties and poorer relational functioning because depressive symptoms produce stress in interpersonal situations, which undermines constructive behaviours within interpersonal situations. In particular, Hammen (1991) outlines that depression is accompanied by a sense of personal depletion that leaves people feeling they lack the capacity or ability to handle stressful situations and interpersonal challenges, which creates a cycle of poorer coping within emergent situations that exacerbate stress and, in turn, reduces the ability to respond constructively (Keser, Kahya, & Akın, 2017; Segrin & Abramson, 1994). Indeed, a large body of research has shown that people higher in depressive symptoms

both experience and respond in ways that generate higher levels of stress in interpersonal situations (Hammen, 1991; see Liu & Alloy, 2010 for a review).

The robust association between depressive symptoms and stress should also be evident in support provision contexts within intimate relationships. Providing support is challenging, difficult and potentially stressful because it requires individuals to have the emotional resources and capacity to prioritize and respond to their partners' needs (Rafaeli & Gleason, 2009). However, when people are facing more current emotional difficulties of their own, and thus have fewer emotional reserves to direct toward their partner's needs, the interpersonal demands of the situation may exceed the perceived personal resources they have to draw upon to meet their partner's needs. This mismatch between situational demands and personal resources is the foundation of stress (Lazarus & Folkman, 1984). In particular, stress is a state experienced when individuals perceive that current demands exceed the personal resources they have to mobilize and utilize (Lazarus & Folkman, 1984).

This prior theoretical and empirical work suggests that stress should be the key underlying factor that links depressive symptoms and poorer support provision (see Table 1.1). In particular, people with elevated depressive symptoms are likely to experience greater stress when their partner needs support because the emotional energy and resources needed to respond to their partner's support needs have already been used to deal with their own emotional difficulties. In addition, this greater experience of stress is likely to undermine the degree to which individuals can provide *emotional* support specifically, which is the most fundamental form of support desired and provided in close relationships across cultures (Burleson, 2003; Cunningham & Barbee, 2000; also see Table 1.1). Individuals need to draw on and utilize their own emotional reservoir to provide emotional support to others. Yet, people with elevated depressive symptoms are likely to lack the emotional resources and capacity to carry out the additional task of responding to their partners' emotional needs.

Despite the evidence that depressive symptoms undermine support provision in close relationships, prior studies have not examined the emotional experiences within support interactions that could help explain *why* depressive symptoms are associated with poorer support provision. Specifically, no prior studies have examined the stress that people may experience in situations in which they need to respond to their partners' support needs or how this experience of stress shapes support provision in dyadic interactions. In Chapter Four of this thesis, I test whether people who are facing their own emotional difficulties—as indexed by greater depressive symptoms—experience greater stress when in a position to provide support to their partner, and whether greater stress in turn undermines the level of emotional support provided to the partner.

Summary

Support from intimate partners is crucial to navigating and overcoming life's challenges and powerfully predicts psychological and physical wellbeing and relationship functioning. Intimate partners are a primary source of support in adulthood and are frequently relied upon to provide comfort, care, and assistance in times of need (Cutrona, 1996). However, providing support is complex and challenging, which is why not everyone is able to respond to their partner's needs in supportive ways. Despite some prior work acknowledging and recognizing that providing support to partners can be challenging and difficult, requiring individuals to possess adequate personal resources, skills, and abilities, there is a surprising dearth of research examining *how*, *when* and *why* key dispositions of individuals, such as attachment anxiety, self-esteem and depressive symptoms, undermine support provision within intimate relationships.

Moreover, the limited research examining the associations between greater attachment anxiety, lower self-esteem and elevated depressive symptoms and support

provision have not specified or assessed the specific factors that account for *why* these characteristics of support providers restrict the support they provide to partners. Rather, prior research has simply speculated that these individuals provide lower support because they are pre-occupied with disposition-related concerns, needs and difficulties. This thesis presents a series of studies that uniquely test whether specific disposition-related vulnerabilities are evident during couples' support-relevant interactions and, importantly, whether they indeed undermine support provision. Thus, this thesis makes a novel contribution to the literature on support within close relationships by expanding research in three primary ways: (1) examining whether attachment anxiety, self-esteem, and depressive symptoms are associated with key disposition-related factors within important support provision contexts (see middle columns in Table 1.1), (2) assessing the degree to which these disposition-related factors shape specific support behaviours enacted during couples' support discussions (see last column in Table 1.1), and (3) assessing whether such support behaviours effect relational and partner outcomes during support-relevant discussions and across times (described further in each chapter). In doing so, the seven studies presented in this thesis demonstrate how the unique needs and difficulties associated with attachment anxiety, self-esteem and depressive symptoms give rise to unique support processes that have important outcomes for the health and wellbeing of both partners in intimate relationships.

CHAPTER TWO: ATTACHMENT ANXIETY, CONCERNS ABOUT RELATIONAL VALUE, AND NEGATIVE SUPPORT BEHAVIOURS

Attachment anxiety has been shown in prior research to be associated with less positive and more negative support behaviours within close relationships (e.g., Collins & Feeney, 2000; Feeney, 1996; Feeney & Collins, 2001; Feeney & Hohaus, 2001; Feeney et al., 2013; Kunce & Shaver, 1994). However, there has been scant examination of the disposition-related factors within support provision contexts that help explain *why* greater attachment anxiety is associated with poorer support behaviours within intimate relationships. Moreover, existing research is yet to examine the important contextual factors that might activate the factors that underlie the poorer support associated with greater attachment anxiety. As outlined in Chapter One, more anxious individuals tend to respond in destructive ways when they encounter situations that heighten doubts about a partner's love and acceptance (e.g., Campbell et al., 2005; Overall & Sibley, 2009; Simpson et al., 1996). However, this fundamental pattern has never been applied to understanding the negative behaviour exhibited by more anxious individuals during support situations or *when* such concerns about relational value might derail anxious individuals' ability to provide support.

In this chapter, I address these limitations by examining (a) one common factor that might activate more anxious individuals' concerns of relational value when they are in a position to provide support to intimate partners and (b) whether concerns of relational value determine when anxious individuals behave negatively in support situations. In particular, I expected that *partner* distress will be one key feature that is common to support interactions and will likely be associated with more anxious individuals feeling less valued and appreciated. Moreover, I expected that it is when felt relational value is undermined that more anxious individuals respond negatively toward their partner. Although the primary aims in this chapter focus on investigating the role of anxious concerns of relational value in

impeding support provision, I also wanted to show that these support processes have important repercussions for relationships. Thus, incorporating longitudinal models, I also examine whether greater negative support behaviour is associated with declines in *partner's* relationship evaluations across time. I examine these support processes in two dyadic behavioural observation studies because examining responses within couples' dyadic exchanges offers a good way to assess the effects of attachment anxiety as it naturally arises in attachment-relevant contexts.

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Abstract

Two studies examined whether concerns of relational value interfere with the ability of individuals higher in attachment anxiety to provide responsive support to their partner. In both studies, heterosexual couples engaged in 2 video-recorded discussions about each other's most important personal goal. Support recipients (the person whose goal was discussed) reported on how distressed they felt during the discussion. Support providers (the partner who was in the position to provide support) reported on how valued and appreciated they felt during the discussion. Independent observers coded the degree to which support providers exhibited critical and derogating behaviors versus warmth and understanding during the discussion. The results were consistent across both studies, with the exception that the predicted effects only emerged for male providers in Study 2. First, more anxious support providers felt less valued and appreciated when support recipients reported greater distress. Second, lower feelings of value/ appreciation were associated with more anxious providers exhibiting greater negative support behavior. These results illustrate how the concerns of relational value central to attachment anxiety impede effective support provision, which should have detrimental effects for relationships. Indeed, consistent with prior research, greater negative behaviors by support providers predicted declines in recipients' relationship quality over time.

When Attachment Anxiety Impedes Support Provision: The Role of Feeling Unvalued and Unappreciated

Intimate relationships predict improved health and wellbeing, in part because support from intimate partners helps people cope with life's challenges and builds relationship satisfaction and security (Feeney & Collins, 2015; Uchino, Cacioppo, & Kiecolt-Glaser, 1996). Unfortunately, not everyone is able to respond to their partner's needs in supportive ways and instead behave with derogation and criticism rather than warmth and empathy. Understandably, such negative behaviors undermine recipients' coping and goal achievement, create relationship conflict, and predict declines in relationship satisfaction (e.g., Sullivan, Pasch, Johnson, & Bradbury, 2010; Overall, Fletcher, & Simpson, 2010). However, despite a mass of research devoted to understanding the effects of support in relationships, very little is known about the processes that lead to individuals behaving in negative ways when their partner is most vulnerable. We address this gap in two dyadic behavioral observation studies by testing whether more anxious support providers (a) feel less valued and appreciated when their partner who needs support is highly distressed, and (b) respond more negatively in support situations when they feel less valued and appreciated.

Attachment Anxiety, Concerns About Relational Value, and Destructive Responses

Individuals high in attachment anxiety have an intense desire for closeness, acceptance and being valued (Bowlby, 1982; Mikulincer & Shaver, 2003). Unfortunately, such preoccupation with their relational value undermines relationships by producing destructive and disproportionate reactions to key relationship challenges (Simpson & Rholes, 2012). For example, when conflict threatens their relationship, more anxious individuals feel greater distress and lower acceptance and regard (Campbell, Simpson, Boldry, & Kashy, 2005; Overall, Girme, Lemay Jr, & Hammond, 2014; Simpson, Rholes, & Phillips, 1996; Tran & Simpson, 2009). Anxious individuals' concerns about their partner's regard also

impede their ability to handle conflict in constructive ways (e.g., Simpson et al., 1996; Tran & Simpson, 2009) and motivate self-focused attempts to obtain reassurance that they are valued by their partners, which undermines their partner's satisfaction (e.g., Overall et al., 2014). It is because conflict threatens core concerns of relational value that prior research has tended to focus on the ways attachment anxiety shapes conflict interactions. Yet, concerns of relational value should also play an important role in people's responses within couples' support interactions. In particular, providing responsive support enhances appreciation for the support provider and encourages relationship closeness (e.g., Collins & Feeney, 2004; Overall et al., 2010; Sullivan et al., 2010). Thus, when partners need support, more anxious individuals have the opportunity to confirm their relational value and facilitate the closeness they crave. Indeed, more anxious individuals report exactly these kind of egoistic motives for providing support, including trying to gain love and recognition or avoid rejection (Feeney & Collins, 2003; Feeney, Collins, Van Vleet, & Tomlinson, 2013). However, despite wanting to enhance their relational value by providing support to their partner, the existing data show that more anxious individuals instead report and exhibit less positive and more negative support behaviors (e.g., Collins & Feeney, 2000; Feeney, 1996; Feeney & Collins, 2001; Feeney & Hohaus, 2001; Feeney et al., 2013; Kunce & Shaver, 1994).

Although prior research has provided evidence that greater attachment anxiety is linked with poorer support provision, prior studies have not (a) examined the degree to which anxious concerns of relational value produce these detrimental behaviors, or (b) when such concerns might derail anxious individuals' ability to provide support. Indeed, any effects of attachment anxiety should occur when concerns of relational value are activated. For example, more anxious individuals' heightened distress and destructive reactions to conflict occur when major (but not minor) problems threaten relationship bonds and the potential for rejection is high (Simpson et al., 1996). Moreover, these contextual effects are central to the

way the attachment system is theorized to function: (a) attachment-related threats activate the central concerns associated with attachment insecurity, and (b) it is when these concerns are activated that the destructive strategies associated with attachment anxiety ensue (Mikulincer & Shaver, 2003; Simpson & Rholes, 2012). Thus, attachment anxiety is unlikely to produce poor support provision in all relevant situations, but instead these damaging responses will occur when anxious individuals are concerned about their relational value.

In the current studies, we applied this established contextual framework of attachment dynamics to examine the role that concerns of relational value play in impeding more anxious individuals' ability to effectively support their partners. Following the framework described above, we do this by examining (a) one common factor that might activate more anxious individuals' concerns of relational value when they are in a position to provide support (Prediction A, Figure 2.1), and (b) whether feelings of being unvalued and unappreciated determine when anxious individuals behave negatively in support situations (Prediction B).

Prediction A. We identify partner distress as one key attachment-relevant trigger that is central to support situations, typically elicits support by others, but may activate anxious concerns regarding how much they are valued by their partners (see Prediction A, Figure 2.1). Partner distress signals a need for support that others typically respond to by providing greater emotional or practical support (Collins & Feeney, 2000; Iida, Seidman, Shrout, Fujita, & Bolger, 2008). However, more anxious individuals remain focused on their own needs for approval and acceptance, even when their partners need support (Feeney & Collins, 2003; Feeney et al., 2013). Thus, partner's distress may activate the concerns of relational value central to attachment anxiety by indicating anxious individuals are failing to satisfy their partner's needs or their partner is in some way dissatisfied with or rejecting them.

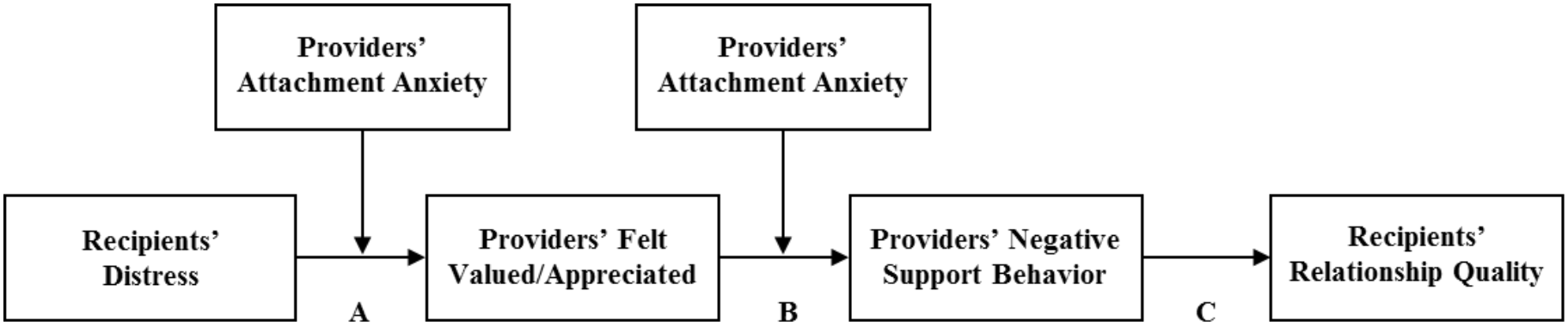

Figure 2.1. Conceptual model regarding the role that anxious concerns of relational value has within couples' support discussions. Prediction A specifies an important contextual factor that might activate more anxious individuals' concerns of relational value when they could provide support to their partners—partners' or recipients' distress. Prediction B specifies that low relational value will determine when more anxious support providers' exhibit negative support behavior. Prediction C specifies that negative support behavior will have a detrimental effect on support recipients' relationship quality.

Note. Figure 2.1 displays the three predictions we tested in the present research. This figure does not portray all of the associations that are likely to occur between these variables. Most notably absent are feedback loops that are likely to occur, such as from providers' negative support behavior to recipients' distress. We consider these potential feedback loops and additional associations not depicted by the figure arrows in the Supplemental Materials in Appendix 1.

Prediction B. It is well-established that more anxious individuals respond in destructive ways when they encounter situations that heighten doubts about a partner's love and acceptance (e.g., Campbell et al., 2005; Overall & Sibley, 2009; Simpson et al., 1996). However, this fundamental pattern has never been applied to understanding the negative behavior exhibited by more anxious individuals during support situations. As described above, relational value remains a central concern to anxious individuals even in support interactions when their partner needs support, and this will result in times when anxious individuals feel less valued and appreciated within support interactions. Most importantly, it is exactly when more anxious individuals feel less valued and appreciated by their partner that they should exhibit negative and damaging support behavior (see Prediction B, Figure 2.1).

Prediction C. Although our primary aims focused on investigating the role of anxious concerns of relational value in impeding support provision, we also wanted to show that the processes outlined in Predictions A and B have important repercussions for relationships. In particular, prior research suggests that the more individuals respond in negative ways to their partner during support interactions, the less their partner feels supported and the more dissatisfied they become (Collins & Feeney, 2000; Cutrona & Suhr, 1992; Overall et al., 2010; Pasch, Bradbury, & Sullivan, 1997). Accordingly, we predicted that greater negative support behavior would be associated with declines in partner's relationship evaluations across time (Figure 2.1, Prediction C).

Current Research

Prior research has shown that anxious concerns of relational value play an important role in determining when anxious individuals respond destructively during conflict, but prior studies have not examined the role that these concerns play in couples' support exchanges. In the current research, we apply the contextual framework that is central to attachment theory

to (a) identify when more anxious individuals might become concerned about their relational value when their partner needs support (Prediction A, Figure 2.1), and (b) test whether it is when felt relational value is undermined that more anxious support providers respond negatively toward their partner (Prediction B, Figure 2.1). First, we hypothesize that partner distress will be one key feature that is common to support interactions and will likely be associated with more anxious individuals feeling less valued and appreciated (Prediction A). Second, we predict that it is when more anxious providers feel less valued and appreciated that they will exhibit negative support behavior (Prediction B). Finally, in line with prior research, these negative support behaviors should be associated with declines in partners' relationship quality across time (Prediction C, Figure 2.1).

We tested the set of predictions outlined in Figure 2.1 in two dyadic behavioral observation studies. In both studies, couples were video-recorded having two discussions about an important, ongoing goal of each partner. After each discussion, the partner whose goal was discussed and in the role of support recipient reported on how distressed they were during the discussion. The individual who responded to their partner's goal and in the role of support provider reported on how valued and appreciated they felt. Independent coders rated the degree to which providers engaged in negative support behaviors, such as derogating, rejecting, and invalidating recipients versus expressing warmth, empathy and understanding. We also collected measures of recipients' relationship quality across time.

Our predictions focused on the concerns of relational value that are central to attachment anxiety, but attachment avoidance also impacts support processes. People high in avoidance try to avoid dependence, including by withholding support from their partners (e.g., Collins & Feeney, 2000; Simpson, Rholes, & Nelligan, 1992). However, more avoidant individuals are not preoccupied with assessing their relational value nor are they concerned about how support interactions reflect on their relational value; instead, they report they do

not like to provide support and only do so if it benefits the self (Feeney & Collins, 2003). Thus, the concerns central to attachment anxiety should not be a strong determinant of the ways in which attachment avoidance shapes support provision and so, although we controlled for avoidance across analyses, we did not expect that avoidance would show the same effects.

Study 1

Study 1 involved an existing sample of romantic couples (see Supplemental Materials in Appendix 1). Participants attended a laboratory-based research session, which involved being recorded having two discussions in which each individual (in the role of support recipient) discussed a personal goal with his or her partner (in the role of support provider). Immediately after the discussion, recipients completed measures assessing their level of distress during the discussion and providers reported how valued and appreciated they felt. Independent coders also rated the degree to which providers exhibited a variety of negative support behaviors that have been assessed in prior research and shown to be detrimental to relationships. One year later, participants were contacted by telephone and verbally reported on their relationship quality.

Method

Participants. Sixty-one heterosexual couples responded to advertisements disseminated across a large university campus and were paid NZ$80 for participating. Participants were involved in serious (49% cohabiting, 15% married, 30% serious, 6% steady/ dating), long-term (*M* = 2.81 years, *SD* = 2.82) relationships, and were a mean age of 23.38 years (*SD* = 5.37).

Procedure and materials. After completing measures of attachment insecurity and relationship quality, each partner identified and ranked in order of importance three aspects of themselves they wanted to improve, which they were told they might discuss with their partner. After a short warm-up discussion, each couple engaged in two 5-min video-recorded

discussions regarding the most important personal goal of each partner. The order of discussions was counterbalanced.

Attachment insecurity. Participants completed the Adult Attachment Questionnaire (Simpson et al., 1996). Nine items assessed attachment anxiety (e.g., "I often worry that my romantic partners don't really love me" 1 = *strongly disagree*, 7 = *strongly agree*) and eight items assessed attachment avoidance (e.g., "I'm not very comfortable having to depend on romantic partners"). Higher scores represent higher anxiety ($\alpha = .83$) and avoidance ($\alpha = .75$).

Relationship quality. The short-form Perceived Relationship Quality Components inventory (Fletcher, Simpson, & Thomas, 2000) assessed participants' satisfaction, commitment, intimacy, trust, passion, love, and romance (e.g., "How satisfied are you with your relationship?"; 1 = *not at all*, 7 = *extremely*). Items were averaged ($\alpha = .84$).

Support recipients' distress. Following each discussion, recipients reported on how stressful (1 = *not at all stressful*, 7 = *extremely stressful*) and upset (1 = *not at all upset*, 7 = *extremely upset*) they were during the discussion. As in prior research (Girme et al., 2013), these items were averaged, $r = .60$, $p < .001$, to index recipients' distress.

Support providers' felt valued and appreciated. Following each discussion, providers rated how much they thought their partner (the recipient) valued their input (1 = *did not value at all*, 7 = *valued me very much*) and appreciated their input (1 = *did not appreciate at all*,7 = *appreciated me very much*). These items were averaged, $r = .77$, $p < .001$, to index providers' feelings of being valued and appreciated during the discussion.

Coding procedure.

Support providers' negative support behavior. Trained coders, blind to the study aims and all participant information and data, independently rated the degree to which providers exhibited negative behavior. Coders were instructed and trained to focus on the providers' behaviors irrespective of the recipients' behaviors. In an initial coding wave, two

coders independently rated the extent to which providers exhibited negative support behaviors as outlined in prior coding schemes (Barbee & Cunningham, 1995; Cutrona, Suhr, 1992; Pasch & Bradbury, 1998; see Overall et al., 2010). Coders rated the degree to which providers were (a) critical and blaming (e.g., criticized or derogated partner, accused or blamed recipient for lack of progress, expressed anger, disagreement or displeasure with recipient), and (b) controlling and invalidating (e.g., insisting or demanding the recipient adopt their approach, rejecting and invalidating the recipient's point of view; (1–2 = *low*, 3–5 = *moderate*, 6–7 = *high*). Coders were reliable (ICCs > .97), and the two ratings were highly correlated (r = .60). In a second coding wave, three different coders rated the degree to which providers (a) were self-focused by expressing their own distress and dissatisfaction or being cold and distant, and (b) expressed warmth and love for the recipient and conveyed empathy and understanding (reverse-coded). Coders were reliable (ICCs > .87), and the two ratings correlated (r = .53). Scores across the two coding waves were also highly correlated (r = .81) and thus averaged to index negative support behavior (α = .76).

Relationship quality 1 year later. Participants completed a telephone interview 1 year after the initial session. Participants were asked to verbally rate the same PRQC inventory used at the initial session to assess participants' relationship quality (α = .86). Fourteen couples ended their relationship during the 12 months. Participants whose relationships dissolved reported lower relationship quality at the initial session (M = 5.81, SD = .72) compared with participants whose relationships remained intact (M = 6.17, SD = .61, t = -2.61, p < .05). Providers from dissolved couples also exhibited greater negative support behaviors (M = 3.04, SD = 1.02 vs. M = 2.68, SD = .83, t = 1.89, p = .06, respectively), supporting that the negative behaviors we assessed are likely to have detrimental effects on relationships.

Results

Table 2.1 displays descriptive statistics (see Supplemental Materials in Appendix 1 for correlations). Attachment anxiety was negatively associated with feeling valued and appreciated by recipients, and positively associated with greater negative support behavior, but these correlations were not significant. However, we predicted that these potential detrimental effects of attachment anxiety would arise in specific contexts. In particular, we expected that greater attachment anxiety would be associated with providers (a) feeling less valued and appreciated when recipients were highly distressed (Prediction A, Figure 2.1), and (b) behaving more negatively when they felt less valued and appreciated (Prediction B, Figure 2.1). All of our dyadic analyses used the approach and SPSS syntax provided by Kenny, Kashy, and Cook (2006), which treats individuals' scores as repeated measures within the dyad, and accounts for nonindependence by modeling a *heterogeneous compound symmetry* error structure.

Prediction A, Figure 2.1. Using the MIXED procedure in SPSS 22, and the dyadic approach and syntax in Kenny et al. (2006), we regressed support providers' felt valued and appreciated on (a) support recipients' distress, (b) support providers' attachment anxiety, and (c) the interaction between recipients' distress and providers' attachment anxiety. To control for the shared variance between attachment anxiety and avoidance, we also included (d) support providers' attachment avoidance, and (e) the interaction between support recipients' distress and support providers' attachment avoidance. All predictor variables were grand-mean centered. Effects were pooled across men and women, but given prior research has shown some gender differences in the timing and effects of support provision (e.g., Neff & Karney, 2005), we tested for gender differences by including the main and interaction effects of gender. No gender differences were found (see Gender *t* column in Table 2.2).

Table 2.1. *Descriptive Statistics across all Measures (Studies 1 and 2)*

	Study 1			**Study 2**		
	Women	*Men*	*Gender Difference*	*Women*	*Men*	*Gender Difference*
	M (SD)	*M (SD)*	*t*	*M (SD)*	*M (SD)*	*t*
Attachment Anxiety	3.05 (1.25)	2.91 (0.93)	.74	3.20 (1.10)	2.95 (0.99)	1.70
Attachment Avoidance	3.06 (0.91)	2.85 (1.00)	1.21	2.94 (1.02)	2.78 (1.02)	1.13
Relationship Quality	6.16 (0.62)	6.03 (0.67)	1.18	6.23 (0.65)	6.19 (0.58)	.61
Recipients' Distress	2.43 (1.10)	2.62 (1.45)	-.84	1.83 (1.39)	2.15 (1.57)	-1.55
Providers' Felt Valued/Appreciated	5.02 (1.29)	4.89 (1.13)	.60	5.18 (1.18)	5.06 (1.39)	.63
Providers' Negative Support Behavior	2.98 (1.00)	2.53 (0.70)	2.88**	2.78 (1.12)	2.50 (1.11)	1.74
Relationship Quality (Follow-Up)	6.23 (0.64)	6.08 (0.82)	1.00	6.13 (0.91)	6.06 (0.92)	.49

Note. M = Mean. *SD* = Standard Deviation. Gender difference *t* represents test of difference between men and women. Positive *t* coefficients represent higher scores for women. Negative *t* coefficients represent higher scores for men.

***p* < .01.

Table 2.2. *Tests of Prediction A: Support Recipients' Distress and Support Providers' Attachment Anxiety on Support Providers' Felt Valued and Appreciated (Studies 1 and 2)*

	Study 1						**Study 2**					
			95% CI						*95% CI*			
	B	*t*	*Low*	*High*	*r*	*Gender t*	*B*	*t*	*Low*	*High*	*r*	*Gender t*
Recipients' Distress	-.09	-.94	-.27	.10	-.10	-.457	-.09	-1.54	-.21	.03	-.11	-.96
Providers' Attachment Anxiety	-.13	-1.28	-.33	.07	-.12	-.463	-.14	-1.67	-.30	.02	-.13	.38
Recipients' Distress × Providers' Attachment Anxiety	**-.21**	**-2.56****	**-.38**	**-.05**	**-.24**	**.464**	**-.12**	**-2.35***	**-.22**	**-.02**	**-.17**	**-2.45***
Providers' Attachment Avoidance	-.20	-1.77	-.43	.03	-.18	-.258	-.27	-3.20**	-.43	-.10	-.24	-.52
Recipients' Distress × Providers' Attachment Avoidance	-.05	-.51	-.24	.14	-.05	-.446	.01	.14	-.11	.13	.01	-1.34

Note. Predicted interaction is presented in bold. Effect sizes (*r*) were computed using Rosenthal and Rosnow's (2007) formula: $r = \sqrt{(t^2 / t^2 + df)}$. CI = confidence interval.

*$p < .05$. **$p \leq .01$.

As shown in the left side of Table 2.2, the predicted interaction between recipients' distress and providers' attachment anxiety was significant. As displayed in Figure 2.2 (Panel A), greater distress in recipients was associated with providers feeling less valued and appreciated when providers were high (see dashed line, *slope* = -.32, t = -2.56, p = .01) but not low (see solid line; *slope* = .15, t = 1.10, p = .27) in attachment anxiety. Thus, more anxious providers felt just as valued and appreciated as providers low in anxiety when recipients were low in distress (left side of Panel A, Figure 2.2; *slope* = .14, t = .99, p = .32), but reported significantly lower feelings of being valued and appreciated when recipients were high in distress (right side of Panel A, Figure 2.2; *slope* = -.40, t = -2.69, p = .01).

Prediction B, Figure 2.1. Using the same dyadic analytic approach (Kenny et al., 2006), we regressed *support providers'* negative behavior on (a) providers' felt valued and appreciated, (b) providers' attachment anxiety, and (c) the interaction between providers' felt valued and appreciated and attachment anxiety. As before we also modeled the concomitant main and interaction effects of support providers' attachment avoidance, and modeled the main and interaction effects of gender. There were no gender differences in the hypothesized effects relevant to Prediction B (see Gender t column in Table 2.3).

As shown in the left side of Table 2.3, the predicted interaction between providers' felt valued and appreciated and attachment anxiety was significant. As displayed in Figure 2.3 (Panel A), when providers reported feeling less valued and appreciated, providers exhibited greater negative behavior when they were high (*slope* = -.42, t = -5.09, $p < .001$), but not low (*slope* = -.04, t = -.46, p = .65), in attachment anxiety. Thus, more anxious providers engaged in similarly low levels of negative behaviors as less anxious providers when they felt highly valued and appreciated (right side of Panel A, Figure 2.3; *slope* = -.16, t = -1.74, p = .09), but engaged in significantly greater levels of negative behavior when

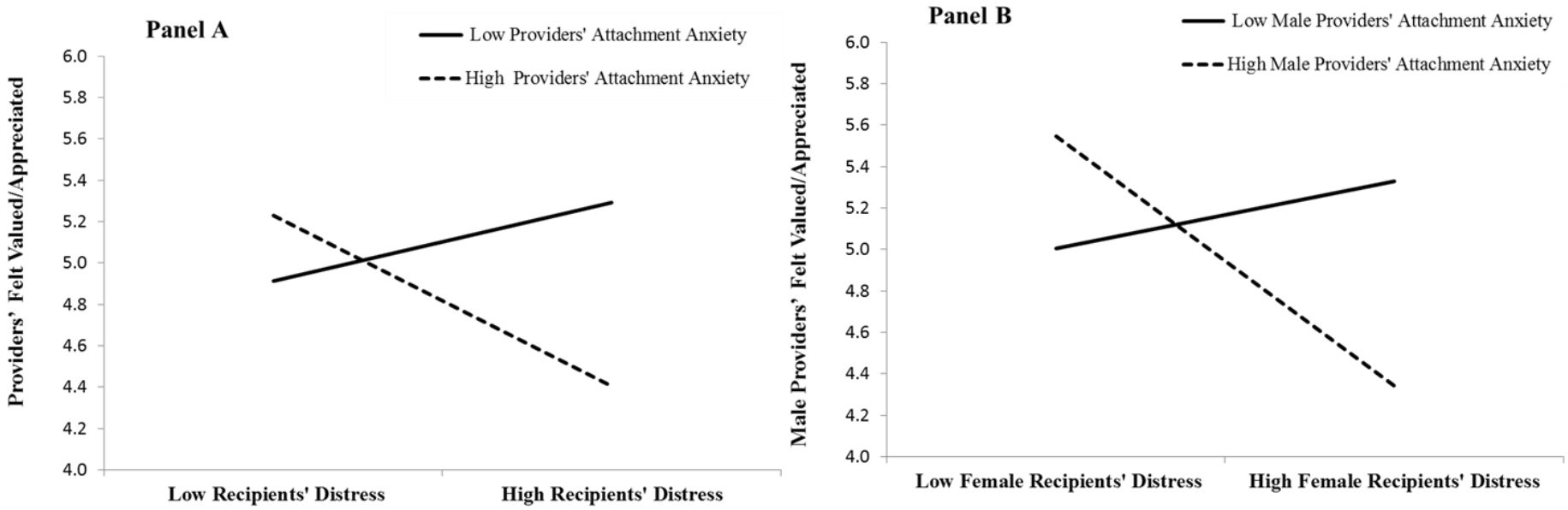

Figure 2.2. The effects of support recipients' distress and support providers' attachment anxiety on support providers' feelings of being valued and appreciated in Study 1 (Panel A) and Study 2 (Panel B).

Note. High and low values are indexed at 1 SD above and below the mean.

Table 2.3. *Tests of Prediction B: Support Providers' Felt Valued and Appreciated and Attachment Anxiety on Negative Support Behavior (Studies 1 and 2)*

	Study 1						**Study 2**					
			95% CI						*95% CI*			
	B	*t*	*Low*	*High*	*r*	*Gender t*	*B*	*t*	*Low*	*High*	*r*	*Gender t*
Providers' Felt Valued/Appreciated	-.23	-3.94**	-.35	-.11	-.36	-.27	-.08	-1.29	-.20	.04	-.08	-2.44*
Providers' Attachment Anxiety	.05	.78	-.07	.17	.07	.81	.14	1.86	-.01	.28	.14	-1.19
Providers' Felt Valued/Appreciated × Providers' Attachment Anxiety	**-.17**	**-3.06***	**-.28**	**-.06**	**-.29**	**.71**	**-.06**	**-.98**	**-.17**	**.06**	**-.07**	**-2.51***
Providers' Attachment Avoidance	.09	1.24	-.05	.24	.12	.03	.11	.07	-.04	.26	.11	.03
Providers' Felt Valued/Appreciated × Providers' Attachment Avoidance	.14	2.03*	.00	.27	.20	-2.67*	-.09	-1.61	-.20	.02	-.12	-1.18

Note. Predicted interaction is presented in bold. Effect sizes (*r*) were computed using Rosenthal and Rosnow's (2007) formula: $r = \sqrt{(t^2 / t^2 + df)}$. CI = confidence interval.

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

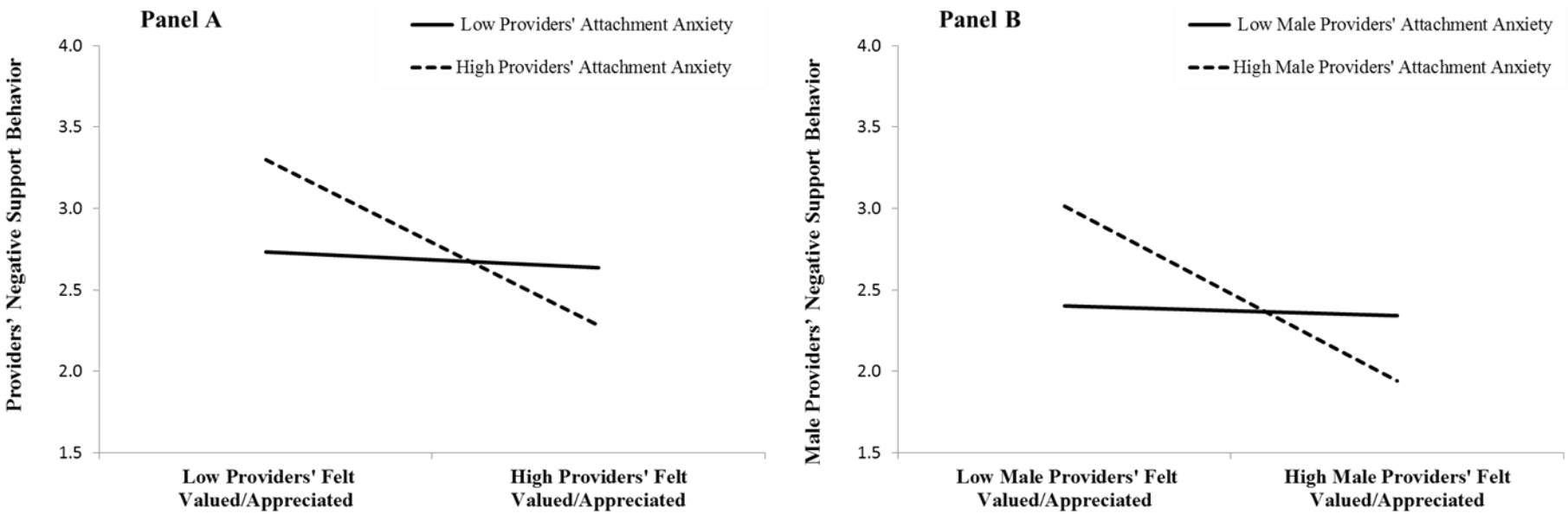

Figure 2.3. The effects of support providers' felt valued and appreciated and providers' attachment anxiety on providers' negative support behavior in Study 1 (Panel A) and Study 2 (Panel B).

Note. High and low values are indexed at 1 SD above and below the mean.

providers felt they were not valued and appreciated (left side of Panel A, Figure 2.3; *slope* = .26, $t = 2.78$, $p = .01$).

Prediction C, Figure 2.1. These analyses were conducted using the data from the 47 couples who provided relationship quality data one year later. Using the same approach described above, we regressed *support recipients'* relationship quality at 12 months on (a) recipients' relationship quality collected at the initial session, so that we were predicting residual change across time, and (b) support providers' negative behavior. A significant gender interaction emerged, $t = -2.51$, $p = .02$, demonstrating that male ($B = -.27$, $t = -3.11$, $p = .00$, 95% CI = -.44 to -.09, $r = -.42$), but not female ($B = .07$, $t = .56$, $p = .58$, 95% CI = -.17 to .30, $r = .08$), providers' negative behavior was associated with lower relationship quality in support recipients 1 year later (and this was not moderated by providers' attachment anxiety; $B = .02$, $t = .33$, $p = .74$). Providers' negative behaviors did not predict providers' relationship quality across time ($B = .03$, $t = .39$, $p = .70$, 95% CI = -.13 to .30, $r = .05$).

Additional analyses. We ran a series of additional analyses to rule out alternative explanations, which we describe in detail in the Supplemental Materials in Appendix 1 and summarize briefly here. Rerunning the models controlling for *recipients'* attachment insecurity did not change the effects of *providers'* attachment anxiety. Controlling for relationship status or length also did not alter the results. Controlling for providers' negative behavior also did not change the interaction between providers' attachment anxiety and recipients' distress on providers' felt valued/appreciated showing that Prediction A remained independent of any additional feedback link between providers' negative behavior and recipients' distress (see Figure 2.1 note). Similarly, the links between providers' anxiety, felt value/appreciation and negative support behavior (Prediction B) were unaltered when controlling for recipients' distress, and thus were independent of the effects captured in Prediction A. Finally, additional analyses controlling for *recipients'* actual value/appreciation

of providers illustrated that it was anxious *providers'* lower feelings of value/appreciation that was associated with their greater negative behaviors and not that these negative behaviors led anxious providers to actually be less valued by recipients.

Study 2

Study 1 provided initial evidence for the set of predictions illustrated in Figure 2.1. Study 2 was designed to replicate these effects in a larger sample. Study 2 involved the same procedure and same measures as in Study 1, with the exception that we measured relationship quality one month rather than one year following couples' support discussions.

Method

Participants. One-hundred heterosexual couples responded to advertisements posted across a city-based university and associated organizations (e.g., recreation and health centers). Participants were involved in serious (13% married, 36% cohabiting, 47% serious, 4% steady/dating), long-term (M = 3.28 years, SD = 4.16) relationships, and were a mean age of 22.64 years (SD = 6.51). Couples were paid NZ$80 for participating.

Procedure and materials. After completing measures of attachment anxiety and relationship quality, participants identified and ranked (in order of importance) three current personal goals they had been trying to achieve, which they were told they might discuss with their partners. The top-ranked personal goal was selected for discussion. After a short warm-up discussion, each couple was video-recorded engaging in two 7-min discussions about each person's personal goal. Half of the couples discussed the woman's goal first, and half discussed the man's goal first.

Attachment insecurity. The same scales from Study 1 were used to assess attachment anxiety (α = .78) and avoidance (α = .76).

Relationship quality. Participants rated: (a) three items that assessed their relationship satisfaction (Rusbult, Martz, & Agnew, 1998), including "I feel satisfied with our

relationship," "Our relationship makes me very happy," and "Our relationship is close to ideal" (1 = *not at all*,7 = *very much*; α = .80), (b) three items assessing their relationship commitment (Rusbult et al., 1998), including "I want our relationship to last a very long time," "I am committed to maintaining my relationship with my partner," and "I would feel very upset if our relationship were to end in the near future" (α = .73), and (c) three items that assessed closeness and relatedness (La Guardia, Ryan, Couchman, & Deci, 2000), including "I feel loved and cared for by my partner," "I feel a lot of distance from my partner (reverse-coded)," and "I feel a lot of closeness and intimacy with my partner" (α = .72). These three constructs (satisfaction, commitment and closeness) have been shown to contribute to a global factor of relationship quality as we measured in Study 1 (see Fletcher et al., 2000), and thus were averaged to capture an overall index of relationship quality (α = .74).

Support recipients' distress. Immediately after each discussion, recipients rated the same items used in Study 1 to assess distress during the discussion, $r = .74$, $p < .001$.

Support providers' felt valued and appreciated. The same items from Study 1 were used to measure providers' felt valued and appreciated, $r = .85$, $p < .001$.

Coding procedure.

Support providers' negative support behavior. Three trained coders, blind to the study aims and all participant information and data, independently rated negative support behavior in two coding waves using the same procedures as in Study 1. In a first wave of coding, coders provided a single rating of the degree to which providers displayed negative affect, derogated the recipient, expressed disagreement or disapproval, rejected the recipients' ideas and views, and blamed the recipients for their situation or any lack of goal success (ICC = .97). As in Study 1, in the second wave of coding, coders rated the degree to which providers (a) expressed their own distress and dissatisfaction or was cold and distant (ICC = .94) and (b) expressed warmth and love and conveyed empathy and understanding (reverse-

coded; ICC = .94). These two ratings were correlated (r = .45), and this scale was associated with the rating in the first coding wave (r = .60). Thus, we averaged across the ratings to index support providers' negative support behavior (α = .74).

Relationship quality 1 month later. Participants were contacted 1 month after the initial session and completed the same measures of relationship satisfaction (α = .89), commitment (α = .83), and feelings of relatedness (α = .69), which were averaged to index relationship quality (α = .86). Three couples ended their relationship during the one month.

Results

Table 2.1 displays descriptive statistics (see Supplemental Materials in Appendix 1 for correlations). We followed the same analytic strategy outlined in Study 1 to test the predictions shown in Figure 2.1.

Prediction A, Figure 2.1. As shown in Table 2.2 (right side), the interaction between recipients' distress and providers' attachment anxiety predicting providers' felt valued and appreciated was significant. However, this interaction was further moderated by gender (see final column labeled gender t), which revealed a significant effect for men (B = -.24, SE = .07, t = -3.49, $p \leq .001$), but not women (B = .01, SE = .07, t = .002, p = .99). The significant interaction for men is illustrated in Figure 2.2, Panel B. Greater recipients' distress was associated with male providers feeling less valued and appreciated when providers were high (*slope* = -.41, t = -3.77, $p < .001$), but not low (*slope* = .11, t = .96, p = .34), in attachment anxiety. Thus, more anxious male providers felt just as valued as less anxious providers when female recipients were low in distress (left side of Panel B, Figure 2.2; *slope* = .26, t = 1.42, p = .16), but reported significantly lower feelings of valued/appreciated when female recipients were high in distress (right side of Panel B, Figure 2.2; *slope* = -.47, t = -3.15, p = .00).

Prediction B, Figure 2.1. As shown in Table 2.3 (right side), the interaction between providers' felt valued and appreciated and providers' attachment was not significant, but (as in Prediction A above) was further moderated by gender (see final column labeled gender t) revealing a significant interaction for men (B = -.19, SE = .07, t = -2.56, p = .01) and not women (B = .08, SE = .08, t = .95, p = .34). As shown in Figure 2.3, Panel B, when male providers felt less valued and appreciated they exhibited greater negative behaviors when they were high (*slope* = -.42, t = -4.03, p < .001), but not low (*slope* = -.02, t = -.20, p = .84), in attachment anxiety. Thus, more anxious male providers exhibited the same low levels of negative behavior as low anxious providers when they felt highly valued and appreciated (right side of Panel B, Figure 2.3; *slope* = -.19, t = -1.41, p = .16), but engaged in significantly greater negative behavior when they felt they were less valued and appreciated by their partner (left side of Panel B, Figure 2.3; *slope* = .29, t = 2.08, p = .04).

Prediction C, Figure 2.1. Greater negative support behavior was associated with reductions in recipients' relationship quality 1 month later (B = -.13, t = -2.71, p = .01, 95% CI = -.22 to -.04, r = -.21), and this effect did not differ by gender, t = -.99, p = .32 and was not moderated by providers' attachment anxiety (B = -.07, t = -1.56, p = .12). As in Study 1, providers' negative behavior did not predict support providers' relationship quality over time (B = -.03, t = -.53, p = .59, 95% CI = -.13 to .07, r = -.04).

Additional analyses. As in Study 1, we conducted additional analyses to rule out alternative explanations, which are described in the Supplemental Materials in Appendix 1. Controlling for recipients' attachment insecurity, relationship status or relationship length did not alter the effects described above. Furthermore, the interaction between providers' anxiety and recipients' distress on providers' felt valued/appreciated (Prediction A) remained even when controlling for feedback associations between providers' negative behavior and recipients' distress. Similarly, the links between felt value/appreciation and negative support

behavior (Prediction B) remained when controlling for recipients' distress and thus were independent of the effects captured in Prediction A. Finally, the effects were specific to anxious *providers'* feelings of value/appreciation rather than differences in *recipients'* value/appreciation of providers.

General Discussion

Intimate partners are often people's primary source of support, which is one central reason why relationships can have substantial health and wellbeing benefits (Feeney & Collins, 2015; Uchino et al., 1996). Unfortunately, the current research indicates that the concerns of relational value central to attachment anxiety can curtail their ability to provide effective support to their partners when they need it. We tested the potential role of these concerns in two ways. First, we tested one important element of support situations that we predicted would activate more anxious individuals' concerns of relational value when they are in a position to provide support to their partner (Prediction A, Figure 2.1). As predicted, when support recipients experienced greater distress during couples' support-relevant discussions, more anxious support providers felt less valued and appreciated by their partner. This first important finding demonstrates that concerns of relational value are an important element of couples' support exchanges, particularly for more anxious providers.

Second, we tested whether feelings of relational value determine when attachment anxiety is associated with negative support behavior (Prediction B, Figure 2.1). As predicted, more anxious support providers exhibited more observer-rated negative support behavior *when* they felt less valued and appreciated by their partner, but demonstrated the same low levels of negative behavior as less anxious support providers when their felt relational value was high. Thus, extending prior research examining main effects between attachment anxiety and poor support provision, the current studies illustrate that more anxious individuals are poor support providers when they feel unvalued and unappreciated by their partners.

Finally, we also investigated whether the negative support behavior arising from anxious concerns of their value to their partners has consequences for relationships (Prediction C, Figure 2.1). Consistent with prior research, greater negative support behavior was associated with declines in support recipients' relationship quality over time.

A Contextual Perspective of Attachment and Support Processes

The results demonstrate the importance of taking a contextual perspective to understanding when attachment insecurities interfere with the provision of support. Prior research has shown that more anxious individuals report providing support in order to secure closeness and love (e.g., Feeney et al., 2013), which is consistent with their preoccupation to be valued in relationships. However, prior research has not examined (a) when these core concerns of relational value are threatened within support-relevant exchanges or (b) the role any threat to relational value plays in activating destructive support behaviors. In particular, motives to enhance closeness and gain love will not always undermine anxious individuals' ability to provide support to their partners. Accordingly, in the current studies, more anxious individuals did not always feel unvalued and unappreciated by their partners, and they did not always behave negatively. Instead, their relational value concerns arose when their partners were distressed and needed them the most. Unfortunately, rather than directing attention to the partners' needs, partner distress appears to signal a lack of valuing and appreciation by the partner. More importantly, feelings of being unvalued and unappreciated had behavioral implications; when more anxious providers felt less valued and appreciated, they exhibited greater derogation, criticism and rejection and lower warmth and empathy.

The critical role of threats to relational value in activating destructive and damaging relationship behavior is most evident in prior research examining how attachment anxiety shapes responses to relationship conflict (e.g., Campbell et al., 2005; Tran & Simpson, 2009; also see Simpson & Rholes, 2012). In contrast, within support contexts, prior research has

focused on main effects between attachment anxiety and support provision (Collins & Feeney, 2000; Feeney, 1996; Feeney et al., 2013; Feeney & Collins, 2001; Feeney & Hohaus, 2001; Verhofstadt, Buysse, Devoldre, & De Corte, 2007), and have overlooked that this poor support provision should occur when the central concerns at the core of attachment anxiety are activated. Our results show that concerns of relational value are not only relevant to high rejection risk contexts, such as conflict, but also support situations. More broadly, the current results extend the wider support literature by revealing that feelings of low relational value are an important determinant of support provision, and indicate that other factors that undermine relational value may also produce unsupportive and damaging support behaviors.

These support dynamics also have an important impact on relationship quality. Prior research has established that the types of support behaviors assessed in the current research have negative implications for relationship health and wellbeing (e.g., Collins & Feeney, 2000; Cutrona & Suhr, 1992; Overall et al., 2010; Sullivan et al., 2010). Consistent with this prior work, negative behavior by support providers was associated with declines in support recipients' relationship quality. Thus, the support processes identified in the current studies are likely an important way in which attachment anxiety undermines relationship health and stability. There is good evidence that greater attachment anxiety is associated with lower relationship satisfaction for both partners (Banse, 2004), but there are very few studies that tie the behaviors that occur in couples' interactions to relationship outcomes across time. The rare studies that have examined the effects of couples' interaction behaviors on relationship outcomes have focused on communication patterns in conflict situations (e.g., Feeney, Noller, & Callan, 1994; Overall et al., 2014). The results of the two current studies suggest that the relationship damaging behaviors arising from relational concerns within support interactions also underpin the poor relationship outcomes associated with attachment anxiety.

Finally, the contextual effects we identified have implications for understanding how to buffer relationships from attachment anxiety (Overall & Simpson, 2015). Identifying that (a) partner distress can activate anxious concerns of relational value, and that (b) feelings of low relational value produce more negative support provision by more anxious individuals, offers important information about how and when couples may approach support situations to prevent these concerns from derailing the support process. Prior research has shown that partners' bolstering of relational value may help more anxious individuals feel more secure and traverse conflict more effectively (Overall & Simpson, 2015). Similarly, when partners' communications (or other relationship characteristics) provide secure affirmation of relational value even in the face of partners' distress, more anxious intimates may rise to be the good relationship partners they want to be. And, not to place all the burden on the partners, the current results also highlight key areas to target for more anxious individuals to help build more secure and supportive responses to their partners' needs. Applying the knowledge garnered here to identify the intrapersonal, relational, and contextual factors that protect against anxious individuals' concerns of relational value from undermining effective support provision is a valuable direction for future research.

Caveats and Limitations

The results from two dyadic behavioral observation studies supported our predictions. However, gender differences emerged that were inconsistent across the two studies. In Study 2, the moderating effects of attachment anxiety (Predictions A and B) were evident for men and not women. In Study 1, the detrimental effect of negative support behavior on recipients' relationship quality (Prediction C) was significant for women and not men. Given that prior research has not shown that the effects of anxiety on support dynamics are moderated by gender, the differences in these studies may not be robust. On the other hand, it is possible that these differences reflect broader gender-related factors that result in

men being more vulnerable, and women being sturdier, support providers. For example, compared with women, men experience greater physiological and emotional threat (Bartz, Zaki, Bolger, & Ochsner, 2011; Ditzen et al., 2013; Kudielka & Kirschbaum, 2005) and are less emotionally sensitive and more egoistic in response to stress (Tomova et al., 2014) during emotionally intense social situations. Men are also more likely to be negative and critical when their female partners are experiencing high levels of stress (e.g., Neff & Karney, 2005). Thus, men's more intense and negative reactions to social stress may combine with the sensitivities associated with attachment anxiety to render them most reactive to their partners' distress and their own felt relational value as was the case in Study 2 (also see Verhofstadt et al., 2007).

In contrast to men, women tend to become more sensitive and other-oriented during stressful social situations (Tomova et al., 2014), and they provide more responsive support that is contingent on their male partners' distress (Neff & Karney, 2005). This pattern may be the result of socialization practices that emphasize women's caregiving and greater relational identification (Cross & Madson, 1997). Moreover, while such tendencies and motivations may counteract the negative effects of anxiety on support provision for women (i.e., the null effects of providers' anxiety for women in Study 2), they also might sharpen the pain of receiving unsupportive, negative responses from partners (i.e., the stronger effect for women recipients in Study 1). Although these gender differences were not consistent across studies, given the importance of these support dynamics, future research should examine whether, how and why gender modifies the effects of attachment anxiety in support situations.

Methodological limitations should be considered in evaluating the generalization of the results. The sample size of Study 1 was relatively small, but that limitation was overcome by the larger sample in Study 2. Some of the key variables relied on self-reports, which are often subject to biases. More anxious individuals may be more inclined to report feeling less

valued and appreciated given their chronic doubts about their partner's regard. However, our analyses controlled for the weak main effects of attachment anxiety, and revealed that low relational value and negative support behaviors only occurred in particular contexts. As is typical in these types of samples, participants were generally satisfied in their relationships and levels of attachment anxiety were relatively low. Nonetheless, demonstrating these processes in well-functioning couples highlights the pervasive impact of attachment anxiety, and the importance of counteracting these effects. This point is also emphasized by the fact that the results did not differ by relationship status or relationship length.

Examining responses within couples' dyadic exchanges offers a good way to assess the effects of attachment anxiety as it naturally arises in attachment-relevant contexts, but such correlational data prevents causal conclusions. We did rule out a range of alternative explanations, which also helped us consider the plausibility of reverse causal directions. For example, negative behavior by more anxious support providers is likely to produce greater recipient distress, but additional analyses demonstrated that even if or when greater recipient distress is produced by negative support behavior, it still independently predicts lower feelings of value/appreciation for more anxious providers (see Supplemental Materials in Appendix 1). These analyses also provided good evidence that the effects shown in the current studies arise from the concerns and fears associated with attachment anxiety and not because more anxious providers (and their reactions within support exchanges) are resulting in support recipients actually valuing them less. Nonetheless, the use of experimental paradigms to manipulate the different contexts we isolated in the current studies is a valuable direction for future research.

Some additional questions also require future research. For example, we did not directly assess the specific reasons more anxious individuals feel unvalued and unappreciated when partners are highly distressed, such as partners' distress signaling dissatisfaction and

potential rejection or whether more anxious individuals simply become threatened by partners' focus on their own needs. Our hypotheses were based on an extensive body of theoretical and empirical work showing that concerns of relational value are central to how attachment anxiety shapes reactions to important relationship situations, and we focused on a common and important element of support interactions that may activate these concerns. Future research examining more anxious individuals' interpretation of their partner's distress will offer more detailed information regarding how to target and improve these destructive processes. Future research is also likely to uncover other important contextual factors that are also threatening and undermine feelings of value in these contexts. Regardless, our results demonstrate for the first time that the relational concerns central to attachment anxiety play an important role within support interactions by showing that feelings of relational value are shaped by important features of support interactions, such as partners' distress. Moreover, and perhaps most importantly, the results demonstrate that once activated, feelings of low relational value are associated with more anxious providers behaving more negatively.

Conclusions

The current research demonstrates the central role concerns of relational value play in impeding more anxious individuals' ability to effectively support their partners. First, the results demonstrate that common elements of support situations can activate more anxious individuals' concerns of relational value when they are in a position to provide support to their partner. Across two behavioral observation studies, individuals higher in attachment anxiety reported feeling less valued and appreciated when their partners reported experiencing greater distress during couples' support-relevant discussions (male support providers only in Study 2). Thus, rather than spurring more anxious providers to attend to their partners' needs (and thus enhance the closeness and relational value they crave), partner distress appears to activate their principal fear that partners do not value them.

Second, the results demonstrate that feeling unvalued and unappreciated is a critical determinant of when anxious individuals will be poor support providers. In both studies, more anxious individuals exhibited greater negative support behaviors, including being more derogating, rejecting and invalidating and less warm and understanding, but only when they felt unvalued and unappreciated (male support providers only in Study 2). In contrast, when more anxious individuals felt valued and appreciated, they demonstrated the same low levels of negative behavior as less anxious support providers. This contextual pattern highlights that protecting more anxious individuals' feelings of relational value will help curtail the poor support provision that prior research suggests arises from attachment anxiety.

In sum, the results of the two dyadic observational studies presented here advance understanding of support interactions by showing that concerns of relational value are an important determinant of support provision, particularly for individuals high in attachment anxiety. They also uniquely identify when more anxious individuals behave in negative ways when their partner needs support—when they feel unvalued and unappreciated—and therefore when their relational concerns will have detrimental effects for their partners.

CHAPTER CONCLUSION

These studies indicate that the concerns of relational value central to attachment anxiety can curtail highly anxious individuals' ability to provide support to their partners in times of need, and that common elements of support situations can activate more anxious individuals' concerns of relational value when they are in a position to provide support to their partner. In particular, the two behavioural observation studies reported in Chapter Two represent the first to demonstrate that individuals higher in attachment anxiety report feeling less valued and appreciated when their *partners* report experiencing greater distress during couples' support-relevant discussions. Thus, rather than spurring more anxious providers to attend to their partners' needs (and thus enhance the closeness and relational value they crave), *partner* distress appears to activate their principal fear that partners do not value them.

More uniquely, these studies provide the first demonstration that feeling unvalued and unappreciated is a critical determinant of when anxious individuals will be poor support providers within intimate relationships. In both studies, more anxious individuals exhibited greater negative support behaviours, but only when they felt unvalued and unappreciated. In contrast, when more anxious individuals felt valued and appreciated, they demonstrated the same low levels of negative behaviour as less anxious support providers. These results advance prior research examining main effects between attachment anxiety and poor support provision by highlighting that concerns of relational value are an important element of couples' support-exchanges that help determine negative support behaviour, particularly for individuals higher in attachment anxiety. Finally, demonstrating the importance of this process, across both studies greater negative support behaviour was associated with declines in *partners'* (i.e., support *recipients'*) relationship quality over time.

In the next chapter, I continue to examine the role disposition-related factors play in determining support provision within intimate relationships by examining the extent to

which support-related efficacy during couples' support-relevant interactions shapes the support individuals low (versus high) in self-esteem provide to partners. I also explore the outcomes of these important support processes by examining how esteem support affect *partners'* self-evaluations during support-exchanges and across time.

CHAPTER THREE: SELF-ESTEEM, EFFICACY AND, ESTEEM-RELATED SUPPORT BEHAVIOURS

Individuals lower in self-esteem also provide lower support to close others (e.g., Feeney & Collins 2003; Gurung et al., 1997). However, prior studies have not examined the disposition-related factors that account for *why* individuals lower in self-esteem might provide lower support to partners in times of need. Notably, a key reason why individuals lower (versus higher) in self-esteem provide lower (vs greater) support could be because of their lower (versus greater) feelings of support-related efficacy. As outlined in Chapter One, individuals low (versus high) in self-esteem differ in their experience of self-efficacy (Baumeister, 2013; Brown, 2014). Moreover, prior studies have shown that self-efficacy may play a key role in the degree to which individuals provide responsive support to their intimate partner (MacGeorge, Clark, & Gillihan, 2002; MacGeorge, Feng, Butler, Dane, & Passalacqua, 2005; Rossetto, Lannutti, & Smith, 2014; Steffen et al., 2002). Yet, prior research has not assessed how self-esteem and efficacy shape the support delivered during couples' actual support interactions. In Chapter Three, I address this gap by examining whether feelings of efficacy during couples' support-relevant interactions account for the positive association between self-esteem and support provision, with a particular focus on support that builds efficacy in others (labelled esteem support).

As in the studies assessed in Chapter Two, I also wanted to examine the outcomes of these predicted links between self-esteem, support-related efficacy, and support provision. As outlined in Chapter One, efficacy is a critical outcome of support: the right kind of support can enhance recipients' efficacy and thus enhance recipients' ability to cope (Feeney, 2004, 2007; Feeney & Collins, 2015; Feeney & Thrush, 2010; Girme et al., 2013). However, prior research has not simultaneously examined efficacy as both a predictor and an outcome of partner support. I do this in Chapter Three by examining whether the greater esteem

support I predicted would arise from greater self-esteem and thus efficacy would flow-on to enhance *partners'* self-evaluations, including their self-efficacy and self-esteem. Thus, Chapter Three offers an important contribution by examining how self-evaluations of one partner can spill over and enhance or hinder self-evaluations of the other partner via dyadic support processes.

I test these potential dyadic processes in two dyadic studies. Moreover, to distinguish these processes from those associated with attachment anxiety in Chapter Two, in each study I assessed and controlled for attachment anxiety to illustrate that the type and reasons for the poorer support shown to be associated with self-esteem and attachment are distinct.

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Abstract

The current research tested an important way one person's self-evaluations could shape their intimate partner's self-evaluations. We predicted that greater self-esteem would predict greater efficacy and esteem support when partners needed support, which would facilitate greater efficacy and self-esteem in partners. We examined these processes within discussions in which one partner could provide support (support provider) to the other (support recipient). Study 1 illustrated that self-esteem was specifically associated with esteem support. Study 2 demonstrated that support providers higher in self-esteem experienced greater efficacy during couples' support discussions and thus delivered greater esteem support to their partners. Greater esteem support, in turn, was associated with recipients experiencing greater efficacy within couples' discussions and greater self-esteem across time. Analyses of alternative explanations indicated these processes were unique to self-esteem and esteem support. The results provide initial evidence that self-esteem and efficacy shape, and are shaped by, esteem-related support processes within relationships.

The Dyadic Nature of Self-Evaluations: Self-Esteem and Efficacy Shape and Are Shaped by Support Processes in Relationships

Self-esteem captures people's overall evaluation of their worth and value and is closely tied to social relationships (Leary & Baumeister, 2000). Yet, we know little about how self-esteem and other important self-evaluations emerge and change within relationships across time. The current research examined whether esteem-related support processes play a role in the transference of self-evaluations across intimate partners. We focused on support processes because (1) prior research indicates that self-esteem predicts how capable people feel at providing support (Feeney & Collins, 2003) and (2) support is a key way that relationships shape self-relevant evaluations, including how much people feel able to overcome challenges (Bolger & Amarel, 2007; Howland & Simpson, 2010). Below, we describe how these two lines of research led us to identify esteem-related support processes that suggest one partner's self-esteem will foster esteem-boosting support that enhances the other partner's self-evaluations.

Self-Esteem, Self-Efficacy, and Support Provision

One key reason self-esteem should predict support provision is because self-esteem is associated with perceived efficacy to provide support. Efficacy involves perceptions of individuals' ability to achieve situationally relevant goals (Bandura, 1997). People low versus high in self-esteem vary in their experience of self-efficacy. High self-esteem individuals rate themselves more favorably on efficacy-related attributes, such as being capable and talented, whereas low self-esteem individuals are less confident about their abilities, expect to perform more poorly, and are less likely to attribute success to their ability (Baumeister, 2013; Brown, 2014).

Efficacy is needed to motivate approach behavior during challenging situations (Bandura, 1997), such as when others need support. Greater support-related efficacy

promotes the delivery of support whereas lacking efficacy stymies support provision, particularly when providing support is difficult or unsuccessful (Steffen, McKibbin, Zeiss, Gallagher-Thompson, & Bandura, 2002). Indeed, prior studies have shown that individuals with greater caregiving or support efficacy report providing higher levels of a range of behaviors intended to support and help partners (MacGeorge, Clark, & Gillihan, 2002; MacGeorge, Feng, Butler, Dane, & Passalacqua, 2005; Rossetto, Lannutti, & Smith, 2014).

The tight links between self-esteem and efficacy, and efficacy and support provision, are also evident in research examining the links between self-esteem and partner support. High self-esteem intimates report providing more support to their partners because they feel competent and capable (Feeney & Collins, 2003). By contrast, low self-esteem individuals report *not* providing support because they lack the skills and capability to do so, and such lower feelings of efficacy predict lower partner support (Feeney & Collins, 2003). Moreover, partners detect this lack of support-related efficacy. People seek less support from low (vs. high) self-esteem others because they perceive low (vs. high) self-esteem others lack the efficacy to provide support (Cavallo, Zee, & Higgins, 2016).

Partner Support and Recipients' Self-Efficacy

The links between self-esteem, efficacy, and support provision are important because support can have a range of beneficial effects, including promoting recipients' coping, health, and wellbeing (Cutrona, 1996; Feeney & Collins, 2015; Uchino, Cacioppo, & Kiecolt-Glaser, 1996). A central reason for these benefits is that support can facilitate recipients' efficacy and thus their ability to formulate and enact plans to manage challenges and achieve goals (Feeney, 2004, 2007; Feeney & Collins, 2015; Feeney & Thrush, 2010; Girme, Overall, & Simpson, 2013). However, direct and overt support can undermine recipients' self-efficacy and thus exacerbate distress (Bolger & Amarel, 2007; Bolger, Zuckerman, & Kessler, 2000; Girme et al., 2013; Howland & Simpson, 2010). These harmful

effects are understood to arise because overt support conveys that recipients do not have the capability to deal effectively with the problem on their own and thus undermines recipients' felt efficacy.

The benefits and costs of support indicate that support will be optimal when it fosters efficacy by conveying to recipients that they are capable of overcoming stressors and achieving important goals. *Esteem support* is a particular type of support that primarily focuses on facilitating recipients' efficacy. Esteem support focuses on instilling recipients with efficacy regarding their skills and abilities, including affirming recipients' competence, expressing confidence and trust in recipients' ability to deal with and overcome the problem, and encouraging recipients to persist even when it is difficult (Barbee & Cunningham, 1995; Cutrona & Suhr, 1992; Overall, Fletcher, & Simpson, 2010; Pasch & Bradbury, 1998).

There is growing evidence that esteem support is particularly relevant to promoting recipients' efficacy. Greater perceived esteem support is associated with increased confidence and efficacy among athletes and this positive effect rivals that of other types of support, such as informational, tangible, and emotional support (Freeman & Rees, 2009, 2010; also see Holmstrom, Russell, & Clare, 2015, for self-efficacy in job seekers). There is also evidence that esteem support is particularly important in bolstering the positive effects of support within intimate relationships. Overprovision of support— when recipients report their partner provides more support than is needed/desired—predicts marital decline except when overprovision involves esteem support (Brock & Lawrence, 2009). Recipients and providers also judge esteem support to be the most helpful at improving recipients' feelings of self-worth and confidence in their ability to cope with stressful events (Cohen & Wills, 1985; Holmstrom & Burleson, 2011; McLaren & High, 2015).

Esteem-Related Support Processes Building Recipients' Efficacy and Self-Esteem

The two lines of research highlight important esteem-related support processes that help to explain how the self-esteem of one partner can shape self-relevant outcomes of another. We combine these two key processes in Figure 3.1. First, as shown by Paths A and B, prior research has shown that efficacy is central to the way self-esteem is linked with support provision, which is one of the key ways in which individuals enhance versus undermine the wellbeing of their partners. Second, efficacy is also central to whether support has beneficial effects on recipients. As shown by Path C, support that targets building recipients' efficacy should be particularly useful at immediately facilitating self-relevant evaluations, including efficacy about achieving specific goals or overcoming stressful challenges. Moreover, as shown by Paths D and E, esteem support may also bolster recipients' efficacy across time and, in turn, promote positive changes in recipients' self-esteem.

Despite the theoretical and empirical foundation for each of the paths we have combined in Figure 3.1, no prior research has (a) assessed how self-esteem and efficacy shape the support delivered during couples' actual support interactions, (b) identified the characteristics that promote the provision of esteem support, or (c) simultaneously examined efficacy as both a predictor and an outcome of partner support. The current research achieves each of these important aims by examining specific esteem-related support processes that may be one way in which the self-evaluations of one partner shapes the self-evaluations of the other partner. As outlined in Figure 3.1, we predicted that providers higher in self-esteem should possess greater support-related efficacy during couples' support interactions and thus be more disposed to deliver esteem support that fosters efficacy in recipients (Paths A, B, and C). By contrast, people lower in self-esteem should feel less able to provide the type of esteem support that should be most effective at bolstering efficacy. We also tested whether

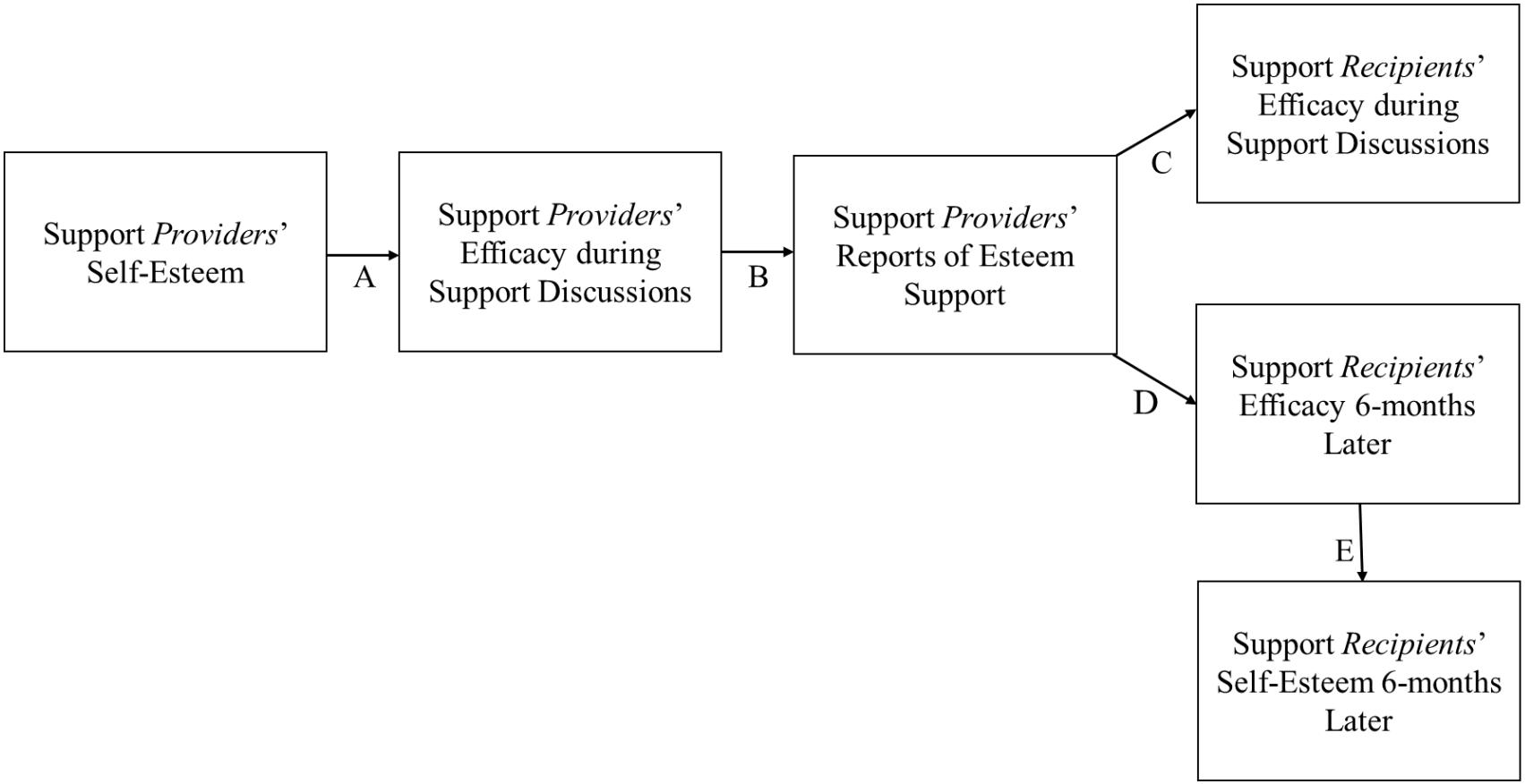

Figure 3.1. The predicted serial associations between *support providers'* self-esteem, efficacy and esteem support during couples' discussion of recipients' stressful challenge and *support recipients'* efficacy and self-esteem.

Note. Support recipients refers to the couple members whose stressful challenge was the topic of couples' discussions and *support providers* refers to the partners who could respond to recipients' stressful challenge with support.

these esteem-building processes were evident across time by examining whether these support processes within couples' discussions were associated with recipients experiencing greater efficacy and self-esteem across time (Paths A, B, D, and E).

Present Research

We present two studies testing the processes in Figure 3.1. Study 1 uses existing data to test whether self-esteem uniquely predicts esteem support provision in couples' support interactions. Study 2 uses new data to (1) model the role of efficacy in explaining the links between providers' self-esteem and esteem support (Figure 3.1, Paths A and B) and (2) test whether esteem support is associated with immediate boosts in recipients' efficacy (Path C) and self-efficacy and self-esteem across time (Paths D and E). We assessed and controlled for alternative explanations to ensure the processes were specific to self-esteem rather than other person factors shown to be linked with poorer support provision (e.g., attachment anxiety and depressive symptoms; Davila, Bradbury, Cohan, & Tochluk, 1997; Jayamaha, Girme, & Overall, 2016) and specific to esteem support rather than emotional (Study 1) and practical (Studies 1 and 2) support. We also tested whether the role of *providers'* self-esteem outlined in Figure 3.1 was independent of *recipients'* self-esteem and general relationship quality.

Study 1

We drew on an existing data set (Overall et al., 2010) to test whether self-esteem was uniquely associated with esteem support exhibited during couples' support interactions.

Method

Participants. Sixty-one heterosexual couples (total N = 122) involved in serious (49% cohabiting, 15% married, 30% serious, 6% steady/dating), long-term (*M* = 2.81 years, *SD* = 2.82) relationships participated. Mean age was 23.38 years (*SD* = 5.37; see Supplemental Materials in Appendix 2 for more information).

Procedure and Materials. After completing measures of self-esteem and attachment anxiety, participants identified their three most important self-improvement goals. Each couple engaged in two 5-min video-recorded discussions involving each individual (support recipient) discussing their most important goal with their partner (support provider; order counterbalanced) resulting in 122 interactions for analyses.

Self-esteem. The Rosenberg (1965) Self-Esteem Scale assessed global feelings of self-worth (e.g., *On the whole, I am satisfied with myself*; 1 = *strongly disagree*, 7 = *strongly agree*). Items were averaged (α = .89, M = 5.37, SD = 0.96).

Alternative explanations. The Adult Attachment Questionnaire (Simpson, Rholes, & Phillips, 1996) assessed attachment anxiety (α = .83, M = 2.93, SD = 1.10) and the Short-Form Perceived Relationship Quality Component Inventory (Fletcher, Simpson, & Thomas, 2000) assessed relationship quality (α = .84, M = 6.09, SD = 0.65).

Observational coding of support. Two trained coders independently rated the degree to which providers exhibited the types of support described in Table 3.1 (1 = *low*, 7 = *high*). The support behaviors targeted for each type of support were those assessed across established coding schemes (Barbee & Cunningham, 1995; Cutrona & Suhr, 1992; Pasch & Bradbury, 1998). Coders' ratings were reliable and thus averaged (see Table 3.1).

Results

We used the dyadic regression approach and MIXED models SPSS 24 syntax outlined by Kenny, Kashy, and Cook (2006) to assess the associations between support *providers'* self-esteem (mean-centered) and each type of support. As shown in Table 3.1, *providers'* self-esteem was associated with greater esteem support but was not significantly associated with emotional, informational, or tangible support. Additional analyses are described in the Supplemental Materials in Appendix 2. The predicted association was specific to providers' self-esteem and not a function of providers' attachment anxiety,

Table 3.1. *The Associations between Support Providers' Self Esteem and Different Types of Support Provided during Couples' Discussions of Support Recipients' Personal Goals (Study 1)*

Type of Support	**Overview of Support Behaviors Coded**	**Descriptive Statistics**		**Support Providers' Self-Esteem Predicting Type of Support**			
		Mean (SD)	*ICC*	*B*	*t*	95% CI	*r*
Esteem	provides encouragement and comments positively regarding recipient's efforts and progress; compliments recipient and/or emphasizes the recipient's abilities; validates and expresses agreement with recipient's perspective; tries to reduce self-blame or feelings of failure	2.60 (1.09)	.92	.25	2.62**	[.06, .44]	.25
Emotional	expresses love, affection, reassurance and comfort; expresses sorrow or regret for the recipient's distress; encourages recipient to express feelings about the issue; communicates understanding and empathy regarding the recipient's distress	1.80 (1.03)	.95	-.10	-1.08	[-.29, .09]	-.10
Informational	offers advice, ideas and suggests actions; asks questions, searches for causes, and generates solutions or options; provides detailed information, facts, news or skills needed to deal with the situation; provides perspective or reassess the situation offering alternative courses of action	3.75 (1.13)	.91	.11	1.11	[-.09, .32]	.10
Tangible	offers or agrees to join the recipient in action recipient needs to do; offers or agrees to perform a task or do something that will help; offers or agrees to take over one or more of the recipient's other responsibilities; expresses willingness to help or provide tangible aid	2.03 (1.15)	.95	.06	0.61	[-.14, .27]	.06

Note. The four types of support, and the specific support behaviors associated with each type, represent the most common types and behaviors captured by established support typologies and associated coding schedules, including the Social Support Interaction Coding System (Pasch & Bradbury, 1998), the Social Support Behavior Code (Cutrona & Suhr, 1992), and the Interactive Coping Behavior Coding System (Barbee & Cunningham, 1995). See Overall et al., (2010) for further details.

**$p < .01$.

recipients' self-esteem, or relationship quality. The results did not differ across gender, relationship length, or relationship status.

Study 2

Study 1 provided initial evidence that providers' self-esteem is uniquely associated with esteem support. In Study 2, we examined the (1) role of self-efficacy in explaining the links between *providers'* self-esteem and esteem support (Figure 3.1, Paths A and B), (2) the effects of esteem support for *recipients'* self-efficacy during couples' discussions (Path C), and (3) the potential longitudinal effects on recipients' self-efficacy and self-esteem across time (Paths D and E). Couples engaged in video-recorded discussions in which one partner (support recipient) discussed their most significant, ongoing personal stressor with the other partner (support provider). Support providers and recipients reported on their self-esteem as well as feelings of efficacy and esteem support during the discussion, and recipients reported their self-efficacy and self-esteem 6 months later.

Method

Participants. Eight-five heterosexual couples (total N = 170) involved in serious (42% married, 37% cohabiting, 20% serious dating), long-term (M = 7.82 years, SD = 10.15) relationships participated. Mean age was 33.05 years (SD = 13.55). This sample provided adequate power to test the predicted associations, although attrition reduced power for the longitudinal analyses (see below and details in Supplemental Materials in Appendix 2).

Procedure. During a laboratory session, participants completed questionnaires assessing self-esteem and identified three important ongoing personal stressors. The person who reported the most significant stressful issue was selected as support recipient to discuss his or her most significant stressor with his or her partner as support provider. When partners reported equal stress (53.1%), support role was randomly assigned. Recipients reported on their efficacy regarding the stressful issue identified. After a warm-up discussion, each

couple had a 7-min video-recorded discussion of the recipients' stressor. Immediately post discussion, both partners rated how much *providers* delivered esteem and practical support during the discussion. Each participant then privately reviewed the recording of their discussion and rated their experience of efficacy during each 30-s portion of the discussion. Six months after the laboratory session, recipients completed an online questionnaire reassessing recipients' stressor-related self-efficacy and self-esteem.

Pre-Discussion Questionnaires

Self-esteem was assessed as in Study 1.

Alternative explanations. Attachment anxiety and relationship quality were assessed as in Study 1. *Depressive symptoms* across the past week was assessed using the Centre for Epidemiological Studies Depression Scale (Radloff, 1977).

Support recipients' pre-discussion efficacy. Recipients rated how much they felt "confident/capable" and "useless/ineffective" (reverse-scored) with regard to the stressful issue they were about to discuss with their partner (1 = *not at all*, 7 = *very much*).

Post-Discussion Measures

Support providers' reported support. Support providers rated 5 items assessing their provision of esteem support: "I expressed confidence that my partner could cope," "I communicated trust in my partner's ability to cope," "I made my partner feel like she/he had the ability to cope," "I encouraged my partner to keep trying to overcome his/her challenges," and "I complimented my partner's efforts and achievements" (1 = *not at all*, 7 = *very much*).[1] Providers also rated 5 items assessing practical support (e.g., "*I provided practical assistance*

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[1] We had originally included 2 items assessing expressions of warmth and reassurance because instilling confidence and efficacy also involves expressing positive regard and faith in the partner (Holmstrom, 2012). We removed these items because emotional support focusing on empathizing and consoling recipients' distress also includes these elements (see Table 3.1). The results are the same with these items included (see Supplemental Materials in Appendix 2).

to help my partner," "*I offered my partner help or advice*").

Support recipients' perceptions of support. Recipients rated the same items worded to their perspective to assess their perceptions of providers' esteem support (e.g., "*my partner expressed confidence that I could cope*") and practical support.

Efficacy during support discussions. During the discussion review, providers and recipients rated how much they had felt "confident/ capable" and "useless/ineffective" (reverse-scored) during each 30-s portion of the discussion (1 = *not at all*, 7 = *very much*).

Longitudinal Follow-Up

Using the same measures completed at the initial session, participants completed assessments of self-esteem and relationship quality, and recipients reported on their efficacy with regard to the stressful issue discussed at the initial session.

Results

To test the processes outlined in Figure 3.1, we conducted a series of sequential mediation analysis using PROCESS macros 2.16.1 (Hayes, 2013). PROCESS is a computational tool for examining *serial multiple mediator models*. PROCESS macros simultaneously estimate all unstandardized and standardized model coefficients, standard errors, t and p values, and confidence intervals using ordinary least squares (OLS) regression for continuous outcomes. In addition to simultaneously calculating all associations accounting for prior paths, the key advantage of PROCESS is that the macros generate direct and indirect effects of a specified sequential model and all other possible single or multiple mediator models. Thus, we simultaneously compared the indirect effects assessing the sequential paths in Figure 3.1 to alternative models.

We ran two sets of PROCESS analyses. First, we assessed all predictors and outcomes *within* couples' support discussions to test how providers' self-esteem, efficacy, and esteem support were associated with immediate changes in recipients' efficacy (Figure

3.1, Paths A, B, and C). Second, we examined how providers' esteem, efficacy, and support within couples' discussions were associated with *longitudinal* changes in recipients' efficacy and esteem (Paths A, B, D, and E). For both analyses, we first examine the esteem support reported by the provider and then esteem support perceived by recipients.

Esteem-Related Support Processes and Recipients' Efficacy Within Couples' Discussions: Paths A, B, and C

Zero-order correlations support the predicted associations (see Table 3.2). Providers' self-esteem was positively associated with providers' efficacy and esteem support, and both providers' and recipients' reports of esteem support were positively associated with recipients' efficacy during couples' discussions. To test whether the association between *providers'* self-esteem (predictor) and *recipients'* efficacy during couples' support discussions (outcome) was mediated via *providers'* efficacy (mediator 1) and esteem support (mediator 2), we ran the *serial multiple mediator model* in PROCESS specifying a 10,000 sample bootstrap test. We controlled for recipients' efficacy with regard to their stressful issue prior to the discussion to ensure we were examining how the dynamics within the discussion were associated with changes in recipients' efficacy.

As shown in Figure 3.2, greater *providers'* self-esteem was associated with greater providers' efficacy (Path A), greater *providers'* efficacy in turn was associated with greater esteem support (Path B), and *providers'* esteem support was, in turn, associated with relative increases in *recipients'* efficacy (Path C).[2] Table 3.3 presents the indirect effects. The indirect effect for the predicted serial mediation was significant (see top row). The indirect effects

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[2] Some readers may be interested in the changes in the direct associations, which PROCESS do not provide. In the Supplemental Materials in Appendix 2, we present regression analyses calculating each association controlling for the mediator. These illustrate, for example, that controlling for support providers' efficacy removed the direct links between providers' self-esteem and esteem support.

Table 3.2. *Descriptive Statistics, Correlations and Reliability Coefficients of Primary Variables (Study 2)*

Variables	*1.*	*2.*	*3.*	*4.*	*5.*	*6.*	*7.*	*8.*	*9.*
1. Providers' Self-Esteem	-								
2. Providers' Efficacy during Couples' Discussions[a]	.31**	-							
3. Providers' Reports of Esteem Support	.23*	.40**	-						
4. Recipients' Perceptions of Esteem Support	.08	.36**	.48**	-					
5. Recipients' Efficacy Prior to Couples' Discussions[a]	.10	.15	.18	.26*	-				
6. Recipients' Efficacy during Couples' Discussions[a]	.31**	.28**	.45**	.43**	.41**	-			
7. Recipients' Efficacy 6-months Later[a]	.19	.17	.33*	.20	.30*	.29*	-		
8. Recipients' Self-Esteem	.23*	.05	.09	.05	.42**	.32**	.48**	-	
9. Recipients' Self-Esteem 6-months Later	.30*	.33*	.27*	.28*	.38**	.39**	.66**	.66**	-
Means	5.07	4.87	5.28	5.09	3.87	4.31	4.96	4.66	5.03
SDs	1.17	1.20	1.22	1.50	1.38	1.21	1.63	1.25	1.23
IR	.90	.52	.88	.93	.40	.58	.65	.91	.92

Note. Recipients refers to the couple members whose stressful challenge was the topic of couples' support discussions and *providers* refers to the partners who could respond to recipients' stressful challenge with support. Internal reliability (IR) was measured with Cronbach's alphas except for the two-item measures marked by [a], which reflect Pearson's correlations. See Table SM 2.1 in Appendix 2 for descriptive statistics and correlations across all variables.

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

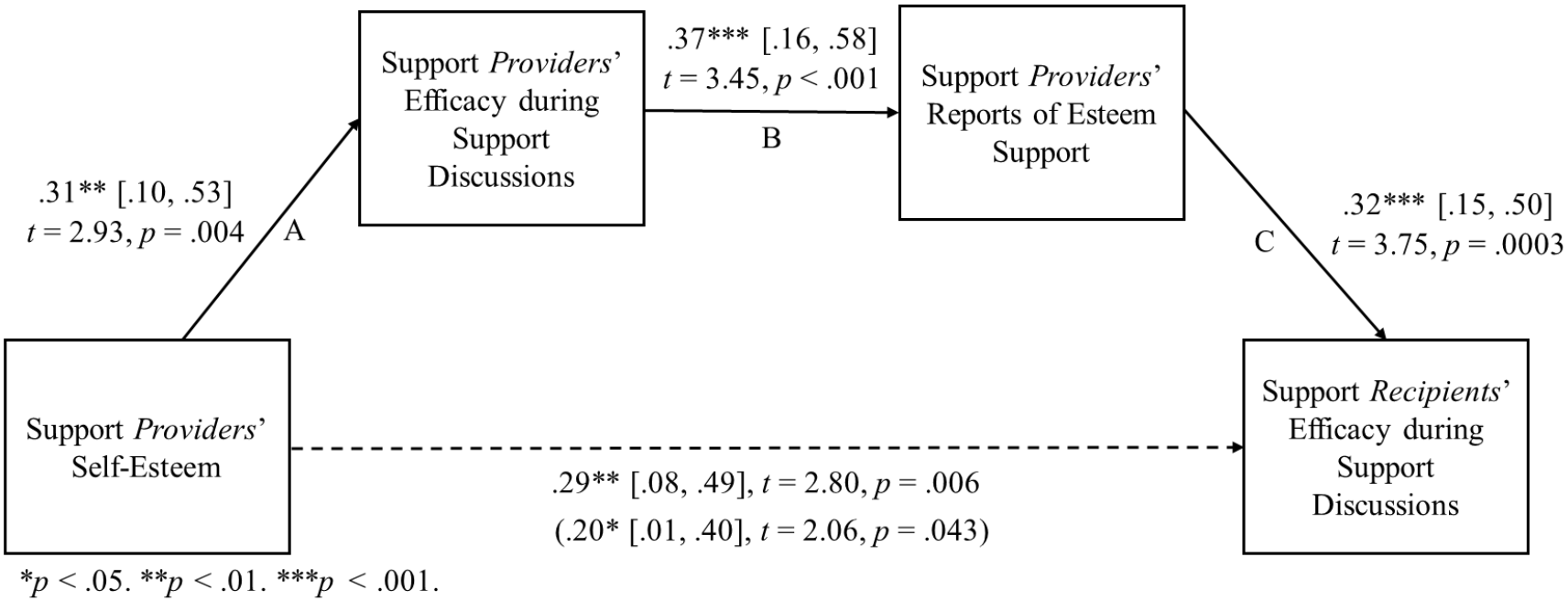

Figure 3.2. Analyses testing the predicted associations between support *providers'* self-esteem, efficacy and esteem support and support *recipients'* efficacy during couples' discussion of recipients' most stressful challenge.

Note. Coefficients [and 95% confidence intervals] on the solid lines represent the associations controlling for prior paths in the model. Coefficients [and 95% confidence intervals] on the dashed line represent the association before controlling for the mediating variable(s) (i.e., total effect) and, in parentheses, the association after controlling for the mediating variable(s) (i.e., direct effect). All analyses predicting recipients' efficacy during couples' discussions control for recipients' efficacy *prior* to couples' discussions.

Table 3.3. *Serial Mediation Analysis Examining the Associations between Support Providers' Self-Esteem, Efficacy and Esteem Support and Support Recipients' Efficacy during Couples' Discussions of Recipients' Stressful Challenge (Study 2)*

Indirect Pathways	*B*	*SE*	95% CI
Serial Mediation Depicted in Figure 3.1			
Providers' Self-Esteem → Providers' Efficacy → Providers' Reports of Esteem Support → Recipients' Efficacy	.04	.02	[.01, .10]
Alternative Serial Mediation Pathways			
Providers' Self-Esteem → Providers' Efficacy → Recipients' Efficacy	.01	.03	[-.04, .08]
Providers' Self-Esteem → Providers' Reports of Esteem Support → Recipients' Efficacy	.04	.04	[-.03, .12]

Note. Indirect paths were calculated using PROCESS macro (Hayes, 2013) and coefficients are standardized. The 95% confidence intervals were calculated from a 10,000 sample bootstrap test. All analyses control for support recipients' efficacy *prior* to couples' support discussions. PROCESS automatically assesses the indirect effect of the hypothesized process shown in Figure 3.1 and compares that sequential mediation model to alternative mediation pathways. The results illustrate that the predicted serial mediation shown in Figure 3.1 (Paths A, B, and C) is significant, whereas the alternative mediation pathways are not.

testing alternative models that did not include providers' efficacy (alternative 1) or esteem support (alternative 2) were not significant indicating that both providers' efficacy and esteem support help explain the link between providers' self-esteem and recipients' efficacy.

Recipients' perceptions of esteem support. Providers' reports and recipients' perceptions of esteem support were significantly positively associated (see Table 3.2), indicating that recipients detected providers' reported esteem support. We reran the above *serial multiple mediator model* in PROCESS replacing providers' reports of esteem support with recipients' perceptions of esteem support. As shown in Figure 3.3, the same results emerged: Greater providers' self-esteem was associated with greater providers' efficacy (Path A), which was associated with greater *recipients'* perceptions of esteem support (Path B) and, in turn, greater recipients' efficacy (Path C). The predicted serial mediation was significant, whereas the alternative models were not (Table 3.4).

Esteem-Related Support Processes and Recipients' Efficacy and Self-Esteem Over Time: Paths A, B, D, and E

An additional aim of Study 2 was to examine whether the esteem-related support processes within discussion also had implications for self-evaluations across time, including recipients' efficacy and self-esteem. Four couples dissolved over the 6-month longitudinal period and 23 recipients chose not to complete the follow-up questionnaire, leaving 58 recipients and their partners (total N = 116) for the longitudinal analyses. There were no differences in the primary variables at the initial session across retained versus lost participants, but sample attrition did reduce statistical power to test Path D (see Supplemental Materials in Appendix 2).

Providers' reports of esteem support. As shown in Table 3.5, providers' reports of esteem support predicted positive changes in recipients' efficacy and self-esteem across time (controlling for recipients' pre-discussion efficacy and self-esteem at the initial session). We

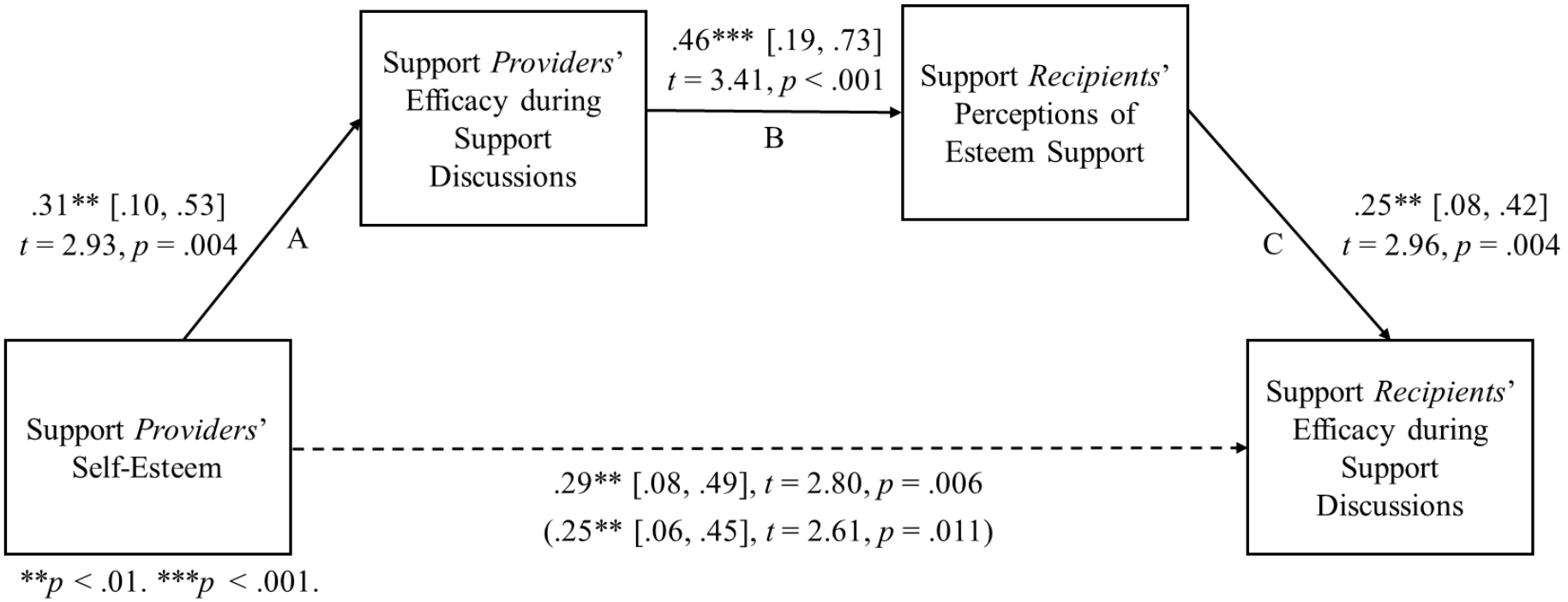

Figure 3.3. Analyses testing the predicted associations between support *providers'* self-esteem and efficacy, support *recipients'* perceptions of esteem support, and *recipients'* efficacy during couples' discussion of recipients' most stressful challenge.

Note. Coefficients [and 95% confidence intervals] on the solid lines represent the associations controlling for prior paths in the model. Coefficients [and 95% confidence intervals] on the dashed line represent the association before controlling for the mediating variable(s) (i.e., total effect) and, in parentheses, the association after controlling for the mediating variable(s) (i.e., direct effect). All analyses predicting recipients' efficacy during couples' discussions control for recipients' efficacy *prior* to couples' discussions.

Table 3.4. *Serial Mediation Analysis Examining the Associations between Support Providers' Self-Esteem and Efficacy, Support Recipients' Perceptions of Esteem Support and Recipients' Efficacy during Couples' Discussions of Recipients' Stressful Challenge (Study 2)*

Indirect Pathways	*B*	*SE*	95% CI
Serial Mediation Depicted in Figure 3.1			
Providers' Self-Esteem → Providers' Efficacy → Recipients' Perceptions of Esteem Support → Recipients' Efficacy	.03	.02	[.01, .09]
Alternative Serial Mediation Pathways			
Providers' Self-Esteem → Providers' Efficacy → Recipients' Efficacy	.02	.03	[-.03, .09]
Providers' Self-Esteem → Recipients' Perceptions of Esteem Support → Recipients' Efficacy	-.01	.03	[-.09, .04]

Note. Indirect paths were calculated using PROCESS macro (Hayes, 2013) and coefficients are standardized. The 95% confidence intervals were calculated from a 10,000 sample bootstrap test. All analyses control for support recipients' efficacy *prior* to couples' support discussions. PROCESS automatically assesses the indirect effect of the hypothesized process shown in Figure 3.1 and compares that sequential mediation model to alternative mediation pathways. These results illustrate that the predicted serial mediation shown in Figure 3.1 (Paths A, B, and C) is significant, whereas the alternative mediation pathways are not.

Table 3.5. *The Longitudinal Associations between Time 1 Support Providers' Self Esteem, Efficacy and Esteem Support and Time 2 Support Recipients' Efficacy and Self-Esteem (Study 2)*

Time 1 Variables	Time 2 Recipients' Efficacy			Time 2 Recipients' Self-Esteem		
	B	*t*	95% CI	*B*	*t*	95% CI
Providers' Self-Esteem	.18	1.38	[-.11, .57]	.18	1.78†	[-.02, .38]
Providers' Efficacy	.11	.87	[-.21, .53]	.24	2.44*	[.05, .46]
Providers' Reports of Esteem Support	.29	2.30*	[.06, .81]	.22	2.22*	[.02, .46]
Recipients' Perceptions of Esteem Support	.10	.68	[-.20, .40]	.25	2.62**	[.05, .35]

Note. Associations were calculated in separate models. Coefficients are standardized. All analyses predicting Time 2 recipients' efficacy control for recipients' efficacy *prior* to couples' support discussions. All analyses predicting Time 2 recipients' self-esteem control for recipients' self-esteem at the initial session.

$^{\dagger}p \leq .08$. *$p < .05$. **$p < .01$.

ran the *serial multiple mediator model* in PROCESS (10,000 sample bootstrap test) to model the Paths A, B, D, and E in Figure 3.1. We specified *providers'* self-esteem as a predictor of *providers'* efficacy (Mediator 1), *providers'* esteem support (Mediator 2), *recipients'* efficacy 6 months later (Mediator 3), and *recipients'* self-esteem 6 months later (outcome), controlling for both *recipients'* pre-discussion efficacy and self-esteem at the initial session.

As shown in Figure 3.4, the processes within couples' discussions replicated in the smaller longitudinal sample. Higher providers' self-esteem was associated with greater providers' efficacy (Path A), which was associated with greater providers' esteem support (Path B). Moreover, greater providers' esteem support predicted greater efficacy (Path D) and, in turn, greater self-esteem (Path E) in recipients 6 months later. Table 3.6 presents the indirect effects. The predicted serial mediation was significant (see top row), whereas the six

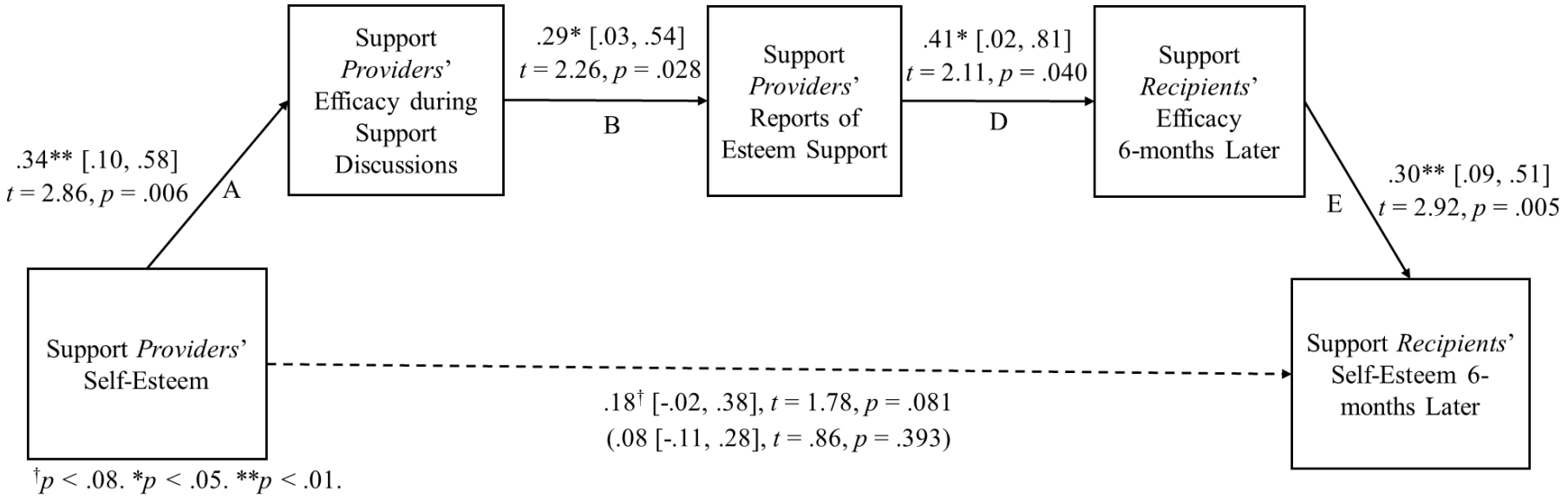

Figure 3.4. Analyses testing the predicted associations between support *providers'* self-esteem, efficacy and esteem support during couples' discussion of recipients' most stressful challenge and support *recipients'* efficacy and self-esteem 6-months later.

Note. Coefficients [and 95% confidence intervals] on the solid lines represent the associations controlling for prior paths in the model. Coefficients [and 95% confidence intervals] on the dashed line represent the association before controlling for the mediating variable(s) (i.e., total effect) and, in parentheses, the association after controlling for the mediating variable(s) (i.e., direct effect). All analyses predicting recipients' efficacy and self-esteem 6-months later control for recipients' efficacy *prior* to couples' support discussions and recipients' self-esteem at the initial session.

Table 3.6. *Serial Mediation Analysis Examining the Associations between Support Providers' Self-Esteem, Efficacy and Esteem Support during Couples' Discussions of Recipients' Stressful Challenge and Support Recipients' Efficacy and Self-Esteem 6-months after Couples' Initial Support Discussions (Study 2)*

Indirect Pathways:	*B*	*SE*	95% CI
Serial Mediation Depicted in Figure 3.1			
Providers' Self-Esteem → Providers' Efficacy → Providers' Reports of Esteem Support → Recipients' Efficacy 6-months later → Recipients' Self-Esteem 6-month later	.02	.02	[.002, .086]
Alternative Serial Mediation Pathways			
Providers' Self-Esteem → Providers' Efficacy → Recipients' Self-Esteem 6-months later	.07	.04	[.012, .190]
Providers' Self-Esteem → Providers' Efficacy → Providers' Reports of Esteem Support → Recipients' Self-Esteem 6-months later	.01	.02	[-.023, .068]
Providers' Self-Esteem → Providers' Efficacy → Recipients' Efficacy 6- months later → Recipients' Self-Esteem 6-months later	-.01	.03	[-.061, .045]
Providers' Self-Esteem → Providers' Reports of Esteem Support → Recipients' Self-Esteem 6-months later	.00	.02	[-.023, .064]
Providers' Self-Esteem → Providers' Reports of Esteem Support → Recipients' Efficacy 6-months after → Recipients' Self-Esteem 6-months later	.00	.02	[-.031, .053]
Providers' Self-Esteem → Recipients' Efficacy 6-months later → Recipients' Self-Esteem 6-months later	.03	.07	[-.081, .182]

Note. Indirect paths were calculated using PROCESS macro (Hayes, 2013) and coefficients are standardized. The 95% confidence intervals were calculated from a 10,000 sample bootstrap test. All analyses control for both support recipients' self-esteem at the initial session and recipients' efficacy *prior* to couples' support discussions. PROCESS automatically assesses the indirect effect of the hypothesized process shown in Figure 3.1 and compares that sequential mediation model to alternative mediation pathways. The predicted serial mediation shown in Figure 3.1 (Paths A, B, D, and E) is significant; the alternative mediation pathways are not significant with one exception.

alternative pathways were not supported with one exception: providers' self-esteem → providers' efficacy → recipients' self-esteem 6 months later. Thus, providers' self-esteem and efficacy may foster recipients' self-esteem in additional ways to esteem support.

Recipients' perceptions of esteem support. Recipients' perceptions of esteem support predicted recipients' self-esteem but not recipients' efficacy 6 months later (see Table 3.5). Accordingly, when running the longitudinal sequential mediation analyses replacing providers' reported esteem support with recipients' perceptions of esteem support, the within-discussion analyses were replicated (see Figure 3.5, Paths A and B), but recipients' perceptions of esteem support was not significantly associated with recipients' efficacy 6 months later (Path D). Thus, although recipients' efficacy predicted recipients' self-esteem 6 months after couples' support discussions (Path E), the direct links between recipients' perceptions of esteem support and self-esteem shown in Table 3.5 were not mediated by changes in recipients' efficacy with regard to their stressful issue. The predicted serial mediation was not significant (see top row of Table 3.7) nor were the potential alternative pathways. We consider the differences between providers' reports and recipients' perceptions of esteem support below.

Additional analyses. The Supplemental Materials in Appendix 2 details additional analyses showing that the associations in Figure 3.1 (1) remained when controlling for *providers'* attachment anxiety, *providers'* depressive symptoms, and *recipients'* self-esteem and relationship quality; (2) were unique to esteem, and not practical, support; and (3) did not systematically differ across levels of recipients' self-esteem, gender, or relationship status or length.

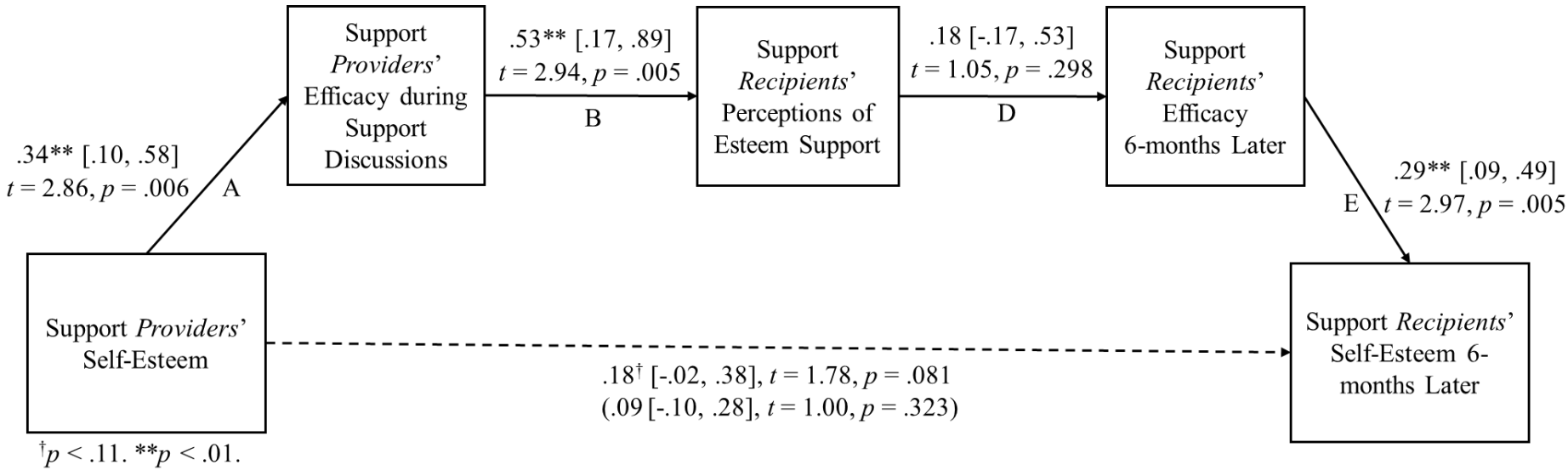

Figure 3.5. Analyses testing the predicted associations between support *providers'* self-esteem and efficacy, support *recipients'* perceptions of esteem support during couples' discussion of recipients' most stressful challenge and *recipients'* efficacy and self-esteem 6-months later.

Note. Coefficients [and 95% confidence intervals] on the solid lines represent the associations controlling for prior paths in the model. Coefficients [and 95% confidence intervals] on the dashed line represent the association before controlling for the mediating variable(s) (i.e., total effect) and, in parentheses, the association after controlling for the mediating variable(s) (i.e., direct effect). All analyses predicting recipients' efficacy and self-esteem 6-months later control for recipients' efficacy *prior* to couples' support discussions and recipients' self-esteem at the initial session.

Table 3.7. *Serial Mediation Analysis Examining the Associations between Support Providers' Self-Esteem and Efficacy and Support Recipients' Perceptions of Esteem Support during Couples' Discussions of Recipients' Stressful Challenge and Recipients' Efficacy and Self-Esteem 6-months after Couples' Initial Support Discussions (Study 2)*

Indirect Pathways:	*B*	*SE*	95% CI
Serial Mediation Depicted in Figure 3.1			
Providers' Self-Esteem → Providers' Efficacy → Recipients' Perceptions of Esteem Support → Recipients' Efficacy 6-months later → Recipients' Self-Esteem 6-month later	.01	.01	[-.003, .054]
Alternative Serial Mediation Pathways			
Providers' Self-Esteem → Providers' Efficacy → Recipients' Self-Esteem 6-months later	.06	.04	[-.001, .167]
Providers' Self-Esteem → Providers' Efficacy → Recipients' Perceptions of Esteem Support → Recipients' Self-Esteem 6-months later	.02	.02	[-.003, .106]
Providers' Self-Esteem → Providers' Efficacy → Recipients' Efficacy 6- months later → Recipients' Self-Esteem 6-months later	.00	.02	[-.037, .056]
Providers' Self-Esteem → Recipients' Perceptions of Esteem Support → Recipients' Self-Esteem 6-months later	-.01	.03	[-.111, .032]
Providers' Self-Esteem → Recipients' Perceptions of Esteem Support → Recipients' Efficacy 6-months after → Recipients' Self-Esteem 6-months later	-.00	.02	[-.064, .013]
Providers' Self-Esteem → Recipients' Efficacy 6-months later → Recipients' Self-Esteem 6-months later	.04	.06	[-.064, .191]

Note. Indirect paths were calculated using PROCESS macro (Hayes, 2013) and coefficients are standardized. The 95% confidence intervals were calculated from a 10,000 sample bootstrap test. All analyses control for both support recipients' self-esteem at the initial session and recipients' efficacy prior to couples' support discussions. PROCESS automatically assesses the indirect effect of the hypothesized process shown in Figure 3.1 and compares that sequential mediation model to alternatives. The predicted serial mediation when modeling recipients' perceptions of esteem support, and the alternatives mediation pathways, are not significant.

General Discussion

The current research demonstrated that self-evaluations of one partner are associated with support processes that can enhance or hinder self-evaluations in intimate partners. Based on two lines of research indicating that (a) self-esteem shapes support-related efficacy and thus support provision and (b) esteem support maybe most effective at building efficacy in recipients, we examined a dyadic process linking one partners' self-esteem and efficacy to the other partners' efficacy and self-esteem. First, *support providers* higher in self-esteem experienced greater efficacy when in a position to support their partners, which in turn predicted greater provision of esteem support during couples' support-relevant discussions. Second, greater esteem support was associated with relative increases in *support recipients'* efficacy during couples' support discussions. Third, longitudinal analyses provided some evidence that esteem support was associated with positive changes in recipients' efficacy and self-esteem across time. Additional analyses illustrated that these processes were specific to self-esteem and the provision of esteem support. These novel results provide a unique illustration that greater versus lower self-esteem is associated with dyadic support processes that will likely build versus undermine self-efficacy and self-esteem in others.

The Dyadic Nature of Self-Evaluations

Although prominent theories acknowledge that social interactions will shape self-esteem (Leary & Downs, 1995), prior research has not provided a clear picture of how self-evaluations emerge and change through relationship interactions. Prior research has shown, however, that people's life satisfaction, emotions, and wellbeing influence those same outcomes in intimate partners (e.g., Anderson, Keltner, & John, 2003; Gustavson, Røysamb, Borren, Torvik, & Karevold, 2016; Kouros & Cummings, 2010). The current results provide another demonstration of these contagion processes by showing that central self-evaluations,

including self-esteem and efficacy, can build or undermine corresponding self-evaluations in intimate partners via the provision of esteem-related support processes.

The current study also advances understanding of the important role efficacy plays in determining the ability to provide, and the resulting impact of, support. The results replicate prior work showing that support-related efficacy predicts support provision but extends that work by (a) illustrating these processes occur within couples' actual support interactions and (b) showing that central self-relevant judgments (self-esteem and efficacy) are associated with a form of support that should be particularly useful in building positive self-evaluations in others. Drawing on prior theory and research, we focused on esteem support because it specifically involves promoting recipients' efficacy and esteem. The results indicate that providers who are confident in their own worth and efficacy are more likely to provide esteem support and thus promote positive self-evaluations in others. Thus, efficacy is not only an important contributor to esteem support, but efficacy and self-esteem should be important recipient outcomes of esteem support.

We posited that esteem support would be particularly important in bypassing the potential efficacy threat arising from partner support. However, the longitudinal analyses were consistent with prior research showing that partner reported support tends to have benefits, but *perceiving* support from partners can sometimes undermine efficacy (Bolger et al., 2000; Howland & Simpson, 2010). Recipients' *perceptions* of esteem support was associated with positive pre-to-post changes in recipients' efficacy during couples' support discussions but did not predict relative changes in efficacy across time. However, recipients' perceived esteem support did directly predict greater self-esteem across time, indicating that perceived esteem support is likely to have important esteem-building benefits. Perhaps *perceptions* of esteem support enhances more global self-relevant evaluations but has complex or opposing effects on recipients' felt efficacy vis-a`-vis specific stressors

(consistent with the documented costs of recipient perceived support in prior research). Sample attrition also reduced power for these analyses, which reduces confidence in the null and significant effects that emerged. Overall, however, the pattern across both providers' reported and recipients' perceived esteem support provides initial evidence that self-esteem and efficacy does facilitate support in a way that builds positive self-evaluations in partners.

Strengths, Caveats, Implications, and Future Directions

Although the correlational nature of our data limits causal conclusions, examining responses within couples' support discussions examines how important self-evaluations are associated with esteem-building support as these processes naturally arises during self-relevant support exchanges. Moreover, additional analyses distinguishing the effects of self-esteem from related constructs, such as attachment anxiety and depressive symptoms, enhanced understanding of the specificity of these dyadic processes. Self-esteem at its core is concerned with self-worth and capability and thus should be most closely tied to self-efficacy and building efficacy and esteem in another. Moreover, the results were specific to esteem support, which also reinforces tight links between key esteem-related characteristics shaping esteem-related support and esteem-related outcomes in recipients.

Our sample consisted primarily of relatively satisfied long-term couples with healthy levels of self-esteem. Thus, the self-evaluations and esteem support of one partner likely shapes partners' self-evaluations even in well-functioning couples. This is good news, given that greater self-esteem can foster esteem support and efficacy in close others. Yet, the processes we examined have another side: lower self-esteem, efficacy, and thus esteem support are likely to undermine the efficacy and self-esteem of close others. These negative transference effects might be particularly the case when very low levels of self-esteem inhibit the provision of support; recipients really need esteem-bolstering support; or low relationship satisfaction, very serious stressors, or providers' own stressful challenges further undermine

providers' efficacy and esteem support. The contexts that maximize or minimize these dyadic processes are an important direction for future investigations.

The current research focused on how the self-evaluations of one partner promoted support in ways that had important flow-on effects for the other partner's self-evaluations. These dyadic processes, however, may be self-fulfilling and alter providers' self-esteem. For example, provision of effective support may feedback to bolster the providers' efficacy and self-esteem, whereas ineffective support provision may compound low self-evaluations in providers. We did not track providers' support-related efficacy across time, but these perpetuating cycles deserve further attention. Moreover, these dyadic processes may mean that partners' self-esteem and self-efficacy become more closely connected across time, although in the current study relationship length did not moderate these associations. There are likely many, and sometimes competing, processes that account for how partners' self-evaluations shape each other over time. It is also possible that some partners exert a stronger self-shaping influence (e.g., Anderson et al., 2003). In particular, although recipients' self-esteem did not moderate the results, discrepancies in self-evaluations across partners may mean that partners with particularly low or high self-esteem or self-efficacy could pull the couple in that direction.

Finally, support is pivotal to wellbeing and should be a key context in which relationships shape self-evaluations. Self-esteem should also be linked to efficacy and associated responses in other important contexts. For example, because conflicts heighten their self-doubts, low self-esteem individuals respond to conflict by derogating and distancing from their partners (Murray, Rose, Bellavia, Holmes, & Kusche, 2002). Unencumbered by self-doubts, higher self-esteem may predict greater efficacy in resolving conflicts, more constructive problem-solving, and perhaps greater conflict efficacy and self-esteem in partners. Moreover, although prior theory and research indicates efficacy is central to the

support processes we examined, there are likely additional ways through which self-esteem affects support, conflict, and other behaviors that impact partners. Greater and more persistent negative mood, for example, may detract people low in self-esteem from meeting their partners' needs and generally undermine the effectiveness of important relationship behaviors (e.g., Forest, Kille, Wood, & Holmes, 2014; Jayamaha & Overall, 2015). The current research highlights the importance of future investigations identifying the myriad ways one person's self-evaluations influences their partner's self-evaluations beyond specific types of relationship interactions or even specific relationships.

Conclusions

The current research highlights the dyadic nature of self-evaluations. Self-esteem and efficacy do not just lie within the individual. Instead, the current studies indicate that people higher in self-esteem possess the efficacy needed to provide support in ways that may build positive self-evaluations in their partners. By contrast, people with lower self-esteem and efficacy fail to provide esteem support, which is likely to undermine partners' self-evaluations. Self-esteem and efficacy shape, and are shaped by, dyadic processes within relationship interactions.

CHAPTER CONCLUSION

The studies presented in Chapter Three advance understanding of the important role efficacy plays in determining the support individuals low (versus high) in self-esteem are able to provide to partners in times of need. The results indicate that support providers who are confident in their own worth and efficacy are more likely to provide esteem support, whereas individuals with lower feelings of efficacy find it difficult to provide esteem support to partners. The results also provided a novel demonstration of how self-evaluations of one partner are associated with support processes that can enhance or hinder self-evaluations of the other partner during support exchanges and across time. Moreover, both studies provided the first demonstration that self-esteem is uniquely associated with a specific type of support most relevant to the underlying disposition-related factors associated with self-esteem–esteem support–reinforcing the tight links between key esteem-related characteristics shaping esteem-related support and esteem-related outcomes in support recipients. Providing further support for these distinct processes, additional analyses demonstrated that these effects were unique to self-esteem and not due to attachment anxiety.

In sum, Chapter Three advanced prior research on self-esteem and support provision by identifying an important disposition-related factor–support-related efficacy–that helps explain *why* individuals low (versus high) in self-esteem might provide lower (versus greater) support to partners in times of need. The results also provided a unique illustration that greater versus lower self-esteem is associated with dyadic support processes that will likely build versus undermine self-efficacy and self-esteem in others. In the next chapter, I continue to examine the role disposition-related factors play in determining support provision by examining the ways in which elevated depressive symptoms may predict other situational experiences that undermine provision of support to partners.

CHAPTER FOUR: DEPRESSIVE SYMPTOMS, STRESS AND, EMOTIONAL SUPPORT

Chapter Two and Chapter Three focused on how *chronic* personal difficulties, such as high attachment anxiety and low self-esteem, undermine support provision within intimate relationships. In Chapter Four, I examine how *acute* personal difficulties, namely elevated depressive symptoms, derail individuals' provision of support to partners in times of need. Prior research has suggested that depressive symptoms are associated with poorer support provision to intimate partners (Gurung et al., 1997; Pasch et al., 1997; Feeney & Collins, 2003), but prior studies have not examined the specific state-oriented factors that might account for *why* individuals with elevated depressive symptoms provide lower support. In this chapter, I examine the role of support providers' stress in understanding the links between depressive symptoms and poorer support provision.

As reviewed in Chapter One, key theoretical models of depressive symptoms and relational functioning suggests that individuals with elevated depressive symptoms produce stress in interpersonal situations, which undermines constructive relationship behaviours (Hammen, 1991; Keser et al., 2017; Liu & Alloy, 2010; Segrin & Abramson, 1994). In this chapter, I propose that this robust association between depressive symptoms and stress should also be evident in support provision contexts within intimate relationships. Specifically, I expected that individuals higher in depressive symptoms would experience greater stress when in a position to provide support to partners in times of need. In addition, this greater experience of stress is likely to undermine the degree to which individuals can provide emotional support to their partner.

I test these associations in three dyadic studies assessing levels of stress and support provision during couples' support interactions in the laboratory and when partners' need support during couples' daily life. Examining responses within couples' specific support

discussions and daily interactions allows me to directly examine how depressive symptoms and feelings of stress may affect support exchanges as they occur naturally. Moreover, I assess individuals' (i.e., support providers) and their *partners'* (i.e., support recipients) reports of emotional support provided and received. Gathering assessments of support from both partners can offer stronger evidence that the predicted lower support arising from greater depressive symptoms and thus stress is also detected by partners. Finally, given that extant research and my prior studies presented in Chapters Two and Three have shown that attachment anxiety and self-esteem also predict poorer support provision (Collins & Feeney, 2000; Feeney & Collins, 2001, 2003; Feeney & Hohaus, 2001; Jayamaha et al., 2017; Jayamaha & Overall, 2018), I also assessed and controlled for attachment anxiety and self-esteem to ensure that the predicted effects were distinct to depressive symptoms.

The research article which follows is the author's copy of a manuscript submitted to *Personality and Social Psychology Bulletin.* It is currently under review.

Abstract

Emotional support is central to health and wellbeing. Yet, providing support may be stressful if people are burdened with their own emotional difficulties, and such stress may interfere with support provision. Three dyadic studies tested whether greater depressive symptoms were associated with experiencing stress when in a position to provide support to intimate partners, and whether greater stress in turn predicted providing lower emotional support. Greater depressive symptoms were associated with experiencing greater stress during discussions about *partners'* important goals (Study 1) and stressful challenges (Study 2) and on days when *partners* needed greater support (Study 3). Greater stress when in a position to provide support was, in turn, associated with lower emotional support provision as reported by both dyad members (Studies 1-3). These results identify an important interpersonal process that may help explain why one person's depressive symptoms can undermine the relationship and personal wellbeing of their intimate partners.

Depressive Symptoms, Stress when Partners Need Support, and Support Provision within Intimate Relationships

Intimate partners are often the principal source of emotional support that helps people overcome life's challenges (Cutrona, 1996), and there is an abundance of evidence that supportive relationships facilitate coping and promote health and wellbeing (see Feeney & Collins, 2015; Uchino, Cacioppo, & Kiecolt-Glaser, 1996). Unfortunately, providing support to partners can be challenging and stressful, and thus not everyone is able to respond to their partner's needs in supportive ways (Collins, Ford, Guichard, Kane, & Feeney, 2010; Feeney & Collins, 2001). Yet, the huge literature on social support has primarily focused on the benefits of support provision, rather than identifying when and why responding to partners' support needs might increase stress and thus undermine the provision of emotional support. In the current studies, we examine whether suffering from one's own emotional difficulties—indexed by elevated depressive symptoms—exacerbates the stress that could be experienced when in a position to provide support to partners, and whether this greater stress reduces people's ability to provide emotional support to close others.

The Challenge of Providing Support in Intimate Relationships

Intimate partners are heavily relied upon to provide comfort, care and reassurance in times of need—termed *emotional support* (Cutrona, 1996; Weiss, 1980). Indeed, the provision of emotional support is theorized to be a fundamental function of close relationships across cultures (Burleson, 2003; Cunningham & Barbee, 2000). People also report emotional support to be the most desired type of support from intimate partners (Cutrona & Russell, 1987; Xu & Burleson, 2001), and emotional support tends to have the most benefits, such as building feelings of being cared for and valued, even when other types of support are desired (Cutrona, Shaffer, Wesner, & Gardner, 2007). Accordingly, receiving greater emotional support has a range of beneficial effects, including promoting coping with

stressful life events, facilitating the achievement of personal goals, building relationship satisfaction and security, and bolstering recovery from illness and injury (Feeney & Collins, 2015; Overall, Fletcher, & Simpson, 2010; Seeman, 2001; Spiegel & Kimerling, 2001; Uchino et al., 1996).

However, people do not just receive support in relationships, they also must provide support to their partner when needed. But, providing support can be challenging, difficult, and stressful (Rafaeli & Gleason, 2009). Support provision requires individuals to have the cognitive and emotional resources to apply situationally appropriate support in the ways required (Collins et al., 2010; Feeney & Collins, 2001, 2003). Indeed, providing support is challenging because people have to temporarily suspend their own needs, emotions, and difficulties in order to provide support that is attuned to the partner's—rather than one's own—need for support, comfort, and care (Coyne & DeLongis, 1986; Coyne, Ellard, & Smith, 1990; Shaver, Mikulincer, & Shemesh-Iron, 2010). Thus, providing support is likely to be especially challenging when individuals have their own difficulties or needs to manage.

Consistent with this proposition, prior research has found that individuals who have greater chronic interpersonal needs or personal difficulties tend to provide lower support to partners. For example, when partners are highly distressed, people higher in attachment anxiety experience insecurities regarding their own relational value, which in turn predicts poorer support provision (Jayamaha, Girme, & Overall, 2017; also see Collins & Feeney, 2000; Feeney & Collins, 2001; Feeney & Hohaus, 2001). People lower in self-esteem feel less confident in their own worth and efficacy during support interactions, which in turn hinders the degree to which they are able to provide esteem-boosting support (Jayamaha & Overall, 2018; also see Feeney & Collins, 2003). These findings illustrate that individuals' own personal difficulties, such as self-focused needs for relational security and lower self-esteem and efficacy, interfere with individuals' ability to provide support.

More acute personal difficulties may also make support provision more challenging and thus undermine the support provided to partners. In particular, people who are facing greater difficulties may lack the emotional, cognitive, and psychological resources necessary to respond to their partners' support needs. For example, research has shown that individuals are less likely to provide emotional support to their partners when they have just experienced days of greater negative affect (e.g., distressed, upset, and nervous), possibly because dealing with one's own emotional needs reduces the emotional resources required to recognize and attend to the partner's needs (Iida et al., 2010). Similarly, caregiving quality deteriorates when individuals are facing significant stressors, such as financial strain, and thus may lack the emotional energy and resources necessary to respond to their partners' support needs (Vinokur, Price, & Caplan, 1996; also see Collins et al., 2010; Feeney & Collins, 2001).

Other research has also shown that depletion of personal resources undermines support provision. Mikulincer, Shaver, Sahdra, and Bar-On (2013) found that support providers who performed a cognitive resource-depleting Stroop task were rated by external coders as exhibiting lower levels of listening, understanding, empathy, and reassurance in response to romantic partners' disclosures of a distressing problem. A similar process should occur when people's emotional resources have been used heavily due to their own emotional difficulties. That is, individuals burdened with their own emotional difficulties may not have the emotional reservoir needed to provide the kind of emotional support that is so critical to close relationships. Indeed, people's own difficulties may result in the additional strain of partners' support needs creating stress, which in turn interferes with support provision.

Depressive Symptoms, Stress, and Support Provision

One important indicator of current emotional difficulties that could undermine support provision is depressive symptoms. Depressive symptoms are characterized by feelings of depressed mood, helplessness, hopelessness, and worthlessness along with a range

of broader deficits that reduce activity and energy, such as sleep disturbance (Kohout, Berkman, Evans, & Cornoni-Huntley, 1993; Radloff, 1977). Measures of depressive symptoms assess the degree to which these symptoms are currently present in people's lives. The Center for Epidemiological Studies-Depression (CES-D), for example, asks individuals to rate how often they experienced symptoms associated with depression over the past week (Radloff, 1977). The range of current emotional difficulties captured by depressive symptoms may leave individuals with less emotional capacity to be a source of support for their partners. In particular, the demands of responding to partners' support needs may exceed the emotional resources people with elevated depressive symptoms have on hand, and thus create or exacerbate feelings of stress that should in turn reduce support provision.

There is existing evidence that individuals with greater depressive symptoms provide lower support to their partners. Gurung, Sarason, and Sarason (1997) found that individuals with elevated depressive symptoms were less supportive toward their romantic partners in interactions, including exhibiting lower expressions of positive feelings for each other, lower sensitivity to each other's needs, and lower responsiveness. Pasch, Bradbury, and Davila (1997) also found that individuals with greater negative affectivity—greater depressive symptomology and neuroticism—exhibited lower levels of emotional support (reassuring, consoling, conveying love and care, promoting esteem) when discussing a personal issue their partner wanted to change. People with elevated depressive symptoms also report that they generally feel unable to be responsive to their partners' needs because they find it too difficult to cope with the situation and their partners' responses (Feeney & Collins, 2003).

Despite the evidence that depressive symptoms undermine support provision in close relationships, these prior studies did not examine the emotional experiences within support interactions that could help explain *why* depressive symptoms are associated with poorer

support provision. As highlighted above, providing support is challenging and potentially stressful because it requires individuals to have the emotional resources and capacity to prioritize and respond to their partners' needs. However, when people are facing more current emotional difficulties of their own, and thus have fewer emotional reserves to direct toward their partner's needs, the interpersonal demands of the situation may exceed the perceived personal resources they have to draw upon to meet their partner's needs. This mismatch between situational demands and personal resources is the foundation of stress (Lazarus & Folkman, 1984). In particular, stress is a state experienced when individuals perceive that current demands exceed the personal resources they have to mobilize and utilize (Lazarus & Folkman, 1984).

A large body of research has shown that people higher in depressive symptoms both experience and respond in ways that generate higher levels of stress (Hammen, 1991; see Liu & Alloy, 2010 for a review). Hammen (1991) suggests that depression is accompanied by a sense of personal depletion that leaves people feeling they lack the capacity or ability to handle stressful situations, which creates a cycle of poorer coping within emergent situations that exacerbate stress both within the situation and across time. For example, people with elevated depressive symptoms possess negative perceptions of their ability to effectively navigate and cope with stressful situations (Caldwell, Rudolph, Troop-Gordon, & Kim, 2004; Keser, Kahya, & Akın, 2017), particularly interpersonal situations that require being responsive to others (Herzberg et al., 1998; Nezu & Ronan, 1988). These perceptions of being unable to appropriately respond and cope with interpersonal challenges create greater feelings of stress (Segrin & Abramson, 1994), which reduces the ability to respond in constructive ways (Keser et al., 2017). Moreover, this process within interpersonal challenging situations accounts for, at least in part, why depressive symptoms also predict

increases in more general stress within interpersonal relationships over time (e.g., Davila, Hammen, Burge, Paley, & Daley, 1995; Holahan, Moos, Holahan, Brennan & Schutte, 2005).

In sum, people with elevated depressive symptoms are likely to experience greater stress when their partner needs support. In addition, this greater experience of stress is likely to undermine the degree to which individuals can provide support to their partner. Providing support often requires directing attention away from one's own emotional state in order to focus on the partner's needs (Batson, 1991). However, one's own current experiences of stress will detract from sufficiently attending to the partner's needs (Collins & Ford, 2010; Collins et al., 2010). Indeed, as described above, naturally occurring daily experiences of distress undermine support, probably by reducing the emotional resources needed to respond to the partner's needs (Iida et al., 2010). Thus, the greater stress that we predict people with elevated depressive symptoms are likely to experience when their partner needs support should be associated with poorer provision of emotional support.

Current Research

Close relationships are a primary source of emotional support, but providing support can be challenging and stressful. No prior studies have examined the stress that people may experience in situations in which they need to respond to their partners' support needs or how this experience of stress shapes support provision in dyadic interactions. In the current research, we test whether people who are facing their own emotional difficulties—as indexed by greater depressive symptoms—experience greater stress when in a position to provide support to their partner, and whether greater stress in turn undermines the level of emotional support provided to the partner. We test these associations in three dyadic studies assessing levels of stress and support provision during couples' support interactions in the laboratory (Studies 1-2) and when partners' need support during couples' daily life (Study 3). As depicted by Path A in Figure 4.1, we predicted that individuals higher in depressive

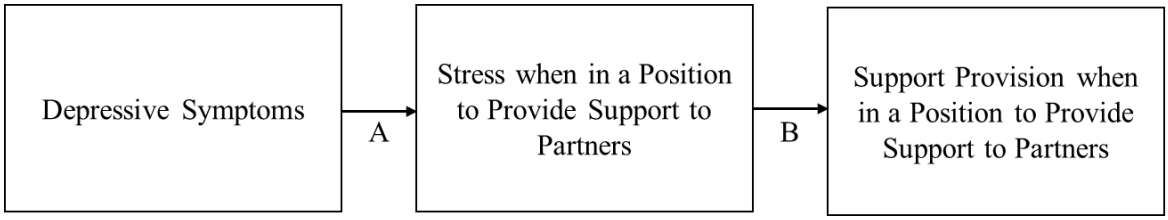

Figure 4.1. The predicted associations between depressive symptoms, stress, and support provision when in a position to provide support to intimate partners during couples' discussions of *partners'* most important personal goal (Study 1) or current stressful challenge (Study 2), and when *partners* need support during daily life (Study 3).

symptoms would experience greater stress when in a position to provide support, such as when discussing their partner's most important personal goal (Study 1) or stressful challenge (Study 2) or when their partner needs support during daily life (Study 3). As depicted by Path B in Figure 4.1, we also predicted that higher levels of stress when in a position to provide support to partners would undermine the degree to which individuals provide emotional support during couples' interactions (Studies 1-2) and daily life (Study 3). Finally, we ran additional analyses to show that associations between depressive symptoms, stress, and support provision were independent of other individual differences previously shown to affect support provision in close relationship (attachment anxiety and self-esteem) and distinct from any effects of *partners'* depressive symptoms.

Study 1

We first drew on an existing dataset to test the associations depicted in Figure 4.1 during discussions in which individuals could provide support as their partner discussed an important, ongoing personal goal. Participants attended a laboratory-based research session involving couples discussing each other's most important personal goal. Individuals reported on their feelings of stress and the emotional support they provided when discussing their *partners'* goal and thus were in a position to provide support to their partner. Partners also reported on the emotional support they received when discussing their personal goal.

Method

Participants

One-hundred heterosexual couples (total N = 200) responded to advertisements posted across a city-based university and associated organizations (e.g., recreation and health centers). The resulting 200 dyadic interactions provided ample power to test the predicted associations (see Supplemental Materials in Appendix 3 for more information on power and prior use of this sample). Participants were involved in serious (13% married, 36% cohabiting, 47% serious, 4% steady/dating), long-term (*M* = 3.28 years, *SD* = 4.16) relationships, and were a mean age of 22.64 years (*SD* = 6.51). Couples were paid NZ$80 for completing the procedures described below.

Procedure and Materials

After completing questionnaire measures assessing depressive symptoms, attachment anxiety, and self-esteem, each partner identified and ranked in order of importance three current personal goals they had been trying to achieve, which they understood they might discuss with their partner. After a short warm-up discussion, each couple engaged in two 7-minute discussions about each partner's top-ranked personal goal (order counterbalanced by gender across the sample). Immediately after each discussion, participants who were discussing their *partner's* goal and thus in a position to provide support reported their feelings of stress and the support they provided to their partner. *Partners* who were discussing their goal also reported on the support they received.

Materials

Self-report items were averaged to construct overall measures, except depressive symptoms which was summed. Table 4.1 displays descriptive statistics.

Table 4.1. *Descriptive Statistics and Correlations of All Variables in Study 1 and Study 2*

Measures	*1.*	*2.*	*3.*	*4.*	*5.*	*6.*	*Means*	*SDs*	*IR*
Study 1									
Questionnaire Measures									
1. Depressive Symptoms	-						14.57	9.32	.89
2. *Partners'* Depressive Symptoms	.01	-					14.57	9.32	.89
3. Attachment Anxiety	.33**	.07	-				3.07	1.05	.78
4. Self-Esteem	-.63**	-.02	-.36**	-			4.91	1.09	.87
Measures During Discussions of Partners' Personal Goal									
5. Stress During Partners' Goal Discussions [a]	.22**	.21**	.08	.02	-		1.63	1.08	.72
6. Own Reports of Support Provision	-.11	-.09	-.04	-.03	-.32**	-	5.81	.90	.70
7. *Partners'* Perceptions of Support Received	-.13	-.27**	-.11	-.05	-.44**	.35**	5.81	1.04	.79
Study 2									
Questionnaire Measures									
1. Depressive Symptoms	-						14.22	7.68	.90
2. *Partners'* Depressive Symptoms	.26*	-					18.15	10.66	.90
3. Attachment Anxiety	.40**	.22*	-				2.93	1.16	.81
4. Self-Esteem	-.44**	-.24*	-.45**	-			5.07	1.17	.90
Measures During Discussion of Partners' Own Stressful Issue									
5. Stress During Partners' Stressful Issue Discussions [a]	.29**	.09	.07	-.19	-		2.37	1.37	.60
6. Own Reports of Support Provision	-.37**	-.31**	-.24*	.29**	-.40**	-	5.45	1.09	.83
7. *Partners'* Perceptions of Support Received	-.10	-.22*	-.03	.12	-.39**	.50**	5.23	1.42	.89

Note. Internal reliability (IR) was measured with Cronbach's alphas except for the two-item measures marked by [a], which reflect Pearson's correlations. Scores range from 1 to 7 for all measures, except depressive symptoms which represent scores from 0-60.

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

Depressive Symptoms. The 20-item Centre for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) designed for use with nonclinical samples was used to assess depressive symptoms experienced during the past week (e.g., "I felt depressed", "I could not get "going"", "I felt hopeful about the future" [reverse-coded]; 0=*rarely or none of the time* [less than 1 day] to 3=*most or all the time* [5-7 days]).

Attachment Anxiety. Participants completed the Adult Attachment Questionnaire (Simpson, Rholes, & Phillips, 1996). Nine items assessed attachment anxiety (e.g., "I often worry that my romantic partners don't really love me" 1=*strongly disagree*, 7=*strongly agree*).

Self-Esteem. Participants completed the 10-item Rosenberg (1965) Self-Esteem Scale (e.g., "On the whole, I am satisfied with myself"; 1=*strongly disagree*, 7=*strongly agree*).

Stress during Partners' Goal Discussions. Participants who were in a position to provide support when discussing their *partners'* goal reported on how stressful (1=*not at all stressful*, 7=*extremely stressful*) and upset (1=*not at all upset*, 7=*extremely upset*) they felt during the discussion. Items were averaged to index the level of stress experienced when in a position to provide support to partners.[3]

Own Reports of Support Provision during Partners' Goal Discussions. Participants who were in a position to provide support when discussing their *partners'* goal rated 10 items according to how much they provided support to their partners. The items assessed two related forms of support that belong to a category of nurturant behavior that is most often

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[3] The terms 'stress' and 'upset' were used in Studies 1 and 2 in accordance with items in Cohen, Kamarck, and Mermelstein's (1983) *Perceived Stress Scale* (PSS). Both items were highly correlated in both studies, and were combined before the analyses were run. The results were the same when only the 'stress' item was used (see details provided in the Supplemental Materials in Appendix 3).

referred to as emotional support (Cutrona & Suhr, 1992; Overall et al., 2010; Pasch & Bradbury, 1998) and, as reviewed in the introduction, have been shown to be important in facilitating *recipients'* felt support and goal achievement (see Supplemental Materials in Appendix 3 for all items). Six items assessed listening, comforting and providing reassurance (e.g., "I reassured and comforted my partner"; α = .82) and four items assessed expressing encouragement, confidence and esteem with regard to the partners' goal strivings (e.g., "I complimented my partner's goal-related efforts and achievements"; 1 = *not at all*, 7 = *very much;* α = .88). These two measures were averaged to provide an overall index of emotional support provision.

Partners' Perceptions of Support Received. Partners who could receive support when discussing their own goal rated the same items worded to their perspective in order to assess the degree to which they perceived they received comfort and reassurance (α = .89) and goal-related encouragement and esteem (α = .91) from their partner. See Supplemental Materials in Appendix 3 for all items. These two measures were averaged to index of *partners'* perceptions of support received.

Results

Zero-order correlations support the predicted associations (see Table 4.1). Depressive symptoms were positively associated with stress during *partners'* goal discussions when individuals could provide support (Figure 4.1, Path A), and stress was negatively associated with support provision and *partners'* perceptions of support received (Figure 4.1, Path B). However, to appropriately test our predictions controlling for the dependence across couple members, we calculated these predicted associations using the dyadic regression approach and SPSS 25 syntax recommended by Kenny, Kashy, and Cook (2006), which treats individuals' scores as repeated measures within the dyad, and accounts for non-independence by modeling a *heterogeneous compound symmetry* error structure. All

predictor variables were grand-mean centered.

We tested the associations in Figure 4.1 examining both (1) individuals' own reports of support provision and (2) partners' perceptions of support received. The results are shown in the top row of Table 4.2. First, to test the links between depressive symptoms and stress when in a position to provide support (Path A, Figure 4.1), we regressed stress during *partners'* goal discussions on depressive symptoms. Greater depressive symptoms predicted greater stress. Second, to test the links between stress and support provision (Path B, Figure 4.1), we regressed support provision during partners' goal discussion on stress during partners' goal discussions (as well as depressive symptoms to control for Path A). As predicted, greater stress during partners' goal discussions was associated with lower emotional support provision. The same results occurred when running the dyadic analyses predicting partners' perceptions of support received. Greater stress during partners' goal discussion was associated with partners perceiving they received less emotional support.

We also calculated the indirect effect testing the links between depressive symptoms and emotional support provision via stress using the PRODCLIN utility (see Mackinnon, Fritz, Williams, & Lockwood, 2007), which calculates the indirect effect and provides associated confidence intervals, while accounting for the asymmetrical distributions of the product of standard errors. The direct association between depressive symptoms and emotional support was negative but non-significant (see Table 4.1). Nonetheless, the indirect effect of depressive symptoms on emotional support via stress provided evidence for the pathway in Figure 4.1 when modeling own reports of support provision (indirect effect = -.005, 95% CI [-.010, -.001]) and partners' perceptions of support received (indirect effect = -.008, 95% CI [-.015, -.001]).

Table 4.2. *The Associations between Depressive Symptoms, Stress, and Support as Reported by Support Providers (first column) and Perceived by Support Recipients (second column) during Couples' Discussions of Partners' Personal Goals (Study 1) and Partners' Stressful Issues (Study 2)*

	Own Reports of Support Provision						***Partners' Perceptions of Support Received***					
				95% CI						*95% CI*		
	B	*SE*	*t*	*Low*	*High*	*r*	*B*	*SE*	*t*	*Low*	*High*	*r*
Study 1												
Path A: Depressive Symptoms→Stress	.02	.01	2.46*	.004	.037	.19	.02	.01	2.46*	.004	.037	.19
Path B: Stress→Support	-.24	.06	-4.01***	-.353	-.120	-.28	-.37	.06	-6.04***	-.491	-.249	-.40
Study 2												
Path A: Depressive Symptoms→Stress	.29	.02	2.73**	.014	.088	.28	.29	.02	2.73**	.014	.088	.28
Path B: Stress→Support	-.33	.08	-3.22**	-.422	-.100	-.33	-.39	.11	-3.67***	-.624	-.185	-.37

Note. Path A and B refer to the associations depicted in Figure 4.1. Coefficients in the first column are the associations when modeling support *providers'* own reports of support provided. Coefficients in the second column represent the associations when modeling *partners'* perceptions of support received. Path B associations were calculated controlling for depressive symptoms. Coefficients in Study 1 are unstandardized coefficients from dyadic multilevel models examining associations within both discussions simultaneously. Coefficients in Study 2 are standardized coefficients from regression analyses examining associations within the single discussion. Effect sizes (*r*) were computed using Rosenthal and Rosnow's (2007) formula: $r = \sqrt{(t^2/t^2 + df)}$.

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

As detailed in the Supplemental Materials in Appendix 3, additional analyses demonstrated that the associations between depressive symptoms, stress, and support were independent of other person factors shown to predict poorer support provision, including attachment anxiety and self-esteem. They were also independent of partners' own depressive symptoms and did not systematically differ according to relationship length or status, or gender.

Study 2

Study 1 provided initial evidence that individuals higher in depressive symptoms experience greater stress when they are in a position to provide support to partners, and greater stress in turn undermines emotional support provided to partners as reported by both couple members. Study 2 was designed to replicate these associations within a more stressful context in which partners' support needs, and potential stress in providing support, may be amplified. Couples engaged in a dyadic interaction in the laboratory in which couples discussed one partner's most significant, ongoing personal stressor. Participants responding to their *partners'* stressful issue and were thus in a position to provide support to their partner reported on their levels of stress and degree of support provision. *Partners* discussing their stressful issue reported on the degree to which they received support during the discussion.

Method

Participants

Eighty-five heterosexual couples (total $N = 170$) were recruited from advertisements posted across a large city-based university campus and in community newspapers. This sample provided adequate power to test the predicted associations (see Supplemental Materials in Appendix 3 for further information). Couples were married (42.4%), cohabiting (36.5%), or in serious dating relationships (20%). Mean relationship length was 7.82 years

(*SD* = 10.15). Mean age was 33.05 years (*SD* = 13.55). Couples were compensated NZ$80 for completing the procedures described below.

Procedure

During a laboratory session, participants completed questionnaires as in Study 1 and then identified and ranked in order of importance three current, ongoing personal stressors. The couple member who reported the most significant and stressful ongoing issue was selected to discuss his or her source of stress with his/her partner. When both partners reported equal stress levels (53.1%), the discussed issue was randomly selected. Due to differences in reported stress, female partners' issues were the focus in 60% of the discussions. After a short warm-up discussion, each couple had a 7-minute discussion about the selected stressor. Immediately following the discussion, individuals who responded to their *partners'* stressful issue and were in a position to provide support reported on their stress and support provision during the discussion. *Partners* who discussed their stressful issue also rated the degree to which they received support during the discussion.

Materials

Self-report items were averaged to construct overall measures, except depressive symptoms in which items were summed. Table 4.1 displays descriptive statistics.

Depressive Symptoms, Attachment Anxiety, and Self-Esteem were assessed using the same scales as in Study 1.

Stress during Partners' Stressful Issue Discussions. Participants who responded to their *partners'* most stressful issue and thus were in a position to provide support rated the same items used in Study 1 to assess how much stress they felt during the discussion.

Own Reports of Support Provision during Partners' Stressful Issue Discussions. Similar to Study 1, participants who responded to *partners'* most stressful issue rated 4 items assessing their provision of comfort and reassurance (e.g., "I gave my partner reassurance or

comfort"; 1=*not at all*, 7=*very much;* α = .79) and 4 items assessing the expression of confidence and esteem with regard to the partners' stressor (e.g., "I made my partner feel like she/he had the ability to cope"; α = .87). See Supplemental Materials in Appendix 3 for all items. These two measures were averaged to index emotional support provision.

Partners' Perceptions of Support Received. Partners discussing their stressful issue and in a position to receive support also rated similar items (worded to their perspective) to assess how much they received comfort and reassurance (α = .89) and stressor-related encouragement and esteem (α = .93) from their partners. See Supplemental Materials in Appendix 3 for all items. These two measures were averaged to index *partners'* perceptions of support received.

Results

The zero-order correlations supported the predicted associations (see Table 4.1). However, to calculate the associations and indirect effects depicted in Figure 4.1, we conducted a set of multiple regressions examining both (1) individuals' own reports of support provision and (2) *partners'* perceptions of support received. The results are shown in the bottom row of Table 4.2. First, to test the links between depressive symptoms and stress when in a position to provide support (Path A, Figure 4.1), we regressed stress during *partners'* stressful issue discussions on depressive symptoms. Greater depressive symptoms predicted greater stress. Second, to test the links between stress and support provision (Path B, Figure 4.1), we regressed support provision during *partners'* stressful issue discussion on stress (as well as depressive symptoms to control for Path A). As predicted, greater stress during *partners'* stressful issue discussions was associated with lower support provision. The same results occurred when running the analyses predicting *partners'* perceptions of support received. Greater stress when discussing *partners'* stressful issue was associated with *partners* reporting they received less support (see Table 4.2).

Calculating the indirect effect as in Study 1 (Mackinnon et al., 2007) also supported the process in Figure 4.1, in which greater depressive symptoms were associated with lower support via greater stress when in a position to provide support (own reports of support provision: indirect effect = -.094, 95% CI [-.142, -.047]; *partners'* perceptions of support received: indirect effect = -.112, 95% CI [-.177, -.049]).

Finally, as in Study 1, additional analyses illustrated that the association between depressive symptoms, stress and support provision were not due to attachment anxiety or self-esteem, were independent of *partners'* depressive symptoms, and were not modified by relationship length, relationship status, or gender (see Supplemental Materials in Appendix 3 for details).

Study 3

Study 2 replicated Study 1: greater depressive symptoms predicted greater stress when in a position to provide support to partners during support-relevant interactions, and greater stress was in turn associated with poorer support provision as reported by both couple members. In Study 3, we examined whether these processes were evident during couples' daily life by asking couples to provide daily reports of their support need, personal stress and support experiences for 21 consecutive days. This methodology allowed us to examine whether the associations shown within couples' discussions in the laboratory replicate during couples' daily transactions. Moreover, by tracking the varying degree to which partners face difficulties and need support each day, daily analyses offer a test of whether individuals high in depressive symptoms experience within-person changes in stress and support provision on days partners need support versus days when partners do not need support. We predicted that, on days partners needed more support than was typical, greater depressive symptoms would be associated with increases in daily levels of stress, and that these within-person increases in daily stress would in turn be associated with lower support provision.

Method

Participants

Seventy-three heterosexual couples (total N = 146) replied to campus-wide advertisements inviting participation in a study on daily life in relationships. Participants were on average 23.61 years old (*SD* = 6.87). Couples were in relatively serious (12% married, 33% cohabitating, 46% serious, 9% steady) relationships for an average length of 3.01 years (*SD* = 3.35). Couples were compensated NZ$70 for completing a 3-week daily diary that yielded 2,786 daily records on which our analyses were based. See Supplemental Materials in Appendix 3 for further information on sample size and use.

Procedure

During an initial laboratory session, participants completed questionnaires as in Studies 1 and 2 and then received instructions regarding a daily online record they were asked to complete every day for the next 21 days. Participants provided an average of 19.82 diary entries (total number of entries = 2,786).

Materials

Self-report items were averaged to construct overall measures, except depressive symptoms which was summed. Table 4.3 displays descriptive statistics.

Depressive Symptoms, Attachment Anxiety, and Self-Esteem were assessed with the scales used in Studies 1 and 2.

Daily Partners' Support need. We assessed partners' support need from both dyad members' perspectives. First, participants were asked to rate the extent to which they perceived their partners "had a personal problem, worry or difficulty" and "wanted me to support him/her" each day (1=*strongly disagree*, 7=*strongly agree*), which were averaged to index perceptions of partners' daily support need. Second, participants also rated the extent to which they themselves "had a personal problem, worry or difficulty" and "wanted my partner

Table 4.3. *Descriptive Statistics and Correlations of All Variables in Study 3*

Measures	*1.*	*2.*	*3.*	*4.*	*5.*	*6.*	*7.*	*8.*	*9.*	*Means*	*SDs*	*IR*
Questionnaire Measures												
1. Depressive Symptoms	-									10.58	7.69	.89
2. *Partners'* Depressive Symptoms	.05**	-								10.58	7.69	.89
3. Attachment Anxiety	.29**	-.05*	-							3.04	1.12	.84
4. Self-Esteem	-.67**	.02	-.41**	-						5.44	1.08	.91
Measures During Daily Life												
5. Perceptions of Partners' Support Need [a]	.18**	.03	.14**	-.13**	-					3.00	1.69	.45
6. *Partners'* Reports of Support Need [a]	-.02	.25**	.01	.03	.28**	-				2.93	1.73	.44
7. Stress	.15**	-.01	.12**	-.15**	.29**	.10**	-			2.50	1.86	-
8. Own Reports of Support Provision	.07**	-.04*	.05*	-.04*	.49**	.18**	.004	.05*	-	4.60	1.45	.68
9. *Partners'* Perceptions of Support Received	-.08**	.04*	-.004	.10**	.16**	.31**	-.04	.06**	.36**	4.72	1.53	.62

Note. Descriptive statistics for measures during couples' daily life represent average levels across days. The correlations are between questionnaire scores and average levels of daily measures across days. Internal reliability (IR) was measured with Cronbach's alphas except for the two-item measures marked by [a], which reflect Pearson's correlations. Stress was a single-item measure and thus IR could not be calculated. Scores range from 1 to 7 for all measures, except depressive symptoms which represent scores from 0-60.

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

to support me", which were averaged to index *partners'* own reports of daily support need.

Daily Stress. One item measured individuals own daily levels of stress each day: "I had a stressful day today" (1=*strongly disagree*, 7=*strongly agree*).

Daily Support Provision. We also assessed support provision from both dyad members' perspectives. First, three items assessed the degree to which individuals provided support to their partners on a daily basis: "I supported my partner"; "I listened to and comforted my partner", and "I was affectionate and loving toward my partner" (1=*not at all*, 7=*very much*). These items were averaged to index daily levels of emotional support provision (see Table 4.3). Second, we gathered ratings of *partners'* perceptions of support by assessing the degree to which participants perceived they received support: "my partner supported me"; "my partner listened to and comforted me", and "my partner was affectionate and loving toward me" (1=*not at all*, 7=*very much*). These items were averaged to index *partners'* perceptions of support received.

Results

We tested the associations depicted in Figure 4.1 in two sets of nested analyses. First, we tested whether greater depressive symptoms were associated with individuals feeling greater increases in daily stress on days *partners'* daily support need was higher than typical, but not when *partners'* daily support need was lower than typical. Second, we tested whether greater within-person increases in daily stress when *partners'* daily support need was higher than typical were associated with lower daily levels of support provision. Consistent with Studies 1 and 2, we also tested these daily processes by examining both: (1) individuals' and (2) *partners'* reports of support need and support provided.

Daily Perceptions of Partners' Support Need and Reports of Support Provision

Our first test of the links in Figure 4.1 used individuals' reports of their own daily stress and support provided to the partner on days individuals perceived their partner had high

support need. Daily diary data has a nested structure, with multiple daily reports (level 1) nested and crossed within each dyad (level 2). Thus, we tested our predictions following the recommendations for analyzing repeated measures dyadic data by Kenny et al. (2006) using the MIXED procedure in SPSS 25. We first examined the associations between depressive symptoms and stress according to whether partners were perceived to need support (Path A, Figure 4.1). To do this, we regressed daily levels of own stress on (a) daily perceptions of partners' support need (person-mean centered), (b) depressive symptoms (grand-mean centered) and (c) the interaction between depressive symptoms (grand-mean centered) and daily perceptions of partners' support need (person-mean centered). Because we wanted to isolate the within-person processes from average between-person effects, we also modeled (d) between-person averages of perceptions of partners' support need (grand-mean centered) and (e) the associated interaction with depressive symptoms (see Bolger & Laurenceau, 2013). Thus, the coefficients testing the within-person effects test whether individuals high in depressive symptoms experience greater stress when they perceive their partner needs more support relative to their partner's average levels of support need across the diary period.

Table 4.4 displays the results. The significant within-person effects reveal that greater daily perceptions of partners' support need were associated with greater daily stress, and this within-person association was moderated by depressive symptoms (the predicted interaction in boldface). To decompose the interaction, we calculated the effect of depressive symptoms according to days in which partners were perceived to need high levels of support (+1 SD) and compared that to days in which partners were perceived to need low levels of support (-1 SD). Given the results of these analyses test Path A of the model shown in Figure 4.1, we present these simple effects in the context of the overall model in Figure 4.2. The top pathway presents the predicted associations between depressive symptoms, increases in stress, and decreases in support provision when individuals are in a position to respond to

Table 4.4. *Path A: Depressive Symptoms and Daily Partners' Support Need on Daily Stress (Study 3)*

			95% CI		
	B	*t*	*Low*	*High*	*r*
Perceptions of Partners' Support Need					
Depressive Symptoms	.01	.90	-.01	.03	.08
Within-person effects					
Perceptions of Partners' Support Need	.22	9.46***	.18	.27	.18
Depressive Symptoms x Perceptions of Partners' Support Need	**.01**	**3.28*** **	**.004**	**.016**	**.29**
Between-person effects					
Perceptions of Partners' Support Need	.43	5.85***	.28	.57	.45
Depressive Symptoms x Perceptions of Partners' Support Need	.01	1.32	-.01	.04	.12
Partners' Reports of Support Need					
Depressive Symptoms	.03	2.75**	.01	.06	.23
Within-person effects					
Partners' Reports of Support Need	-.01	-.54	-.06	.03	-.01
Depressive Symptoms x *Partners'* Reports of Support Need	**.01**	**3.65*** **	**.01**	**.02**	**.30**
Between-person effects					
Partners' Reports of Support Need	.12	1.51	-.04	.28	.13
Depressive Symptoms x *Partners'* Reports of Support Need	.001	.14	-.02	.02	.01

Note. The interactions testing Path A are presented in bold. Effect sizes (*r*) were computed using Rosenthal and Rosnow's (2007) formula: $r = \sqrt{(t^2 / t^2 + df)}$. Between-person degrees of freedom varied from 115.96 to 136.50. Within-person degrees of freedom varied from 2195.20 to 2606.18. All effect sizes related to depressive symptoms were calculated using the between-person degrees of freedom. CI = confidence interval. $^{**}p < .01$. $^{***}p < .001$.

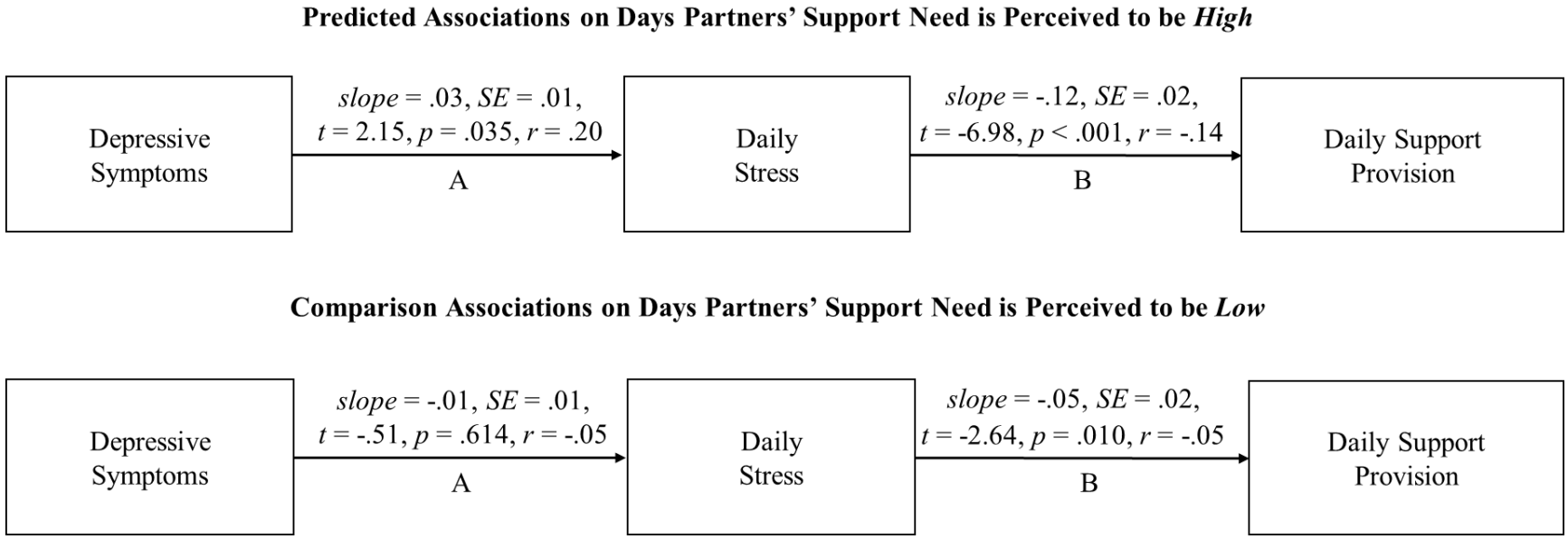


Figure 4.2. The associations between depressive symptoms, daily levels of stress, and daily levels of support provision on days perceptions of partners' support need were high versus low.

Note. These associations are decomposed from the significant interactions displayed in Table 4.4 (top half) and Table 4.5 (top half). The top pathway presents the predicted associations between depressive symptoms, within-person increases in stress, and within-person decreases in support provision when individuals are in a position to respond to their partners' support need. Effect sizes (r) were computed using Rosenthal and Rosnow's (2007) formula: $r = \sqrt{(t^2/t^2 + df)}$. Path A effect sizes were calculated using the between-person degrees of freedom. Path B effect sizes were calculated using the within-person degrees of freedom.

Table 4.5. *Path B: Daily Stress and Daily Partners' Support Need on Daily Support Provision (Study 3)*

			95% CI		
	B	*t*	*Low*	*High*	*r*
Perceptions of Partners' Support Need					
Depressive Symptoms	-.01	-1.29	-.03	.01	-.12
Within-person effects					
Perceptions of Partners' Support Need	.30	20.12***	.27	.33	.37
Depressive Symptoms x Perceptions of Partners' Support Need	.001	.36	-.003	.004	.04
Stress	-.09	-7.18***	-.11	-.06	-.14
Stress × Perceptions of Partners' Support Need	**-.02**	**-2.56****	**-.04**	**-.01**	**-.05**
Between-person effects					
Perceptions of Partners' Support Need	.73	10.81***	.60	.86	.70
Depressive Symptom x Perceptions of Partners' Support Need	.01	1.50	-.004	.035	.15
Stress	-.12	-1.63	-.27	.03	-.15
Stress × Perceptions of Partners' Support Need	-.13	-2.26*	-.25	-.02	-.19
Partners' Reports of Support Need					
Depressive Symptoms	.005	.38	-.02	.03	.04
Within-person effects					
Partners' Reports of Support Need	.16	9.87***	.13	.20	.20
Depressive Symptoms x *Partners'* Reports of Support Need	-.002	-.88	-.007	.003	-.08
Stress	-.01	-.59	-.04	.02	-.01
Stress × *Partners'* Reports of Support Need	**-.03**	**-2.47****	**-.05**	**-.01**	**-.05**
Between-person effects					
Partners' Reports of Support Need	.48	6.58***	.33	.62	.50
Depressive Symptoms x *Partners'* Reports of Support Need	-.01	-.90	-.03	.01	-.08
Stress	-.10	-1.28	-.26	.06	-.11
Stress × *Partners'* Reports of Support Need	.02	.23	-.13	.17	.02

Note. The interactions testing Path B are presented in bold. Effect sizes (*r*) were computed using Rosenthal and Rosnow's (2007) formula: $r = \sqrt{(t^2 / t^2 + df)}$. Between-person degrees of freedom varied from 94.83 to 132.78. Within-person degrees of freedom varied from 2315.93 to 2621.32. All effect sizes related to depressive symptoms were calculated using the between-person degrees of freedom. CI = confidence interval. *$p < .05$. **$p < .01$. ***$p < .001$.

their partners' support need. As shown in Path A, greater depressive symptoms predicted greater increases in stress on days that partners' support need was perceived to be higher than is typical. Demonstrating that this elevated stress specifically occurs when partners need support, depressive symptoms was not associated with greater stress on days partners' support need was perceived to be low (see bottom pathway of Figure 4.2, Path A).

We next tested the flow-on associations between stress and support provision on days partners needed support (Path B, Figure 4.1). Using the same analytic approach for modeling repeated measures dyadic data (Kenny et al., 2006), we regressed daily levels of support provision on (a) daily levels of stress (person-mean centered), (b) daily perceptions of partners' support need (person-mean centered), and (c) the interaction between daily levels of stress (person-mean centered) and daily perceptions of partners' support need (person-mean centered). As before, we isolated the within-person processes from average between-person effects by modeling (d) between-person averages of stress (grand-mean centered), (e) between-person averages of perceptions of partners' support need (grand-mean centered), and (f) the interaction between between-person averages of stress and between-person averages of perceptions of partners' support need. Finally, we also controlled for Path A by modeling all of the within-person and between-person effects in the first analyses (as shown in Table 4.4).

Table 4.5 presents all of the effects from these analyses. The predicted interaction between daily stress and daily perceptions of partners' support need was significant (see interaction in boldface). As in tests of Path A, we decompose the interaction by calculating the effect of daily stress on support provision according to days in which partners were perceived to need high levels of support (+1 SD) and compared that to days in which partners were perceived to need low levels of support (-1 SD). These simple effects testing Path B are presented in the second pathway in Figure 4.2 (right side). Greater daily levels of stress were associated with lower daily support provision, but this negative association was stronger on

days partners were perceived to have high (+1 SD; top pathway) versus low (-1 SD; bottom pathway) support need.

Tests of the indirect effects of the moderated mediation shown in Figure 4.2 supported that depressive symptoms were associated with poorer support provision on days partners were perceived to need support via greater stress. In particular, the indirect effect linking depressive symptoms, daily stress, and daily support provision was significant on days in which perceptions of partners' support need were *high* (top pathway in Figure 4.2, indirect effect = -.004, 95% CI [-.006, -.001]) but not when partners' support need was perceived to be *low* (bottom pathway in Figure 4.2, indirect effect = .0001, 95% CI [-.0005, .0018]). These results provide evidence that the greater stress experienced by individuals higher in depressive symptoms on days partners' support need was perceived to be high is in turn associated with reductions in support provision on those days partners really need it.

Daily *Partners'* Reports of Support Need and Support Received

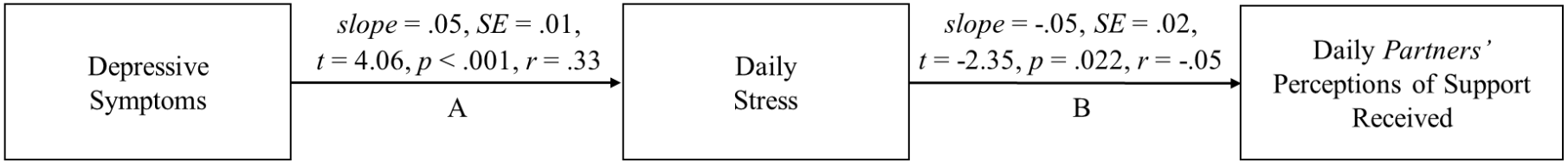
Our second test of the links in Figure 4.1 examined *partners'* reports of daily support need and *partners'* daily perceptions of support received. We first examined the associations between depressive symptoms and stress according to whether *partners* reported needing support (Path A, Figure 4.1). Using the same analytic approach for modeling repeated measures dyadic data (Kenny et al., 2006), we regressed daily levels of individuals' own stress on (a) daily *partners'* reports of support need (person-mean centered), (b) individuals' depressive symptoms (grand-mean centered), and (c) the interaction between depressive symptoms (grand-mean centered) and daily *partners'* reports of support need (person-mean centered). As before, we isolated the within-person processes from average between-person effects by modeling (d) between-person averages of *partners'* reported support need (grand-mean centered) and (e) the associated interaction with individuals' depressive symptoms.

As shown in the bottom section of Table 4.4, the predicted interaction between individuals' depressive symptoms and *partners'* reports of support need was significant (see interaction in boldface). As shown in Figure 4.3 (see left side), decomposing the interaction according to days in which *partners'* reported support need was high (+1 SD; top pathway) versus days in which *partners'* reported support need was low (-1 SD; bottom pathway) revealed that greater depressive symptoms predicted greater daily levels of stress on days *partners* reported high support need, but not on days *partners* reported low support need.

We next tested the links between stress and *partners'* perceptions of support received on days *partners* needed support (Path B, Figure 4.1) by regressing daily levels of *partners'* perceptions of support received on (a) daily levels of stress (person-mean centered), (b) daily *partners'* reports of support need (person-mean centered), and (c) the interaction between daily levels of stress (person-mean centered) and daily *partners'* reports of support need (person-mean centered). We also modeled between-person averages of (d) stress and (e) *partners'* reported support need (both grand-mean centered), and (f) the interaction between between-person averages of stress and *partners'* reported support need. Finally, we controlled for Path A by modeling all of the within-person and between-person effects in the first analyses (shown in Table 4.4).

The results are shown in the bottom section of Table 4.5. The predicted interaction between daily stress and daily *partners'* reports of support need was significant (see interaction in boldface). As shown in Figure 4.3 (see right side), decomposing the interaction revealed that greater daily levels of stress were associated with lower *partners'* perceptions of support received, but only on days *partners'* reports of support need was high (+1 SD; top pathway) and not on days *partners'* reports of support need was low (-1 SD; bottom pathway).

Predicted Associations on Days Partners' Report their Support Need to be *High*



Comparison Associations on Days Partners' Report their Support Need to be *Low*

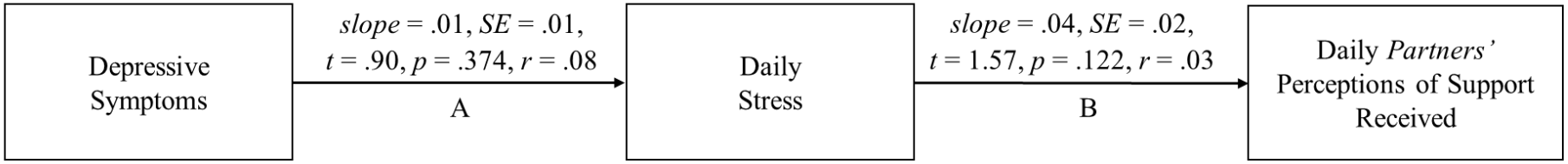


Figure 4.3. The associations between depressive symptoms, daily levels of stress, and daily levels of *partners'* perceptions of support received on days *partners'* reports of support need were high versus low.

Note. These associations are decomposed from the significant interactions displayed in Table 4.4 (bottom half) and Table 4.5 (bottom half). The top pathway presents the predicted associations between depressive symptoms, within-person increases in stress, and within-person decreases in support provision when individuals are in a position to respond to their *partners'* support need. Effect sizes (*r*) were computed using Rosenthal and Rosnow's (2007) formula: $r = \sqrt{(t^2/t^2 + df)}$. Path A effect sizes were calculated using the between-person degrees of freedom. Path B effect sizes were calculated using the within-person degrees of freedom.

Tests of the indirect effects of the moderated mediation shown in Figure 4.3 also supported the predicted associations. The indirect effect linking depressive symptoms, daily stress, and daily *partners'* perceptions of support received was significant on days in which *partners'* reported support need was high (top pathway in Figure 4.3, indirect effect = -.003, 95% CI [-.005, -.001]) but not on days *partners'* reports of support need were low (bottom pathway in Figure 4.3, indirect effect = .0001, 95% CI [-.0004, .0016]). These results provide evidence that the greater stress experienced by individuals higher in depressive symptoms on days *partners* need support undermine the provision of support as experienced by *partners*.

As in Studies 1 and 2, additional analyses demonstrated that the associations shown in Tables 4 and 5, and in Figures 2 and 3, remained when controlling for attachment anxiety, self-esteem, and *partners'* depressive symptoms. The associations also did not systematically differ across gender, relationship status or length (see Supplemental Materials in Appendix 3).

General Discussion

Greater emotional support enhances recipients' health and wellbeing, whereas poorer support impedes people's ability to cope, achieve their goals and thrive (Cutrona, 1996; Feeney & Collins, 2015; Uchino et al., 1996). This crucial function of support is why prior research has focused most heavily on how and in what way support provision helps recipients. However, much less research has been devoted to understanding the characteristics of individuals that restrict the support they provide to close others. The results of the current studies highlight the importance of examining person factors (e.g., elevated depressive symptoms) and associated situational experiences (e.g., stress) that help explain when and why individuals provide lower support to partners in times of need.

Across three dyadic studies, individuals with elevated depressive symptoms experienced greater stress when they were in a position to provide support to their partner,

including when discussing their partner's personal goal or stressful issue (Studies 1-2) or when their partner needed support during daily life (Study 3). Greater stress when partners needed support was, in turn, associated with providing lower emotional support as reported by both partners (Studies 1-3). This consistent pattern across studies and methods indicate that elevated depressive symptoms may lead to experiencing important relational situations as stressful, thereby reducing emotional responsiveness toward partners when they need it the most. The results advance understanding regarding when and why support providers' own personal difficulties undermine support provision, and have important implications for understanding the predictors and consequences of experiencing stress during relationship interactions and the ways that depressive symptoms affect relationship functioning.

Depressive Symptoms, Stress, and Poorer Support Provision

Extending prior research examining depressive symptoms and partner support, the current studies uniquely provide the first repeated examination and replication of the links between depressive symptoms and lower emotional support provision both during couples' support-relevant interactions and when partners need support during daily life. The current studies also extend prior research by identifying an important support-impeding factor associated with elevated depressive symptoms that helps to explain why individuals with depressive symptoms may provide lower support: greater feelings of stress when in a position to provide support to intimate partners. The overall pattern of results is consistent with prominent theoretical models proposing that depressive symptoms cause interpersonal difficulties because depressive symptoms produces stress in interpersonal situations (Hammen, 1991; see Liu & Alloy, 2010 for a review). Moreover, the results provide a direct and novel demonstration of these proposed links within specific relationship interactions that have established outcomes for the health and wellbeing of intimate partners.

The results across studies linking depressive symptoms, stress, and support provision also complement and extend prior research showing that stress undermines constructive relationship behavior. For example, induced stress reduces positive responses towards partners (e.g., listening, expressing interest, empathy; Bodenmann, 1997), and greater daily or work-related stress predicts more destructive responses (e.g., anger, criticism, withdrawal; Buck & Neff, 2012; Schulz, Cowan, Cowan, & Brennan, 2004). The results of the current studies add to the stress-spillover literature by identifying another important relational context in which greater state levels of personal stress undermine significant relational behaviors. The results also extend the wider support literature by identifying, across three dyadic studies examining varying support contexts, that state stress is likely an important determinant of emotional support. Taken together with the theoretical and empirical work across the depression, stress, and support literatures, the findings suggest that people need to have, and be able to use, their own emotional resources to cope with the demands of providing emotional support to partners.

The reduced support arising from elevated depressive symptoms and associated experiences of stress will have important relational consequences. Receiving lower emotional support is associated with lower relationship satisfaction (e.g., Gleason, Iida, Shrout, & Bolger, 2008; Overall et al., 2010), which may be one reason why *partners* of individuals with elevated depressive symptoms tend to experience poorer relationship wellbeing (e.g., Kouros & Mark Cummings, 2011; Whisman & Uebelacker, 2009). A lack of emotional support also undermines goal achievement and effective coping in the face of stressors (e.g., Overall et al., 2010; Seeman, 2001; Spiegel & Kimerling, 2001). Thus, the lower emotional support evident in the current studies may reduce the degree to which *partners* of individuals with elevated depressive symptoms can thrive (see Feeney & Collins, 2015), especially given that the current results illustrate that partners themselves perceive that they are receiving

lower emotional support. Indeed, prior research indicates that perceptions of support received tends to be a stronger predictor of recipient outcomes than the actual receipt of support (Cohen & Wills, 1985; Rafaeli & Gleason, 2009). Thus, the lower support reported by individuals and perceived by partners arising from greater depressive symptoms and feelings of stress risk the relationship and personal wellbeing of partners.

The pattern of results also has implications for understanding other interpersonal outcomes associated with depressive symptoms. Prior research suggests that greater depressive symptoms are associated with more negative conflict behaviors, such as verbal aggression, hostile communication, and withdrawal (e.g., Marchand & Hock, 2000). Just as when partners require support, a key reason for these destructive behaviors may be that the need to use and apply emotional resources to navigate conflict increases experiences of stress, which undermines responsiveness and constructive methods of conflict resolution. Moreover, given that couples have to routinely respond to each other's needs across relationship interactions, it is possible that depressive symptoms will be linked to greater state stress across a range of relational contexts, which may culminate into greater chronic stress and damage to the relationship (Hammen, 1991; Liu & Alloy, 2010). Identifying ways to buffer the degree to which important relationship interactions are stressful for people with elevated depressive symptoms is an important avenue for future investigations.

The current findings offer important information regarding how couples may approach support (and other relational) situations in ways that prevent depressive symptoms and associated feelings of stress harming relationships. Given that stress arises when perceived demands outweigh the personal resources available to deal with current challenges (Lazarus & Folkman, 1984), interventions should target bolstering the degree to which individuals feel they have and can use the personal resources needed. Helping partners understand the stress experienced by individuals with depressive symptoms may also enable

partners to seek support in ways that reduce the stressful nature of the interaction and reduce negative evaluations of individuals' difficulties in providing support. In recognizing the difficulties of support, couples may also be well served to draw on their wider support network (family, close friends), which may reduce the stress of responding to partners needs and thereby provide a context in which individuals may be able to be more supportive. Considering the way these dyadic and contextual factors may create less stressful support interactions, and promote better support, are important aims for future research.

Strengths, Caveats, and Future Directions

Although the correlational nature of our data limits causal conclusions, examining responses within couples' specific support discussions and daily interactions can directly examine how depressive symptoms and feelings of stress may affect support exchanges as they occur naturally. Moreover, our dyadic design gathering assessments of support from both partners provides good evidence that the resulting lower support is a reality for both couple members. Indeed, perceptions of support received has the strongest effects on support recipients' health and wellbeing, highlighting that the lower support reported and perceived across the current studies will have important consequences. Isolating the within-person associations in Study 3 also provided evidence that greater depressive symptoms predicted greater stress specifically when partners needed support, rather than more general levels of stress across the dairy period. Finally, although correlational data leave open the possibility that the associations could arise due to third variables, additional analyses ruled out the most plausible alternative individual differences established in the literature, including individuals' attachment anxiety and self-esteem as well as *partners'* depressive symptoms.

Although the results support that feelings of stress likely play an important role in why individuals with elevated depressive symptoms provide lower emotional support to partners, we did not examine the specific factors associated with depressive symptoms that

contribute to feelings of stress. Our predictions and model were founded on two lines of existing theoretical and empirical work supporting the links between (a) depressive symptoms and stress, and (b) depressive symptoms and support provision. This theoretical and empirical work suggest that a central reason why individuals with elevated depressive symptoms experience greater stress when in a position to provide support may be that they lack the emotional energy and resources necessary to respond to their partner's support needs because they are overwhelmed and overburdened by their own personal emotional difficulties. Thus, the demands of providing emotional support may outweigh the personal emotional resources that individuals with greater depressive symptoms can mobilize because those resources have already been used to deal with their own emotional difficulties. However, prior research has not yet identified the specific emotional resources people need to provide emotional support (e.g., being other- rather than self-focused, self- and emotion-regulation, empathy) or whether individuals with elevated depressive symptoms lack these resources. These are important goals for future research.

Finally, our sample primarily consisted of relatively satisfied long-term couples with relatively low levels of depressive symptoms. Indeed, we focused on typical variations in depressive symptoms rather than diagnoses of depressive disorders or major depression. The CES-D used in the current studies is not a diagnostic tool, but scores ≥ 16 are considered evidence of clinically meaningful depressive symptoms. Around a third of participants across studies scored 16 or over (38.50%, 37.65% and 22.60% in Studies 1, 2 and 3 respectively). Thus, we think the results across studies highlight the relevance of mild-to-moderate depressive symptoms increasing stress when partners need support and, in turn, reductions in support provision. Samples with greater levels of depressive symptoms may reveal even stronger effects. Moreover, given that the prevalence of depressive symptoms has been increasing (Twenge, 2015), the results provide important insight into how mild-to-moderate

depressive symptoms can undermine relationship processes in ways that might reinforce depressive symptoms of both partners (Joiner & Katz, 1999).

Conclusions

The current studies highlight that providing emotional support when partners need it can be stressful, especially when individuals are overburdened with their own emotional difficulties and thus may lack the emotional resources and capacity needed to provide support to intimate partners. Across three studies, individuals with elevated depressive symptoms experienced greater feelings of stress when in a position to provide support to their intimate partner, and greater stress in turn was associated with providing lower emotional support as reported by both dyad members. This pattern of results highlights the importance of possessing the emotional resources required to handle the demands of providing emotional support to close others. The results also help shed light on why partners of individuals with depressive symptoms can suffer from poorer relational and personal wellbeing.

CHAPTER CONCLUSION

Across three dyadic studies, individuals with elevated depressive symptoms experienced greater stress when they were in a position to provide support to their partner, including when discussing their partner's personal goal or stressful issue or when their partner needed support during daily life. Greater stress when partners needed support was, in turn, associated with providing lower emotional support as reported by both partners. Moreover, gathering assessments of support from both partners in all three studies provided good evidence that the resulting lower support is a reality for both couple members. This consistent pattern across studies and methods indicate that elevated depressive symptoms may lead to experiencing important relational situations as stressful, thereby reducing emotional responsiveness toward partners when they need it the most.

Extending prior research examining depressive symptoms and partner support, the current findings provide the first repeated examination and replication of the links between depressive symptoms and lower emotional support both during couples' support-relevant interactions and when partners need support during daily life. Isolating the within-person associations also provided good evidence that greater depressive symptoms predicted greater stress specifically when partners needed support, rather than more general levels of stress that might arise for individuals with elevated depressive symptoms. More importantly, the current studies also extend prior research by identifying an important support-impeding factor associated with elevated depressive symptoms that helps to explain *why* individuals with depressive symptoms may provide lower support: greater feelings of stress when in a position to provide support to intimate partners. Furthermore, the results also demonstrated that the detrimental effect of stress when in a position to provide support to partners was specific to elevated depressive symptoms rather than high attachment anxiety or low self-esteem.

The results across studies linking depressive symptoms, stress, and support provision also complement and extend prior research showing that stress undermines constructive relationship behaviour. In particular, the results of the current studies add to the stress-spillover literature by identifying another important relational context in which greater state levels of personal stress undermine important relational behaviours. The results also extend the wider support literature by identifying, across three dyadic studies examining varying support contexts, that state stress is likely an important determinant of emotional support. Taken together with the theoretical and empirical work across the depression, stress, and support literatures, the findings suggest that people need to have, and be able to use, their own emotional resources to cope with the demands of providing emotional support to partners.

CHAPTER FIVE: GENERAL DISCUSSION

Providing support to intimate partners is a critical function of intimate relationships, but providing responsive, high-quality support is not always easy, particularly if people are needing to manage their own needs and difficulties (Coyne & DeLongis, 1986; Coyne et al., 1990). Yet, prior to the studies presented in this thesis, very little was known about the characteristics of support providers that restrict (or enhance) specific types of support in relationships, or the underlying factors that account for why these characteristics undermine support provision to intimate partners. The current thesis advances understanding of these important processes by expanding the support literature in three primary ways: (1) examining whether attachment anxiety, self-esteem, and depressive symptoms are associated with key disposition-related factors within important support provision contexts, (2) assessing the degree to which these disposition-related factors shape specific support behaviours enacted during couples' support discussions, and (3) assessing whether such support behaviours are associated with important outcomes for support recipients during couples' support-relevant interactions and across time (see Table 5.1).

In this final chapter, I briefly summarize the findings of the studies presented in each chapter (summarized in Table 5.1) and draw conclusions about how each investigation provides new insight that advances understanding of *how*, *when*, and *why* higher attachment anxiety, lower self-esteem, and greater depressive symptoms undermine support provision within intimate relationships. I also discuss how these studies advance the support literature and outline how future research could extend the foundation presented here by exploring how higher attachment anxiety, lower self-esteem, and greater depressive symptoms will uniquely affect constructive relationship behaviours in other important relational contexts, such as during relationship conflict. I also highlight the strengths, and consider the limitations and caveats, of the studies to provide a foundation for future research. Finally, I discuss how to

Table 5.1 *Summary of Thesis Chapters Demonstrating the Key Disposition-Related Factors Underlying the Links between Attachment Anxiety, Self-Esteem, and Depressive Symptoms and Poorer Support Provision, the Support-Related Contexts in which these Effects Occur, and the Associated Outcomes for Support Recipients*

Thesis Chapter	**Disposition**	**Key Underlying Factor in Support Provision Context**	**Support Behaviour**	**Support-Related Context**	**Outcomes for Support Recipients**
Chapter Two	*High* Attachment Anxiety	*Low* Relational Value (Feeling Less Appreciated and Valued)	*Greater* Negative Support Behaviour	Partner is Highly Distressed when Discussing Important Personal Goals	*Lower* Relationship Quality
Chapter Three	*Low* Self-Esteem	*Low* Support-Related Efficacy	*Lower* Esteem Support Provision	Partner is Discussing Important Personal Goals or Significant Stressors	*Lower* Efficacy and Self-Esteem
Chapter Four	*Elevated* Depressive Symptoms	*High* Stress	*Lower* Emotional Support Provision	Partner is Discussing Important Personal Goals or Significant Stressors Partner Needs Greater Support in Daily Life	*Lower* Goal Achievement *Poorer* Coping with Stressors *Lower* Relationship Satisfaction

Note. Outcomes for support recipients were only examined in Chapter Two and Chapter Three.

target and mitigate the support-impeding effects of higher attachment anxiety, lower self-esteem, and greater depressive symptoms.

Summary of Results

Attachment Anxiety and Poor Support Provision (Chapter Two)

Attachment anxiety has been shown in prior research to be associated with less positive and more negative support behaviours within close relationships (e.g., Collins & Feeney, 2000; Feeney, 1996; Feeney & Collins, 2001; Feeney & Hohaus, 2001; Feeney et al., 2013; Kunce & Shaver, 1994). However, there has been scant examination of the specific disposition-related factors within support provision contexts that help explain *why* greater attachment anxiety is associated with poorer support behaviours within intimate relationships. Further, no research to date has examined the important contextual factors that might activate these underlying factors and thus identify when the poorer support associated with greater attachment anxiety should emerge. As outline in Table 5.1, Chapter Two extended prior research by (a) identifying how support interactions are relevant to the concerns about relational value, or feeling appreciated and valued, that are central to attachment anxiety, (b) outlining why these concerns should produce more negative behaviour during support-relevant interactions with intimate partners, such as when discussing partners' important personal goals, (c) examining one common factor–*partner* distress–that might activate more anxious individuals' concerns of relational value and thus negative behaviour when in a position to provide support to partners, and (d) showing how these support processes have important repercussions for *partners'* relationship quality across time.

The two dyadic behavioural observation studies in Chapter Two demonstrated that when *partners* (i.e., support *recipients*) experienced greater distress during couples' support-relevant discussions, more anxious individuals (i.e., support *providers*) felt less valued and appreciated by their partner. This first important finding demonstrated that highly anxious

individuals' concerns of relational value are activated and heightened when partners are highly distressed. Further advancing and extending prior literature, the results also illustrated that more anxious support providers exhibited more observer-rated negative support behaviour, such as derogating the partner, expressing disagreement or disapproval, blaming the partner for their situation or any lack of goal success, *when* they felt less valued and appreciated by their partner, but demonstrated the same low levels of negative behaviour as less anxious support providers when their felt relational value was high. Thus, extending prior research examining main effects between attachment anxiety and poor support provision, the studies in Chapter Two provide the first demonstration that individuals with high attachment anxiety are poorer support providers when they feel unvalued and unappreciated by their partners. Finally, consistent with prior research, greater negative support behaviour was associated with declines in support *recipients'* relationship quality over time, suggesting that the negative support behaviour arising from highly anxious individuals' concerns of their value to their partners has important long-term repercussions for relationships.

The examination of attachment anxiety, relational value, and negative support behaviours during couples' support-relevant exchanges provides a novel contribution to the current literature on support in three ways. First, the results demonstrate the importance of taking a contextual perspective to understanding *when* disposition-related difficulties and needs related to attachment anxiety interfere with the provision of support. Specifically, highly anxious individuals' preoccupation with being valued in relationships (Bowlby, 1982; Mikulincer & Shaver, 2003) will not always undermine anxious individuals' ability to provide support to their partners. Rather, as uniquely demonstrated by the current studies, highly anxious individuals relational value concerns arose *when* their partners were highly distressed. Second and importantly, my research uniquely demonstrates the critical role that

threats to relational value plays in activating destructive and damaging relationship behaviour within support contexts. In particular, these studies extend the wider support literature by revealing that feeling unvalued and unappreciated during support-relevant interactions is one important determinant of unsupportive and damaging support behaviours, particularly for those higher in attachment anxiety. Finally, the longitudinal methods in the studies presented in Chapter Two illustrate that these support processes have an important impact on relationship wellbeing across time. Demonstrating that negative support behaviour by support *providers* was associated with declines in support *recipients'* relationship quality across time suggest that the support processes identified in the current studies are likely an important way in which attachment anxiety undermines relationship health and stability.

Self-Esteem and Poor Support Provision (Chapter Three)

Prior studies have shown that individuals lower in self-esteem provide lower support to close others (e.g., Feeney & Collins 2003; Gurung et al., 1997), but have not examined the disposition-related factors closely related to self-esteem that account for *why* individuals lower in self-esteem might provide lower support to intimate partners in times of need. Thus, extending prior research, Chapter Three examined whether feelings of efficacy during couples' support-relevant interactions helps to explain *why* individuals lower (versus higher) in self-esteem might provide lower (versus greater) support to partners in times of needs (see Table 5.1). Moreover, identifying the specific disposition-related factor relevant to self-esteem that should shape support behaviour within relevant interactions with intimate partners, I was also able to identify the distinct type of support that should be uniquely associated with self-esteem and self-efficacy – esteem support that focuses specifically on building efficacy and esteem in others (see Table 5.1). Further, narrowing in on these important disposition-related feelings and support behaviours also involved identifying the distinct outcomes for support recipients that should emerge from low self-esteem and efficacy

in support providers and subsequent lower esteem support. In particular, I examined whether the lower (versus greater) esteem support that would arise from lower (versus greater) self-esteem and thus efficacy would flow-on to undermine (versus facilitate) *partners'* self-efficacy and self-esteem.

Chapter Three provided initial evidence that self-esteem was significantly associated with esteem support exhibited during couples' support interactions, and not associated with other forms of support (emotional, informational, or tangible). Advancing prior research, this novel finding demonstrated that self-esteem uniquely predicts the provision of esteem support within intimate relationships, which is closely related to the disposition-related factors that should specifically be of concern within support interactions. In particular, Chapter Three demonstrated that support *providers* lower (versus higher) in self-esteem experienced lower (versus greater) efficacy when in a position to support their partners, which in turn predicted lower (versus greater) provision of esteem support during couples' support-relevant discussions (see Table 5.1). These important findings not only suggest that individuals' efficacy during support-relevant discussions is a key factor in accounting for the support-impeding effects of low self-esteem, they also highlight what the principal outcome of the support processes associated with lower (versus greater) self-esteem will be: decreases (versus increases) in support *recipients'* efficacy and self-esteem.

In addition to identifying the specific disposition-related factors and associated forms of support arising from providers' self-esteem, the findings in Chapter Three offers important broader contributions to understanding how self-evaluations emerge and change through important relationship interactions. First, the novel results provided a unique illustration that greater versus lower self-esteem is associated with dyadic support processes that will likely build versus undermine self-efficacy and self-esteem in others. Specifically, the results demonstrate how self-evaluations of one partner can spill over and enhance or

hinder corresponding self-evaluations of the other partner via dyadic support processes. Second, my research advances understanding of the important role efficacy plays in determining the ability to provide, and the resulting impact of, support. In particular, the findings extend existing literature by showing that central self-relevant judgments (such as self-esteem and efficacy) are associated with a form of support that should be particularly useful in building positive self-evaluations in others—esteem support. Finally, the longitudinal analyses presented in Chapter Three illustrated that the links between self-esteem, efficacy, and esteem support have important consequences for *partners'* (i.e., support *recipients'*) self-evaluations both cross-sectionally and across time.

Depressive Symptoms and Poor Support Provision (Chapter Four)

Prior studies have indicated that depressive symptoms are associated with providing lower support to intimate partner in times of need (Feeney & Collins, 2003; Gurung et al., 1997; Pasch et al., 1997), but have not examined the state-based emotional experiences that could help explain *why* depressive symptoms are associated with poorer support provision. Integrating prior research and theory on support processes and the interpersonal stress that depressive symptoms might generate, the three studies in Chapter Four examined whether people with elevated depressive symptoms experience greater stress when their partners' needed support, which in turn interfered with emotional support provision (see Table 5.1).

The results across three studies using different but complementary methods supported this proposed process. As predicted, individuals with elevated depressive symptoms experienced greater stress when they were in a position to provide support to their partner, including when discussing their partner's personal goal or stressful issue or when their partner needed support during daily life (see Table 5.1). Across the three studies, greater stress when *partners* needed support was, in turn, associated with providing lower emotional support as reported by both partners (see Table 5.1). This consistent pattern across studies

and methods indicate that elevated depressive symptoms may lead to experiencing important relational situations as stressful, thereby reducing emotional responsiveness toward partners when they need it the most. Although I did not specifically examine the outcomes of emotional support in these studies, the reduced emotional support arising from elevated depressive symptoms and associated experiences of stress will have important relational consequences, such as poorer goal achievement, ineffective coping in the face of stressors, and lower relationship satisfaction (see final column of Table 5.1; also see Gleason et al., 2008; Overall et al., 2010; Seeman, 2001; Spiegel & Kimerling, 2001).

Chapter Four offers important contributions to the literature on support processes and the intersection between depressive symptoms and social functioning. First, these results advance understanding regarding *when* and *why* individuals with elevated depressive provide lower support to partners in times of need. Specifically, extending prior research, the studies presented in Chapter Three provide the first repeated examination and replication of the links between depressive symptoms and lower emotional support provision both during couples' support-relevant interactions and when partners need support during daily life. Second, advancing and extending existing literature, the studies identified state-oriented stress as an important support-impeding factor that plays a key role in explaining why individuals with elevated depressive symptoms provide lower support to partners. Identifying the disposition-related factor uniquely associated with depressive symptoms also extends the wider support literature by showing that state-oriented experiences of stress are likely an important determinant of emotional support. Thus, the findings highlight that people need to have, and be able to use, their own emotional resources to cope with the demands of providing emotional support to partners. Finally, the results complement and extend prior research showing that stress undermines constructive relationship behaviour, adding to the stress-

spillover literature by identifying another important relational context in which greater state levels of personal stress undermine significant relational behaviours.

Poor Support Provision within Intimate Relationships: Advances, Caveats, and Implications for Future Research

The studies presented across this thesis have important implications for advancing understanding of how attachment anxiety, self-esteem, and depressive symptoms shape support provision within intimate relationships. In the sections that follow, I outline how the methods and results of the studies presented in this thesis open up new and exciting avenues for future research. First, I highlight the advantages of examining factors within couples' support-relevant interactions that have support-impeding effects, including discussing how identifying disposition-related factors that undermine support provision provides a deeper understanding of *why* attachment anxiety, self-esteem, and depressive symptoms are associated with providing lower support to intimate partners in times of need (Point I). Next, I discuss how these key dispositions and associated disposition-related factors in support provision contexts shape the actual support provided to partners within couples' support-relevant exchanges (Point II). I also discuss the importance of identifying how these support processes vary according to context and consider additional contextual factors that will determine the degree to which these key dispositions undermine support provision within close relationships (Point III). Finally, I discuss the advantages of incorporating longitudinal designs to extend understanding of how the support-impeding effects of attachment anxiety, self-esteem, and depressive symptoms flow on to shape the relational and personal wellbeing of intimate partners across time (Point IV). Across each section I highlight the strengths of the studies and the advancements the results offer, but also consider limitations and caveats, in order to provide valuable directions for future research.

I. Disposition-Related Factors Underlying Poor Support Provision

Prior studies suggest that individuals with greater attachment anxiety, low self-esteem, and elevated depressive symptoms provide lower support to intimate partners probably because they tend to be more focused on their own needs and vulnerabilities during interpersonal support situations. However, prior research has focused on main effects between these dispositions and support provision and have not identified the unique disposition-related factors that help explain *why* these key dispositions are associated with distinct types of poor support provision within close relationships. The dyadic studies presented in this thesis demonstrate that greater attachment anxiety, low self-esteem, and elevated depressive symptoms are associated with distinct support-impeding factors that are closely tied to the specific needs and difficulties associated with each disposition. Low relational value when in a position to provide support to partners is a key determinant of poorer support provision for individuals with greater attachment anxiety who are preoccupied with being valued in relationships. Low support-related efficacy was the unique determinant of poorer support provision for individuals lower in self-esteem who have doubts about their competence and worth. Greater stress when in a position to provide support to partners was the key determinant of poorer support provision for individuals with elevated depressive symptoms who are lacking the emotional resources and capacity needed to be emotionally responsive to their partners.

Moreover, additional analyses across studies illustrated that the specific factors linked to each disposition, and the associated behaviours and outcomes that followed (see Table 5.1), were distinct and not the result of the other dispositions. In Chapter Three, additional analyses illustrated that the detrimental effect of self-esteem on support-related efficacy was most closely tied to low self-esteem rather than greater attachment anxiety and depressive symptoms. Similarly, in Chapter Four, the detrimental effect of depressive

symptoms on stress was specific to individuals' elevated depressive symptoms rather than their greater attachment anxiety and lower self-esteem.[4] Thus, the findings across the studies reveal that greater attachment anxiety, low self-esteem and elevated depressive symptoms are not associated with poorer support provision for the same general reasons (e.g., self-focus and personal distress) as suggested by prior studies, but rather these dispositions are associated with specific and distinct concerns and vulnerabilities that undermine support provision within close relationships.

However, the disposition-related factors (e.g., relational value, efficacy, and stress) were assessed using self-report measures, which are often subject to biases. For instance, more anxious individuals may be more inclined to report feeling less valued and appreciated given their chronic doubts about their partner's regard. Individuals lower in self-esteem might be more inclined to report lower support-related efficacy given that they have a tendency to

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[4] In Chapters Three and Four, I reported analyses controlling for the alternative disposition factors. However, I did not conduct those analyses in the first studies focusing on attachment anxiety due to page limits of the journal as well as not yet having established my research agenda to distinguish these processes. This footnote reports analyses of additional analyses ran after the paper was published in service of the major goal of this thesis to show that the factors were distinct. In particular, these additional analyses tested whether the effects of support *providers'* attachment anxiety outlined in Figure 2.1 (Predictions A and B) were independent of support *providers'* self-esteem (Studies 1 and 2) or *providers'* depressive symptoms (Study 2 only; depressive symptoms was not assessed in Study 1). To do this, in both studies I reran the dyadic regression models testing Predictions A and B with the main and interaction effects of *providers'* self-esteem and depressive symptoms (in separate models) as additional predictors. In Study 1, only *providers'* attachment anxiety moderated the associations between partners' distress and relational value (Prediction A; $B = -.20$, $t = -2.32$, $p = .022$) and relational value and negative support behaviour (Prediction B; $B = -.18$, $t = -3.05$, $p = .003$), and the concomitant interactions with *providers'* self-esteem (Bs $< .05$, ts $< .37$; ps $> .716$) were non-significant. Similarly, In Study 2, the effects of *providers'* attachment anxiety (described in the manuscript) for men remained significant when controlling for *providers'* self-esteem (Prediction A: $B = -.35$, $t = -4.67$, $p < .001$, Prediction B: $B = -.24$, $t = -3.06$, $p = .003$) and *providers'* depressive symptoms (Prediction A: $B = -.20$, $t = -2.73$, $p = .008$, Prediction B: $B = -.17$, $t = -2.11$, $p = .038$), respectively. These additional analyses align with those presented in Chapters 3 and 4, which taken together provide strong support that the different disposition-related processes outlined in Table 5.1 represent distinct processes.

evaluate themselves negatively. People in depressive symptoms may also be more likely to report state feelings of stress in line with their more general negative affective states. Future research should examine the support processes outlined in this thesis by incorporating observational indicators and partner reports of these distinct support-impeding factors. For example, identifying behaviours and responses that individuals exhibit that indicate feeling lower in relational value, efficacy or greater stress. Additional physiological assessments, such as monitoring individuals' physiological reactivity (e.g., electrocardiogram (ECG), pulse plethysmogram (PPG) and electrodermal activity (EDA), may also provide insight into physiological arousal states indicative of stress. Nonetheless, these self-report assessments were collected as people negotiated important support-relevant interactions, such as when discussing partners' goals and important stressors, highlighting that these experiences are an experiential reality for these individuals. Moreover, these self-reported experiences were associated with important behaviours and outcomes assessed by observational or reported by partners, indicating that the results are not just simply in the head of individuals higher in attachment anxiety, lower in self-esteem or greater in depressive symptoms.

The current thesis identified only one disposition-related factor that may help explain the support-impeding effects of attachment anxiety, self-esteem, and depressive symptoms. However, there are likely other factors closely tied to attachment anxiety, self-esteem, and depressive symptoms that would also account for *why* these individuals provide lower support to intimate partners. For instance, indicators that signal lower closeness, commitment and security (e.g., partner physically distancing themselves) and associated feelings of closeness and intimacy might affect the support behaviours anxious individuals engage in. These should also promote negative support behaviours given that anxious individuals tend to respond in destructive ways when they encounter situations that heighten doubts about a partner's love and commitment (e.g., Campbell et al., 2005; Overall & Sibley,

2009; Simpson et al., 1996). Moreover, greater negative mood in support provision contexts may also detract people high in attachment anxiety and depressive symptoms and low in self-esteem from supporting their partners in times of need. On the other hand, negative mood may be a general, blunt state associated with each of the dispositions that accompanies the more specific concerns, evaluations and experiences that are distinctively associated with each disposition. The distinctions demonstrated in this thesis provide a foundation for teasing apart the shared and unique factors that underlie the support-impeding effects of attachment anxiety, self-esteem and depressive symptoms, which will offer important information about how couples may approach support situations to prevent these disposition-related processes from derailing support in close relationships.

Further, although the studies demonstrated that the disposition-related factors play an important role in *why* individuals with greater attachment anxiety, low self-esteem, and elevated depressive symptoms provide lower support to partners, I did not examine the specific factors associated with each disposition that contribute to feelings of lower relational value, lower support-related efficacy, and greater stress, respectively. As outlined in above chapters, my predictions and theoretical models were founded on several lines of existing theoretical and empirical work distinctively supporting the links between each disposition, disposition-related factor, and support. Future research should identify the specific needs and difficulties associated with each disposition-related factor in support provision contexts that help to explain why (a) individuals with greater attachment anxiety experience lower relational value, (b) individuals with low self-esteem experience lower efficacy, and (c) individuals with elevated depressive symptoms experience greater stress when in a position to provide support to partners.

For instance, is it anxious individuals' preoccupation to be valued and appreciated in relationships that promote them to experience lower relational value in support provision

contexts? Do individuals with lower self-esteem report feeling lower support-related efficacy because they tend to hold negative self-views about their competence and capabilities and these chronic negative self-views influence their state- and task-oriented efficacy beliefs? Do individuals with elevated depressive symptoms experience greater stress when in a position to provide support to partners because they actually lack the emotional energy and resources necessary to respond to their partner's support needs? Is the lack of emotional resources and capacity due to them being overwhelmed and overburdened by their own personal emotional difficulties? These are important goals for future research as identifying the specific needs and difficulties associated with each disposition-related factor in support provision contexts can help with understanding the support processes and other important relational processes associated with each disposition and provide knowledge on how to target these vulnerabilities to prevent them from undermining important relational processes.

Indeed, the current results have implications for understanding other important interpersonal processes associated with attachment anxiety, self-esteem, and depressive symptoms. For instance, in addition to support, conflict is another important area within close relationships that deserves attention in terms of identifying how chronic and acute dispositions affect conflict processes. Indeed, as outlined in Chapter Two, prior research has shown that when concerns of relational value are threatened during conflict interactions, anxious individuals' ability to handle conflict in constructive ways is impeded (Campbell et al., 2005; Overall et al., 2014; Simpson et al., 1996; Tran & Simpson, 2009). Similarly, low self-esteem individuals respond to conflict by derogating and distancing from their partners (Murray et al., 2002), and prior research also suggests that greater depressive symptoms are associated with more negative conflict behaviours (e.g., Marchand & Hock, 2000). However, these studies examining these dispositions and reactions to conflict have not fully examined the disposition-related factors underlying these detrimental effects in conflict situations.

As highlighted by the findings of this thesis, identifying disposition-related factors that account for why these individuals behave negatively and unconstructively during important relational situations can help us understand the interpersonal processes associated with these dispositions, and thus how to mitigate any damaging effects in both support and conflict situations. For instance, given that conflict threatens relationships, individuals high in attachment anxiety are likely to feel low in relational value during conflict situations, especially if partners are displaying greater levels of distress, and such concerns would promote them to behave negatively and destructively in those situations. Similarly, because conflicts heighten self-doubts, low self-esteem should also be linked to lower feelings of efficacy during conflict situations. In contrast, unencumbered by self-doubts, higher self-esteem may predict greater efficacy in resolving conflicts. For individuals with elevated depressive symptoms, just as when partners require support, a key reason for destructive conflict behaviours may be that the need to use and apply emotional resources to navigate conflict increases experiences of stress, which undermines responsiveness and constructive methods of conflict resolution. Thus, the findings from this thesis highlight the importance of future investigations identifying key disposition-related factors closely related to attachment anxiety, self-esteem, and depressive symptoms that undermine important relational processes across different types of relationship interactions (e.g., conflict, parenting, self-disclosure) and even different relationships (e.g., family, friends, co-workers). Doing so will provide a key test of the theoretical underpinnings of why individuals high in attachment anxiety, low in self-esteem, and high in depressive symptoms are likely to have relationship difficulties as well as provide insight into how to buffer relationships and partners from the relationship-impeding effects of these chronic and acute dispositions.

II. Support-Related Behaviours in Support Provision Contexts

The findings reported in this thesis highlight that disposition-related factors underpinning poorer support provision within intimate relationships are associated with distinct support behaviours during couples' support-relevant interactions. First, concerns of relational value were associated with negative support behaviours, suggesting that feeling undervalued and underappreciated when in a position to provide support to partners can promote individuals to respond in destructive ways to their partners' support needs. Second, support-related efficacy was associated with esteem support behaviours, suggesting that feeling efficacious and competent disposes individuals to deliver esteem support to partners, whereas feeling incapable and incompetent renders individuals unable to provide esteem support. Third, stress was more closely related to emotional support behaviours, suggesting that individuals need to possess personal emotional resources and have the emotional capacity to provide emotional comfort and care to partners in times of need. These findings imply that disposition-related factors closely related to the needs and difficulties associated with attachment anxiety, self-esteem and depressive symptoms shape specific types of support behaviours central to the central concerns, evaluations and experiences distinct to those dispositions.

However, I did not assess the specific reasons underlying the association between disposition-related factors and support behaviours. I did not assess intervening variables that may explain *why* (a) feelings of low relational value are associated with individuals behaving more negatively and destructively towards partners when they need support, (b) feelings of low efficacy when in a position to provide support to partners is associated with individuals not engaging in behaviours that promote efficacy and esteem in close others, and (c) feelings of greater personal stress when in a position to provide support to partners is associated with individuals not providing emotional comfort, care and support to partners when they need it

the most. Future studies could shed further insight into these important connections by investigating in more detail the specific fears and motivations underlying the specific support behaviours associated with attachment anxiety, self-esteem, and depressive symptoms.

For instance, do individuals engage in negative support behaviours when their relational value is threatened because they believe that their partner was purposefully underappreciating and undervaluing them and thus are inclined to punish their partner (the support recipient)? Indeed, anxious individuals tend to infer that their partner purposely reject closeness (Collins, 1996, also see Bradbury & Fincham, 1990, for a review), and such pessimistic attributions help to account for the link between attachment anxiety and relationship conflict and dissatisfaction (Gallo & Smith, 2001; Sumer & Cozzarelli, 2004; Whisman & Allan, 1996). Further, when anxious individuals draw more negative inferences about their *partner's* negative behaviour they also report more hostile and punishing behaviours, possibly to protest the perceived failure of the partner in meeting their attachment-related needs (Collins, Ford, Guichard, & Allard, 2006). In contrast, anxious individuals tend to respond relatively favourably to their partner's positive behaviour, including being as likely as secure individuals to endorse optimistic attributions for positive partner behaviour and reporting relationship promotion responses (e.g., expressing appreciation and gratitude; Collins et al., 2006). The results presented in Chapter Three are consistent with this pattern: highly anxious individuals displayed the same low levels of negative behaviour as less anxious individuals when their felt relational value was high. Future investigations examining anxious individuals' cognitive appraisals, inferences and attributions in support provision contexts may enhance understanding about why low value and appreciation appears to activate negative behaviours toward partners.

Likewise, future research would benefit from investigating the factors underlying the association between support-related efficacy and esteem support. The findings presented in

Chapter Four imply that individuals need to possess confidence in their competence and capability in order to engage in behaviours that build competence and efficacy in others. However, research is yet to identify the specific personal skills and abilities related to efficacy that one needs to possess and utilize in order to be able to provide esteem support to close others. Indeed, existing literature suggests that efficacy is not the only influence on behaviour (Schunk, 1991). Rather, behaviours and responses are likely a function of many variables, such as skills, outcome expectations, and the perceived value of outcomes (Schunk, 1989). High self-efficacy alone is less likely to produce successful and constructive behaviours (such as provision of esteem support) when requisite skills are lacking. For instance, a person could possess high levels of support-related efficacy but if they do not have the skills and knowledge (e.g., *knowing* how to affirm partner's competence, express confidence, encourage partners) to engage in successful esteem-building behaviours, then efficacy alone is unlikely to lead to effective esteem support provision. Thus, successful provision of esteem support likely involves both possessing skills and the efficacy beliefs to use the skills. Future investigations should identify the specific skills high (versus low) in efficacy individuals possess in support provision contexts, and whether such skills help explain the positive association between self-efficacy and esteem support.

Similarly, future studies should also investigate the specific factors that underlie the negative association between stress and emotional support. In Chapter Four, I postulated that stress undermines emotional support provision because intensified personal emotions, such as state-oriented stress, interfere with focusing clearly and accurately on partners' support needs by drawing attention and resources inward in order to soothe one's own emotional state. But, the specific mechanisms through which stress undermines emotional support behaviour is yet to be identified. Prior research suggests that individuals may find it difficult to behave in a positive, constructive manner during important relational situations if they do not also

possess the energy and resources necessary for engaging in those acts. Indeed, enacting positive and constructive relational behaviours is not automatic and requires a great deal of effort and personal resources. Individuals first must exert self-control to inhibit inclinations to act in self-oriented and self-promotive ways, and then decide to engage in positive pro-relationship responses (Rusbult, Yovetich, & Verette, 1996; Yovetich & Rusbult, 1994). Unfortunately, self-control is a limited resource that can become depleted through use, making further acts of self-control more challenging (Baumeister, 2002). Thus, individuals may find it difficult to engage in supportive behaviours when their self-regulation resources are already taxed, such as when individuals are experiencing stress.

Prior research has shown that self-control is needed to manage the negative emotions and arousal that results from stress (Hancock & Warm, 2003; Schönpflug, 1983), and that coping with stress is an effortful process that consumes and drains individuals' regulation resources, thus rendering individuals with less energy and capacity to respond effectively or in a relationship-promoting manner (Baumeister, 2002; see Buck & Neff, 2012). In this way, it is possible that self-regulatory depletion might be a possible mechanism by which the experience of stress undermines individuals' ability to enact emotional support behaviours. That is, coping with stress consumes individuals' self-regulatory resources, leaving individuals with less resources and energy to effectively provide emotional comfort and care to partners in times of need. It is important for future studies to investigate whether individuals with high stress levels (when in a position to provide support) experience self-regulatory depletion, and depletion in other self-related resources (e.g., emotion regulation), and whether this helps explain why they provide lower emotional support to partners.

Despite these caveats, the results across the studies presented in this thesis have important implications for understanding how contextually-relevant factors closely related to the chronic and acute needs and difficulties associated with attachment anxiety, self-esteem,

and depressive symptoms predict key support behaviours within close relationships. Specifically, the studies across this thesis demonstrated that (a) concerns of relational value are an important predictor of negative support behaviours, particularly for those high in attachment anxiety, (b) state levels of support-related efficacy is a key predictor of esteem support behaviours, and (c) stress when in a position to provide support to partners is a key determinant of emotional support behaviours. Further, and importantly, the patterns of results also have implications for understanding other interpersonal behaviours associated with these disposition-related factors. For instance, during conflict, low levels of state-oriented conflict efficacy might undermine individuals' ability to engage in constructive problem-solving behaviours, including behaviours that instil efficacy in resolving conflicts. Similarly, high levels of personal stress during conflict interactions might consume and drain personal resources and energy, thereby curtailing individuals' ability to engage in constructive conflict resolution. Nonetheless, as discussed next, the degree to which these dispositions create specific vulnerabilities in important relationship interactions is likely to vary according to contextual factors.

III. The Contextual Nature of Support Provision

The methods used in the studies presented across the thesis are valuable because they allowed me to directly examine how attachment anxiety, self-esteem, and depressive symptoms affect support exchanges as they occur naturally within intimate relationships. Indeed, the studies in Chapter Two demonstrated that individuals higher in attachment anxiety report experiencing lower relational value during *partners'* discussions of important personal goals. In Chapter Three, individuals lower in self-esteem reported lower support-related efficacy when *partners* were discussing important personal goals and significant, ongoing personal stressors. Finally, in Chapter Four, individuals with elevated depressive symptoms reported experiencing greater stress during discussions about *partners'* important

goals, stressful challenges, and on days when *partners* needed greater support. Thus, all of the investigations demonstrated how the dispositions and disposition-related factors shape support processes when it matters - within the context of couples' *actual* support exchanges.

Of importance, in Chapter Four, examining whether the support process associated with depressive symptoms is evident during couples' daily life (and not just during laboratory-based support-relevant interactions), provided good evidence that the support-impeding effects of depressive symptoms occur specifically within the context of couples' support-relevant situations. That is, individuals high in depressive symptoms experience greater stress specifically on days *partners* actually need high levels of support, but do not experience increases in personal stress on days when *partners* do not need support or need low levels of support. These findings suggest that individuals with elevated depressive symptoms do not experience high levels of stress all the time within intimate relationships, but provide evidence that greater stress occurs in response to partners needing support. Future studies should investigate whether the support processes associated with high attachment anxiety and low self-esteem are also evident during couples' daily support transactions.

Moreover, the studies advance the support literature by demonstrating that the effects of attachment anxiety, self-esteem, and depressive symptoms on support provision can be better understood by examining important contextual factors. The results highlight that contextual factors can influence the degree to which dispositions affect support provision within intimate relationships. In particular, I identified *partner* (i.e., support *recipient*) distress during support-relevant interactions as one key attachment-relevant trigger that activates highly anxious individuals' (i.e., support *providers*) concerns regarding how much they are valued and appreciated by their partners. This finding suggests that highly anxious individuals do not always feel unvalued and unappreciated by their partners in support provision contexts, rather their relational value concerns arise *when* their partners (i.e.,

support recipients) are highly distressed during support-relevant interactions. The effects of attachment anxiety on support provision are also likely to vary according to other relevant contextual variables that threaten and undermine feelings of value and appreciation in support provision contexts, such as when they are uncertain about their *partner's* commitment, regard, availability, and dependability (Mikulincer & Shaver, 2003). Thus, partner behaviours and emotions during couples' support-relevant interactions that indicate strained or wavering commitment or contextual cues concerning a partner's availability and dependability will likely activate concerns of relational value, and associated poorer support provision.

Additional elements of couples' support exchanges will also be important. For instance, if partners seek support in negative ways or behave negatively during support-relevant interactions, such as blaming, derogating or refusing to listen or accept help from the individual (Barbee & Cunningham, 1995; Pasch et al., 1997), highly anxious individuals are likely to show pronounced drops in feelings of value and appreciation. Moreover, it might be that partners' heightened displays of negative behaviour and emotion threaten highly anxious individuals' relational value by indicating that the partner's commitment or regard is wavering because the partner is in some way dissatisfied with or rejecting or hurting them. It is important for future research to identify contextual factors that activate (versus deactivate) attachment-related insecurities in support contexts and also examine insecure individuals' interpretation of these contextual cues to better understand how these factors affect support processes within close relationships.

The support-impeding effects of low self-esteem was evident *when* partners were discussing important personal goals and ongoing, significant personal stressful issues – both contexts in which support that bolsters feelings of efficacy and competence are likely particularly important. Efficacy can facilitate individuals to effectively and efficiently manage and overcome obstacles to personal goals and challenges that create the types of

stressful issues couples discussed. Indeed, greater self-efficacy beliefs have been linked to more successful and persistent pursuit of goals (Low, Overall, Hammond, & Girme, 2017), and effective coping and less negative affect during times of stress (see Cutrona & Russell, 1987, for an overview). However, I did not examine *partners'* (i.e., support *recipients'*) support needs or support-seeking behaviours to establish whether the support contexts in which I examined the effects of self-esteem on support provision can be characterized as a context in which partners really need esteem-bolstering support.

Nonetheless, *partner's* specific support needs (e.g., needing higher levels of esteem support, rather than general support) is likely to be an important contextual factor that affects the *degree* to which the support received facilitates (or undermines) efficacy and esteem. Indeed, the importance of support matching recipient needs, and the specific challenges recipients are facing, has been increasingly recognized as important in determining the effectiveness of support (see optimal-matching theory, Cutrona, 1990; Cutrona & Russell, 1990). Thus, the negative effect of lower esteem support on efficacy should be stronger for those partners with a high need for esteem support, compared to those with a low need for esteem support. Likewise, if partners' goals and stressful issues have the potential to be highly benefited by esteem support (e.g., starting a new job/career, dealing with and overcoming addiction, chronic disease and pain), compared to other forms of support, then the negative effects of lower esteem support might be worse in those situations. Thus, it is important for future research to investigate whether partners' (i.e., support recipients') need for specific support (e.g., esteem versus emotional) and the nature of the stressor maximize or minimize the dyadic esteem-building processes identified in Chapter Three of this thesis.

The studies in this thesis also demonstrate that individuals with elevated depressive symptoms experience greater stress and thus provide lower emotional support to partners *when* discussing partners' important personal goals and significant stressful issues and *when*

partners need greater support during daily life. I speculated that individuals with elevated depressive symptoms experience greater stress in support provision contexts probably because the interpersonal demands of the situation exceed the personal resources and energy these individuals have to draw upon to meet their partner's needs. However, the specific demands of the support situation were not examined. Again, *partners'* (i.e., support *recipients'*) behaviours in support contexts, namely their support-seeking behaviours, might be a good indicator of the demands of the situation. Specifically, the stress associated with providers' depressive symptoms may be amplified if partners seek support in overt and direct ways (e.g., directly asking for help and advice, asking questions, providing partner with information about the help needed to deal with the situation; Barbee & Cunningham, 1995; Pasch et al., 1997). This type of overt, visible support-seeking, along with direct reassurance-seeking more generally (Girme, Molloy, & Overall, 2016), is likely to intensify the perceived demands of the situation and subsequently the degree to which stress undermines support provision by individuals with elevated depressive symptoms.

In contrast, if partners seek support in more subtle and covert ways it might attenuate the stress experienced by individuals with elevated depressive symptoms in support provision contexts. For instance, invisible emotional support provision consists of subtle and indirect behaviours that deemphasize support recipient versus provider roles, an equal and more conversational tone, disguised, subtle physical and affectionate contact (e.g., maintaining open body posture), using "off-topic" humour, and using others' similar issues and challenges to gain reassurance that the recipient can cope (Girme et al., 2013; Howland & Simpson, 2010; Overall et al., 2010). Prior studies have shown that invisible support has beneficial effects on support recipients, including enhancing efficacy, ability to achieve personal goals and decreasing negative mood, primarily by bypassing threats to recipients' competence or capability (e.g., Bolger et al., 2000; Bolger & Amarel, 2007; Girme et al.,

2013; Shrout, Herman, & Bolger, 2006). It is possible that similar invisible types of support-seeking might also have beneficial effects on support provision by reducing the demands of the support situation and consequently the degree to which individuals, particularly those who are experiencing elevated depressive symptoms, experience stress when in a position to provide support. These are important avenues for future investigations, particularly because it is within specific support interactions, and specific support contexts most relevant to the vulnerabilities identified in this thesis, that the poor support provision will have consequences on partner and relational outcomes.

IV. Outcomes of Partner Support

There is a vast amount of research demonstrating that support from partners fosters greater coping and self-esteem, facilitates personal growth by helping recipients achieve their personal goals, and generate closeness, intimacy and relationship satisfaction, (Collins & Feeney, 2000; Cutrona & Suhr, 1992; Feeney, 2004; Feeney & Collins, 2003, 2014; Gleason et al., 2008; Overall et al., 2010; Pasch et al., 1997; Sullivan et al., 2010). Adding to the literature on costs of lack of partner support, the findings from this thesis provided clear evidence that the poorer support provision arising from high attachment anxiety and low self-esteem has detrimental outcomes. In particular, the greater negative support behaviour exhibited by highly anxious support providers predicted declines in *partners'* (i.e., support *recipients'*) relationship quality across time (Chapter Two; see Table 5.1), and lower esteem support had immediate negative effects on *partners'* efficacy as well as detrimental long-term effects on *partners'* efficacy and self-esteem (Chapter Three; see Table 5.1). Thus, assessing support processes within dyadic interactions allowed me to demonstrate that attachment anxiety and self-esteem, and associated disposition-related factors and corresponding support behaviours, go on to undermine *partners'* relationship quality and important self-evaluations.

However, I did not examine the partner or relational outcomes associated with the support processes arising from depressive symptoms and stress as a support provider. Nonetheless, there is considerable evidence that the receipt (or lack) of emotional support in particular contributes to multiple indices of personal and relational wellbeing. Receiving lower emotional support is associated with lower relationship satisfaction (e.g., Gleason et al., 2008; Overall et al., 2010). A lack of emotional support also undermines goal achievement and effective coping in the face of stressors (e.g., Overall et al., 2010; Seeman, 2001; Spiegel & Kimerling, 2001). Thus, as outlined in Table 5.1 (see last column of bottom row), the lower emotional support stemming from elevated depressive symptoms and greater stress is likely to have detrimental effects on *partners'* goal achievement, coping, and relationship satisfaction, especially given that partners (i.e., support *recipients*) themselves perceive that they are receiving lower emotional support. Indeed, prior research indicates that perceptions of support received is a stronger predictor of recipient outcomes than the actual receipt of support (Cohen & Wills, 1985; Rafaeli & Gleason, 2009). Thus, the lower emotional support reported by individuals and perceived by partners arising from greater depressive symptoms and feelings of stress risk the relationship and personal wellbeing of partners.

The current findings also have important implications for understanding how specific support behaviours have distinct partner and relational outcomes. Negative support behaviour undermines relationship quality, whereas esteem support behaviour facilitates efficacy and esteem. Although the current thesis did not identify the specific factors underlying the association between support behaviours and partner outcomes, the means through which support affects relationship satisfaction and efficacy can be informed by existing literature. Prior research has shown that the more individuals respond in negative ways to their partner during support interactions the more dissatisfied they become, probably

because partners feel less supported and cared for (Collins & Feeney, 2000; Cutrona & Suhr, 1992; Overall et al., 2010; Pasch et al., 1997). Indeed, during support-relevant interactions, perceiving partners as supportive and caring provides important diagnostic information about whether partners are responsive and committed to the relationship (Overall, Girme, Simpson, Knee, & Reis, 2016), and is thus crucial for relationship wellbeing (Reis, Clark, & Holmes, 2004). Understandably, responding negatively to recipients' concerns can communicate a lack of care and regard for the recipient, and lead to recipients evaluating their partners (e.g., Cutrona et al., 2007; Feeney & Collins, 2003) and relationships (Feeney & Collins, 2003; 2015; Overall et al., 2010; Sullivan et al., 2010) more negatively.

By contrast, prior research has shown esteem support to be associated with promoting recipients' efficacy by bolstering their efficacy beliefs regarding their skills and abilities (Freeman & Rees, 2009, 2010; Holmstrom et al., 2015). Indeed, esteem support primarily focuses on facilitating recipients' efficacy and esteem (Barbee & Cunningham, 1995; Cutrona & Suhr, 1992; Overall et al., 2010; Pasch & Bradbury, 1998). Thus, esteem support has the potential to bypass the sometimes detrimental effects receiving support can have on recipients' efficacy. Prior research suggests that overt and direct received support risks increasing the salience of stressors, signals that recipients may be unable to cope on their own, and creates feelings of indebtedness to partners, thereby threatening recipients' competence and efficacy (Bolger et al., 2000, Rafaeli & Gleason, 2009). However, as demonstrated in Chapter Three, and supported by prior studies, esteem support has a positive effect on recipients' efficacy that rivals other types of direct and overt support (e.g., informational, tangible, see Freeman & Rees, 2009, 2010). Additionally, not only did the current thesis demonstrate that esteem support facilitates recipients' efficacy *immediately* and *longitudinally*, but such boosts in efficacy also enhance recipients' self-esteem, reiterating the notion that one's self-efficacy is a core determinant of one's self-esteem (Bandura, 1997).

The current findings also highlight the importance of providing support that aligns with *partners'* (i.e., *recipients'*) needs. Research documenting the costs of support has predominately focused on examining personal outcomes *when* recipients are facing impending stressors, such as upcoming exams or delivering a speech (Bolger & Amarel, 2007; Bolger et al., 2000; Shrout et al., 2006). Similarly, in the current thesis, the effects of esteem support on recipients' efficacy was examined *when* recipients were discussing significant, ongoing personal stressors. Thus, it is possible that the positive effect of esteem support on efficacy was more evident and stronger, given that recipients were discussing ongoing stressors and thus possibly needed support that bolstered their efficacy beliefs regarding their skills and ability to deal with and overcome the stressor. Indeed, recipients and providers judge esteem support to be the most helpful at improving recipients' feelings of self-worth and confidence in their ability to cope with stressful events (Cohen & Wills, 1985; Holmstrom & Burleson, 2011; McLaren & High, 2015).

Moreover, as mentioned above, it is becoming increasingly recognized that individuals need to shape their support behaviours to fit the needs of the partner (i.e., recipient) in the specific situations recipients are in for support to be effective and beneficial (Cutrona, 1990; Cutrona & Russell, 1990). Further, according to the *transactive-goal-dynamics* (TGD) theory (Fitzsimons, Finkel, & vanDellen, 2015), successful outcomes (e.g., goal attainment) are most likely to occur when interdependent individuals (e.g., intimate partners) coordinate well by efficiently drawing on the resources afforded by interdependence. That is, support behaviours should align with the *partner's* current needs and situation in order for support to be beneficial and successful (see Fitzsimons et al., 2015). In that case, it might be that the *degree* to which partner support is beneficial (versus costly) depends on whether support behaviours align (versus clash) with recipients' needs and situational demands. The current thesis did not examine support *recipients'* specific support-

seeking behaviours or needs and importantly, whether support *providers'* dispositions influence their ability to recognize *partner's* specific support needs or coordinate support behaviours to match recipient needs. It is likely that those high in attachment anxiety, low in self-esteem and with elevated depressive symptoms will be less accurate at determining partners' specific support needs, possibly because difficulties and needs associated with each disposition (e.g., concerns of relational value, lower efficacy, emotional difficulties and depletion) hinder their ability to recognize partner's needs in support provision contexts. These are important avenues for future investigations.

Finally, the support processes identified in this thesis have important implications for understanding why couples might be suffering from poorer relationship wellbeing, especially *partners* of individuals with high attachment anxiety, low self-esteem and depressive symptoms, respectively. Indeed, prior research suggests that greater attachment anxiety is associated with lower relationship satisfaction for both partners (Banse, 2004). Likewise, lower self-esteem individuals and their partners report lower satisfaction and commitment to their relationships (e.g., Robinson & Cameron, 2012). Lower self-esteem has also been shown to predict declines in *partners'* relationship satisfaction, even when controlling for the effect of the partner's self-esteem (e.g., Erol & Orth, 2013; also see Erol & Orth, 2017, for an overview). *Partners* of individuals with elevated depressive symptoms also tend to experience poorer relationship wellbeing (e.g., Kouros & Mark Cummings, 2011; Whisman & Uebelacker, 2009). The support processes identified in this thesis are likely an important way in which high attachment anxiety, low self-esteem and elevated depressive symptoms undermine relationship health and stability. Along with the detrimental effects shown longitudinally by the negative support behaviour and low esteem support associated with high attachment anxiety and low self-esteem (see Table 5.1), the lower emotional support associated with depressive symptoms likely reduces the degree to which *partners* of

individuals with elevated depressive symptoms are satisfied in their relationships (e.g., Gleason et al., 2008; Overall et al., 2010). Thus, it is important to identify the support behaviours and processes associated with attachment anxiety, self-esteem, and depressive symptoms that have damaging effects on partners and relationships in order for these detrimental processes to be mitigated**.**

Practical Implications and Mitigating Support-Impeding Factors

The support processes identified across the studies in this thesis have implications for understanding how to buffer close relationships from the detrimental effects of attachment anxiety, self-esteem, and depressive symptoms. Showing that highly anxious individuals tend to behave negatively when their relational value is threatened in support provision contexts offers important information about how and when couples may approach support situations to prevent these concerns from derailing the support process. Prior research has shown that partners' bolstering of relational value may help more anxious individuals feel more secure and traverse conflict more effectively (Overall & Simpson, 2015). Similarly, when partners' communications (or other relationship characteristics) provide secure affirmation of relational value even in the face of partners' distress, more anxious intimates may rise to be supportive relationship partners. For instance, reassurance from *partners* (i.e., support *recipients*) might help highly anxious individuals (i.e., support *providers*) be effective and successful support providers. Specifically, in support provision contexts, if partners can reassure highly anxious individuals that the partner loves, values and appreciates them and that the partner is committed to the relationship, this might help mitigate the support-impeding effects of feeling lower in relational value, or even prevent support recipients' distress from threatening highly anxious individuals' relational value to begin with.

Further, facilitating or priming attachment security, such as subliminally exposing individuals to security providers (other than their partner) prior to discussing

partners' personal problems, can also promote effective support provision by counteracting support-impeding effects caused by insecure attachment orientations (see Mikulincer et al., 2013). A number of studies have shown that attachment security, whether dispositional or experimentally enhanced, increases compassion and altruism and provides a foundation for care-oriented feelings and caregiving behaviours (see Mikulincer & Shaver, 2007a, 2007b, for reviews). Attachment security, whether established in a person's long-term relationship history or enhanced by experimental priming, promotes caregiving and supportive behaviour by redistributing attention and resources away from personal needs and toward 'other' behavioural systems, including the caregiving system (see Mikulincer, Shaver, Gillath, & Nitzberg, 2005, for similar arguments). Further, attachment security priming activates mental representations of available and caring close others, which may make it easier to construe a distressed partner as deserving sympathy and compassion, hence motivating individuals to provide comfort, care and support to partners in times of need (see Mikulincer et al., 2005).

Similarly, bolstering one's sense of security can also activate positive models of self, which may help promote confidence in one's ability to address and attend to close others' suffering and need for comfort, care, and support (Mikulincer et al., 2005). That is, augmenting one's sense of security can lead to fewer self-doubts and more self-confidence when interacting with intimate partners (Mikulincer & Shaver, 2007b), which can help overcome barriers to effective partner support provision induced by threats to esteem and efficacy (see Mikulincer et al., 2014). Thus, bolstering low self-esteem individuals' sense of efficacy when they are in a position to provide support to partners and reducing self-focused worries and fears surrounding one's own capability and competence might help prevent the negative effects of self-related threats, such as lower efficacy on support provision. Further, partners engaging in behaviours aimed at bolstering low self-esteem individuals' feelings of efficacy, such as reassuring that the individual is able, competent, valuable and worthy or

signalling that their support is helpful and effectively delivered, might also help overcome the support-impeding effects of lower self-esteem and efficacy.

Security-enhancing interventions can also overcome barriers to effective partner support provision induced by depletion of personal mental resources (Mikulincer et al., 2013). Indeed, being supportive to a partner in need requires using personal cognitive, emotional and behavioural resources, and therefore an individual who is emotionally and cognitively exhausted may be less responsive to a partner's support needs (Gailliot, 2010). Indeed, the current thesis demonstrated that individuals with elevated depressive symptoms provide lower support to partners because the demands of providing support potentially outweigh the personal resources they can mobilize. Thus, enhancing and bolstering the personal resources these individuals possess or perceive to possess in support provision contexts might help overcome the support-impeding effects of elevated depressive symptoms. Providing evidence for this proposition, prior studies suggest that security priming can override the detrimental effects of mental depletion because, given that people whose sense of security has been augmented have fewer self-doubts and concerns about their self-presentation within a relationship (Mikulincer & Shaver, 2007b), individuals may be less focused on personal difficulties and thus have more personal resources to attend to a partner's support needs (Mikulincer et al., 2013). Studies attempting to facilitate the specific personal resources people need to provide support (e.g., being other- rather than self-focused, self-regulation, emotion-regulation, empathy) may not only test a specific way that may reduce the poorer support provision associated with stress and depressive symptom, but also provide a direct test of whether individuals with elevated depressive symptoms actually lack these resources in support provision contexts.

In sum, applying the knowledge generated by the studies in this thesis to identify the myriad intrapersonal, relational, and contextual factors that protect against (a) highly anxious

individuals' concerns of relational value, (b) low self-esteem individuals' lower efficacy, and (c) highly depressed individuals' greater stress from undermining effective support provision is a valuable direction for future research.

Conclusion

The dual tasks of individuals providing support to intimate partners while at the same time managing their own needs and difficulties is understandably difficult, and unfortunately, may often result in poorer support provision. Indeed, the research presented in this thesis demonstrates that individuals who have greater chronic or acute interpersonal needs and personal difficulties tend to provide lower support to partners in times of need. However, extending understanding of these important support provision processes, the studies show that people who have difficulty providing support, such as individuals high in attachment anxiety, low in self-esteem, and high in depressive symptoms, do not provide poor support for the same reasons as suggested by prior research. Instead, these dispositions are associated with *distinct* support-impeding concerns and vulnerabilities in support provision contexts within intimate relationships. Specifically, individuals high in attachment anxiety engage in greater negative support behaviour because they feel low in relational value when their partners are highly distressed and needing support (Chapter Two, Jayamaha et al., 2016), whereas those low in self-esteem provide lower esteem support to partners because they feel lower in support-related efficacy (Chapter Three, Jayamaha & Overall, 2018). In contrast, individuals with elevated depressive symptoms provide lower emotional support to partners because they experience greater stress when in a position to provide support to partners (Chapter Four, Jayamaha et al., under review). These studies highlight that prevalent and important dispositions, and associated state-oriented disposition-related factors, shape the type and level of support individuals provide to their intimate partner in times of need. Unfortunately, the resulting support provision (or lack thereof) will often have

immediate and longitudinal detrimental effects on the relationship and personal wellbeing of intimate partners, including poorer relationship quality, lower efficacy and self-esteem. Of importance, examining the theoretical underpinnings of *why* individuals high in attachment anxiety, low in self-esteem and high in depressive symptoms provide lower support to partners opens up important avenues for future research, including examining how the disposition-related factors identified in this thesis play a role in undermining (versus facilitating) relational behaviours and processes in other important relational contexts, such as conflict, and how *partners* support-seeking and other contextually-relevant behaviours and factors might affect the distinct support process associated with each of these dispositions. The results of these studies also pave the way for future research to determine how highly anxious, low self-esteem and depressed individuals might be able to provide more constructive support. Taken together, the current research, and the potential future research that follows, makes important advances in understanding how couples may approach support (and other relational) situations in ways that prevent these dispositions and associated disposition-related factors from harming intimate relationships and personal wellbeing.

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Appendix 1 - Chapter Two Supplemental Materials

These supplemental materials include additional information on the samples and descriptive statistics across studies, and present additional analyses to support the interpretation of the results and conclusions presented in the paper.

Table of Contents

1. Sample Information

Studies 1 and 2 involved existing samples of romantic couples. Hence, we provide further information on which prior studies have utilized the current samples in order to clarify that the predictions, support variables, and results presented in this manuscript are completely novel and have never been reported.

The focus of prior papers involving Study 1 involved: (1) the effects of emotional, tangible and negative support provision on support *recipients'* perceived support and, in turn, the effects of perceived support on goal achievement and relationship quality (Overall, Fletcher, & Simpson, 2010), and (2) the effects of visible and invisible support provision (different types of support) on *recipients'* goal competence and achievement (Girme, Overall, & Simpson, 2013). Neither of these papers included attachment insecurity and neither examined predicting variation in providers' feelings of value/appreciation or support providers' behavior (the primary aims of the current research). A third paper (Girme, Overall, Simpson, & Fletcher, 2015) included the data from both Study 1 and 2 and did focus on attachment insecurity. However, that paper examined the effects of attachment *avoidance* (not attachment anxiety) on support *recipients'* reactions (not support providers' reactions) to *receiving practical support* (not providing negative behavior).

Thus, none of the three prior papers examined how support providers' characteristics, such as providers' attachment anxiety, shaped support processes, none of the prior papers assessed support providers' outcomes (e.g., their feelings of being valued and appreciated by support recipients), and none of the prior papers examined partner support behavior as an outcome of these variables (e.g., more anxious providers feelings of low relational value promoting greater negative support behavior). Accordingly, the theoretical and empirical contribution of the data presented in the current paper are completely separate from the prior papers. Moreover, the majority of variables are completely independent and

distinct from the prior variables except for the measure of attachment insecurity and recipients' distress. However, again, in the prior papers it was the recipients' attachment insecurity predicting recipients' distress, and not providers' attachment insecurity predicting providers' reactions to recipients' distress (and the other variables shown in Figure 2.1 were not included). Not only are these entirely separate effects examined, controlling for recipients' attachment insecurity across analyses did not change the effects we reported (see the additional analyses reported in these supplement materials below).

2. Correlations across all Measures (Study 1)

	1.	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
1. Attachment Anxiety	**.10**	.21	-.23	.10	-.13	.06	-.23
2. Attachment Avoidance	.13	**-.06**	-.31*	.00	-.11	.07	-.32*
3. Relationship Quality	-.23	-.59**	**.45****	-.03	.35**	-.18	.59**
4. Recipients' Distress	-.15	.09	-.14	**-.06**	-.15	.35**	-.23
5. Providers' Felt Valued/Appreciated	-.16	-.30*	.28*	-.15	**.27****	-.38**	.18
6. Providers' Negative Support Behavior	.22	.29*	-.27*	.10	-.46**	**.22***	-.28
7. Relationship Quality (Follow-Up)	-.20	-.48**	.39**	-.17	.25	-.13	**.58****

Note. Correlations for women are above the diagonal. Correlations for men are below the diagonal. Bold correlations on the diagonal represent correlations across partners.

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

Correlations across all Measures (Study 2)

	1.	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**
1. Attachment Anxiety	**-.00**	.16	-.07	.16	-.22*	.17	-.11
2. Attachment Avoidance	.09	**-.03**	-.32**	.00	-.21*	.11	-.31*
3. Relationship Quality	-.16	-.48**	**.51****	-.11	.32**	-.20*	.73**
4. Recipients' Distress	.07	-.09	-.17	**.18***	-.12	.19	-.20
5. Providers' Felt Valued/Appreciated	-.14	-.21*	.35**	-.23*	**.21****	-.07	.30**
6. Providers' Negative Support Behavior	.08	.11	-.28**	.27**	-.35**	**.32****	-.23*
7. Relationship Quality (Follow-Up)	-.15	-.20	.58**	-.32**	.50**	-.08	**.44****

Note. Correlations for women are above the diagonal. Correlations for men are below the diagonal. Bold correlations on the diagonal represent correlations across partners.

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

3. Mean Difference *t* Tests across Studies 1 and 2

The measures across Study 1 and Study 2 were identical and here we present information regarding whether the means of the primary variables differed across samples. The *t*s in the below table are mean difference *t* tests and illustrate that the majority of variables did not differ on average, with two exceptions: (1) there was a significant difference across studies for men's relationship quality at Time 1, specifically men in Study 2 (M = 6.19, SD = 0.58) reported greater relationship quality at Time 1 compared to men in Study 1 (M = 6.03, SD = 0.67), although this difference was relatively small, and (2) recipients' distress was also significantly different across Studies 1 and 2; both female and male support recipients in Study 1 reported greater distress (M = 2.43, 2.62; SD = 1.10, 1.45, respectively) compared to female and male support recipients in Study 2 (M = 1.83, 2.15; SD = 1.39, 1.57, respectively). Nonetheless, in both studies there was good levels of variance and we do not think there is any reason to suspect that this difference impacted our ability to detect effects.

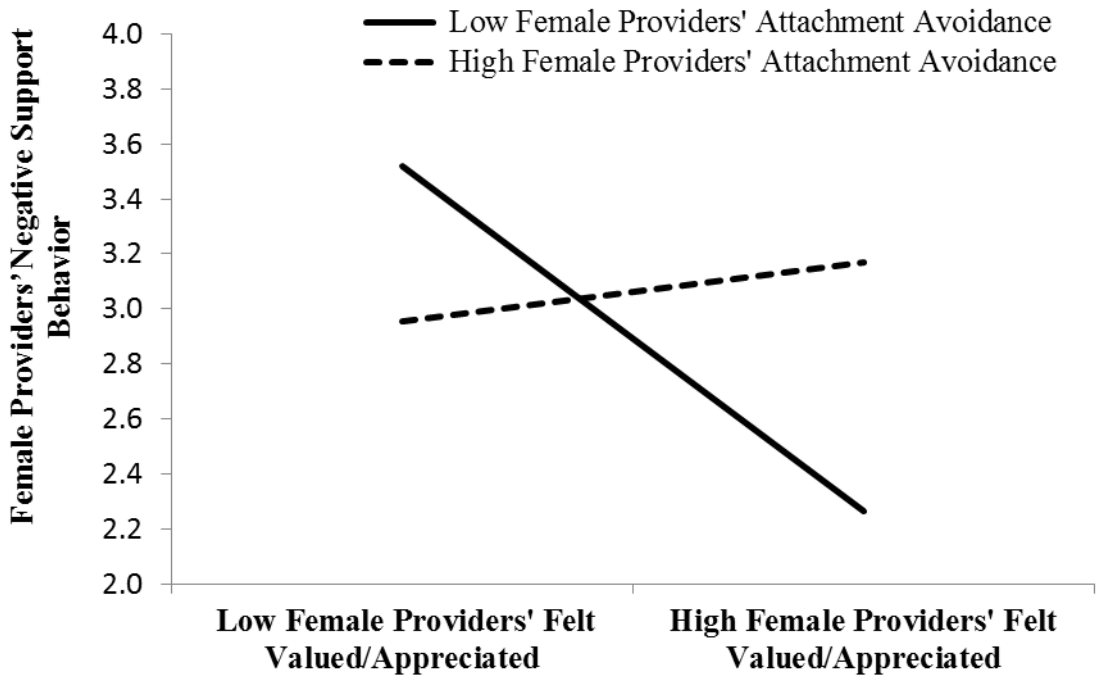
	Women	Men	Overall
	t	*t*	*t*
Attachment Anxiety	-1.07	-0.32	-0.67
Attachment Avoidance	0.92	0.54	0.69
Relationship Quality	-0.84	-2.16*	-1.54
Recipients' Distress	3.37**	2.34*	2.78**
Providers' Felt Valued/Appreciated	-1.06	-0.96	-0.97
Providers' Negative Support Behavior	1.40	0.21	0.84
Relationship Quality (Follow-Up)	0.86	0.17	0.52

Note. Positive *t* values represent greater scores for Study 1. Negative *t* values represent greater scores for Study 2.

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

4. Significant Effects of Providers' Attachment Avoidance

Only one significant effect of attachment avoidance effect emerged across both studies. The interaction between support providers' felt valued and appreciated and attachment *avoidance* predicting providers' negative support behavior was significant in Study 1 (see left side of Table 2.3), and was further moderated by gender (see Table 2.3) such that the interaction occurred for women (*B* = .32, *SE* = .11, *t* = 2.91, *p* = .01) and not men (*B* = -.04, *SE* = .08, *t* = -.56, *p* = .58). When feeling more appreciated and valued, female support providers engaged in lower negative support behaviors when they were low (*slope* = -.52, *t* = -4.16, *p* < .001), but not high (*slope* = .09, *t* = .62, *p* = .54), in attachment avoidance. The flat line for high avoidance is consistent with people high in attachment avoidance being less concerned about how valued they are by their partners.



The effects of female support providers' felt valued and appreciated and female providers' attachment avoidance on female providers' negative support behavior in Study 1.

Note. High and low values are indexed at 1 SD above and below the mean.

5. Additional Analyses: Alternative Explanations (Studies 1 and 2)

We ran a series of additional analyses to rule out alternative explanations and potential feedback loops across the variables in our conceptual model shown in Figure 2.1. We consider each of these alternative explanations in turn, presenting the results of additional analyses in both studies, theoretical consideration of causal direction where relevant, and offer our conclusions. We provide only a brief summary of these analyses in the paper.

Recipients' Attachment Insecurity

Given that attachment insecurity can also affect the way people respond when they are support recipients (e.g., Collins & Feeney, 2000; Florian, Mikulincer, & Bucholtz, 1995; Simpson, Rholes, & Nelligan, 1992), we ran additional analyses to ensure that the effects of support providers' attachment anxiety outlined in Figure 2.1 (Predictions A and B) were not the result of support *recipients'* attachment anxiety or avoidance. To do this, in both studies we reran the dyadic regression models testing Predictions A and B with the main and interaction effects of support recipients' attachment anxiety and attachment avoidance as additional predictors.

Study 1. Only support providers' attachment anxiety moderated the effects of Prediction A (B = -.20, t = -2.18, p = .03) and Prediction B (B = -.16, t = -2.53, p = .01), and the concomitant interactions with support recipients' attachment anxiety (ts < .50; ps > .62) and attachment avoidance (ts < -.58; ps >.34) were non-significant.

Study 2. Only one significant interaction of support recipients' attachment insecurity emerged: support providers engaged in greater negative support behaviors when they felt less valued and appreciated when support *recipients* were higher in attachment anxiety (B = .12, t = 2.31, p = .02). Nonetheless, the effects of support providers' attachment anxiety (described in the manuscript) for men remained significant (Prediction A: B = -.18, t = -2.29, p = .03, Prediction B: B = -.17, t = -2.19; p = .03).

These analyses show that the effects of support providers' attachment anxiety outlined in Predictions A and B (and Figure 2.1) are not the result of support recipients' attachment insecurity. Finally, we also wanted to ensure that the declines in support recipients' relationship quality across time associated with greater support providers' negative support behavior (Prediction C, Figure 2.1) was not the result of support recipients' attachment anxiety or avoidance. In both studies, the effect outlined in Prediction C remained significant controlling for support recipients' anxiety and avoidance (Study 1, B = -.29, t = -3.37, p = .00; Study 2, B = -.13, t = -2.65, p = .01).

Relationship Status and Length

Additional analyses testing whether relationship status (married/cohabiting versus not) or relationship length moderated the set of predictions in Figure 2.1 revealed no differences in the effects presented across both Studies 1 and 2. We also examined examine whether the gender differences reported in the manuscript were further moderated by relationship status or length. The gender effects were not further moderated by relationship status (Study 1, Prediction C: t = 1.14, p = .26; Study 2, Predictions A and B: ts < 1.37, ps > .17) or relationship length (Study 1, Prediction C: t = 1.55, p = .13; Study 2, Predictions A and B: ts < 0.78, ps > .12).

Providers' Negative Support Behavior and Recipients' Distress

Due to the cross-sectional nature of the data it is possible that there are alternative effects that are likely to occur between the variables depicted in Figure 2.1. However, it is not possible with cross-sectional data to examine which of these plausible effects occur first, but we can examine whether the predicted associations are independent of other associations. The key possibility we tested was whether support recipients' distress was an outcome of providers' negative support behavior, whereas our Prediction A positioned support recipients' distress as a predictor of support providers' felt valued/appreciated. We ran additional

analyses to test whether the association between support recipients' distress on support providers' felt valued/appreciated (the proximal outcome of support recipients' distress in our conceptual model in Figure 2.1; Prediction A) remains independent of any association between support providers' negative behavior and support recipients' distress.

We first ran analyses examining whether greater support providers' negative support behavior is associated with support greater recipients' distress, and whether this association is greater when providers are high in attachment anxiety. This model regressed *support recipients'* distress on (1) support providers' negative support behavior, (2) support providers' attachment anxiety, and (3) the interaction between support providers' negative support behavior and support providers' attachment anxiety. In Study 1, support providers' negative support behavior was marginally associated with greater support recipients' distress ($t = 1.79$, $p = .078$), but this was not greater when providers were high in attachment anxiety (i.e., the interaction effect was not significant; $t = 1.23$, $p = .22$). In Study 2, however, the interaction was significant ($t = 2.47$, $p = .02$) revealing that support recipients felt greater distress when support providers exhibited greater negative behavior when providers were high (*slope* = .49, $t = 3.97$, $p < .001$), but not low (*slope* = .02, $t = .13$, $p = .90$), in attachment anxiety.

Although the link between anxious support providers' negative behavior and support recipients' distress was only significant in Study 2, we still wanted to ensure that support recipients' distress was associated with support providers' felt valued/appreciated (Prediction A) irrespective of the links between support providers' negative support behavior and support recipients' distress. So we reran the dyadic regression model for Prediction A outlined in the manuscript modeling as simultaneous predictors (1) support providers' negative support behavior, and (2) the interaction between support providers' negative support behavior and support providers' attachment anxiety. The interaction between support recipients' distress

and support providers' attachment anxiety on support providers' felt valued/appreciated remained in both Studies 1 (t = -1.92, p = .058) and 2 (for men, t = -2.66, p = .01), whereas the interaction between support providers' negative support behavior and support providers' attachment anxiety was non-significant in both Study 1 (t = 0.03, p = .98) and Study 2 (t = -0.27, p = .79). Thus, even if or when support recipients' distress is produced by what is occurring during couples' support exchange, and in particular support providers' negative support behavior, greater support recipients' distress still remained associated with lower feelings of value/appreciation for more anxious support providers.

These analyses also provide greater evidence that it is support recipients' distress resulting in more anxious support providers' lower feelings of valued/appreciated, rather than vice versa. It is possible that support recipients' distress could be the result of support providers' feelings of value/appreciation (rather than vice versa). However, if providers' felt valued/appreciated does produce recipients' distress this should occur via *expressions* of lower feelings of value/appreciation, such as negative support behavior. Thus, lower feelings of value/appreciation would be an unlikely predictor of recipients' distress unless such lower felt valued/appreciated was communicated to recipients via negative behavior. Yet, the analyses above establish that the effects we demonstrated were not the result of providers' negative behavior, and so our interpretation of the effects is the more plausible one.

Recipients' Actual Value/Appreciation of Support Providers

It is also plausible that, rather than lower value/appreciation causing negative support behavior by more anxious providers (Prediction B), the reverse causal direction is at play; that is, more anxious providers' negative behavior causes feelings of low value/appreciation. This is much less theoretically plausible because a key principle arising from attachment theory is that the specific attachment concerns associated with attachment anxiety (i.e., low relational value) lead to destructive responses in relationship interactions

(rather than vice versa). Nonetheless, it is important to provide stronger evidence for our predictions that it is providers' own relational concerns that are driving the effects. One important way to do this is to show that the effects are specific to providers' feelings of value/appreciation rather than the recipients' actual feelings of value/appreciation for providers that would be diminished if providers are engaging in negative behavior.

In addition to providers' feelings of being valued and appreciated, we also collected measures of recipients' actual value and appreciation of their partner. In particular, recipients rated analogous items as those reported by providers, including how much they (support recipients') valued (1 = *did not value at all*, 7 = *valued very much*) and appreciated (1 = *did not appreciate at all*, 7 = *appreciated my partner very much*) their partner's (support providers') input during the discussion. We ran additional analyses examining whether (1) recipients' distress and its interaction with providers' attachment anxiety is associated with recipients' actual value/appreciation of partner, and then tested whether (2) the dyadic interaction effects of providers' attachment anxiety (Predictions A and B outlined in the manuscript) remained significant controlling for recipients' actual value/appreciation and the interaction between recipients' actual value/appreciation and providers' attachment anxiety.

To examine whether recipients' distress is associated with recipients' actual value/appreciation, we regressed recipients' actual value/appreciation of the support provider on (1) recipients' distress, (2) providers' attachment anxiety, and (3) the interaction between recipients' distress and providers' attachment anxiety. In both Studies 1 and 2, the interaction effect (i.e., recipients' distress and providers' attachment anxiety) did not predict recipients' actual value/appreciation of partner (*t* = -1.32, .53, *p* = .19, 59, respectively) as it did for providers' feelings of being valued/appreciated. Thus, the effects are the result of more anxious support providers' own concerns and felt relational value, and not because recipients actually valued/appreciated more anxious support providers less.

This conclusion was further supported when rerunning the dyadic regression models for Predictions A and B outlined in the manuscript modeling as simultaneous predictors (1) recipients' actual value/appreciation and (2) the interaction between recipients' actual value/appreciation and providers' attachment anxiety: in both Studies 1 and 2, the links between recipients' distress and providers' attachment anxiety on providers' feelings of value/appreciation (Prediction A, men only in Study 2; *t*s = -1.90, -2.16, *p*s = .06, .03, respectively) or the links between providers' value/appreciation and providers' attachment anxiety on providers' negative support behavior (Prediction B, men only in Study 2; *t*s = -1.94, -2.21, *p*s = .055, .03, respectively) were not substantively altered.

These analyses show that the dynamics we are assessing are arising from the concerns and fears associated with attachment anxiety and not because more anxious providers are less valued or their reactions within couples' discussions are causing recipients to value them less.

6. Additional Analyses: Independence of Predictions

The contribution of these data do not hinge on mediation processes or indirect effects, but rather isolate theoretically-derived predictions regarding how important elements of support processes are likely to be moderated by attachment anxiety. Most important, each prediction does not rest on the preceding path – that is, we predicted that providers' lower feelings of value/appreciation would be associated with more negative support behavior by highly anxious individuals regardless of whether that low relational/value arose because of recipients' distress. However, we do think that the set of predictions are conceptually connected given the implications of low relational/value if it does arise as a function of recipients' distress. Thus, here we demonstrate that each prediction is distinct from and occurs even when controlling for the variables involved in the preceding prediction(s).

Independence of Prediction B: Our model implies that low value/appreciation is associated with negative support behavior by highly anxious providers (Prediction B) more directly and independently of recipients' distress (the focus in Prediction A). Here we provide the results of analyses testing whether recipients' distress x providers' anxiety (the predictors in Prediction A) was associated with providers' negative behavior (the outcome of Prediction B). In both studies, recipients' distress x attachment anxiety did predict providers' negative behavior (Study 1, $t = 2.48$, $p = .01$ and Study 2, $t = 2.02$ $p = .05$ men only) revealing that when recipients were highly distressed, providers exhibited greater negative support behavior when providers were high (Study 1 *slope* = .27, $t = 3.27$, $p \leq .001$ and Study 2 *slope* = .37, $t = 4.39$, $p \leq .001$) but not low (Study 1 *slope* = -.04, $t = -.38$, $p = .70$ and Study 2 *slope* = .14, $t = 1.52$, $p = .13$) in attachment anxiety.

Nonetheless, analyses examining whether the moderation shown in Prediction B (providers' value/appreciation x providers' anxiety on providers' negative behavior) arises even when controlling for the predictors (recipients' distress x providers' anxiety) in

Prediction A supported that providers' value/appreciation was the more proximal predictor compared to recipients' distress (consistent with the conceptual model outlined in Figure 2.1). In Study 1, rerunning the dyadic analyses showing Prediction B controlling for the main and interaction effects of recipients' distress and providers' attachment anxiety (Predictors in Prediction A) revealed that our theorized Prediction B effect remained significant (t = -2.24, p = .03), but the interaction effect between recipients' distress and providers' attachment anxiety (t = 0.60, p = .55) on providers' negative support behavior was non-significant. In Study 2, however, both interaction effects become non-significant, but the Prediction B effect t = -1.37, p = .17) was stronger than the Prediction A effect (t = 0.85, p = .40) and simple slope analyses continued to support that male support providers who felt less valued and appreciated engaged in greater negative behaviors when they were high (*slope* = -.31, t = -2.25, p = .03), but not low (*slope* = -.05, t = -.47, p = .64), in attachment anxiety.

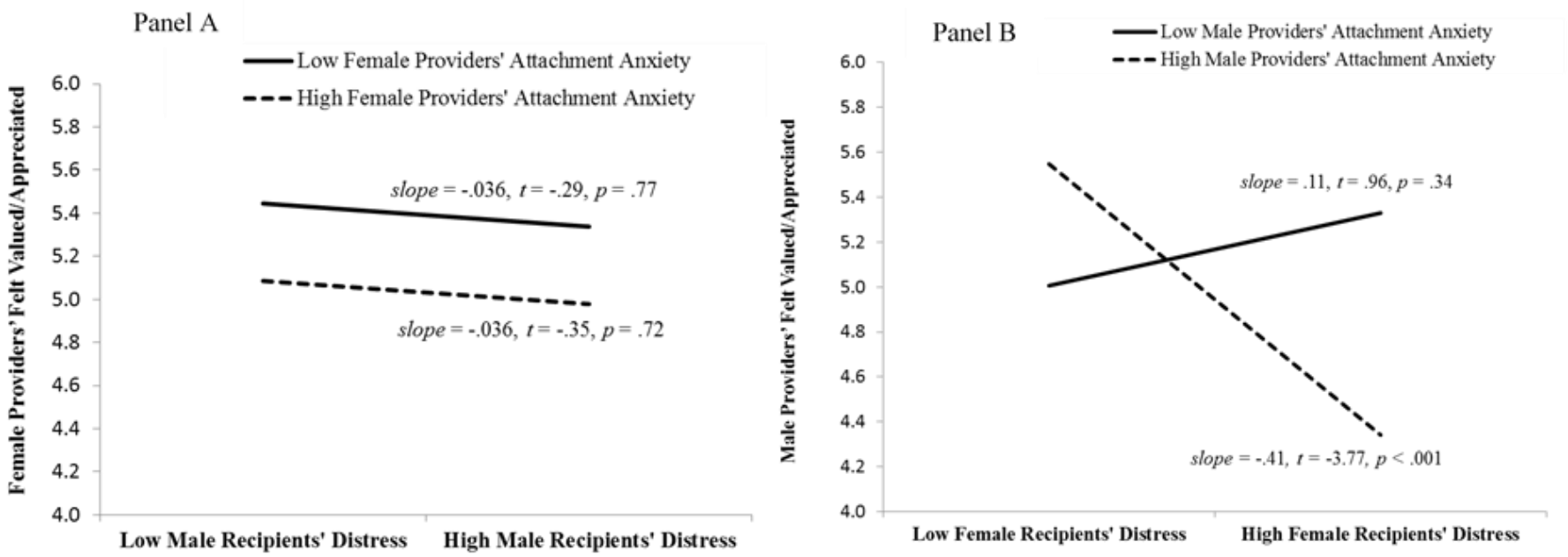
Independence of Prediction C: Our model implies that greater providers' negative support behavior is associated with declines in recipients' relationship quality across time (Prediction C) more directly and independently of the support providers' attachment anxiety, support recipients' distress (the focus in Prediction A) or support providers' felt valued/appreciated (the focus in Prediction B). Thus, we first tested whether (1) support recipients' distress x providers' anxiety (the predictors in Prediction A) and (2) providers' felt valued/appreciated x providers' anxiety (predictors in Prediction B) were directly associated with recipients' relationship quality across time (the outcome of Prediction C). In both studies, the predictors in Prediction A (recipients' distress x providers' attachment anxiety) (t = 0.86, p = .40 and t = -1.53, p = .13) and predictors in Prediction B (providers' felt valued/appreciated x providers' attachment anxiety) (t = -0.55, p = .59 and t = -0.54, p = .59) did not directly predict recipients' relationship quality across time (outcome in Prediction C).

Secondly, we tested whether the association between providers' negative support behavior and recipients' relationship quality across time (Prediction C) arises even when controlling for the predictors in Predictions A (i.e., recipients' distress x providers' anxiety) and B (i.e., providers' felt valued/appreciated x providers' anxiety). Controlling for all of these alternative predictor variables revealed that they continued to not significantly predict declines in recipients' relationship quality (Prediction A: *t*s < 1.27, *p*s > .18; Prediction B: *t*s < -.55, *p*s > .45) and, despite the number of variables in these models that undermined power to detect longitudinal effects, the significant effects of providers' negative support behavior reported in the manuscript remained significant or marginally significant ($t = -2.67$, $p = .01$ and $t = -1.66$, $p = .099$ for Study 1 and Study 2).

Overall, these analyses demonstrate that each prediction is distinct from and occurs even when controlling for the variables involved in the preceding prediction(s).

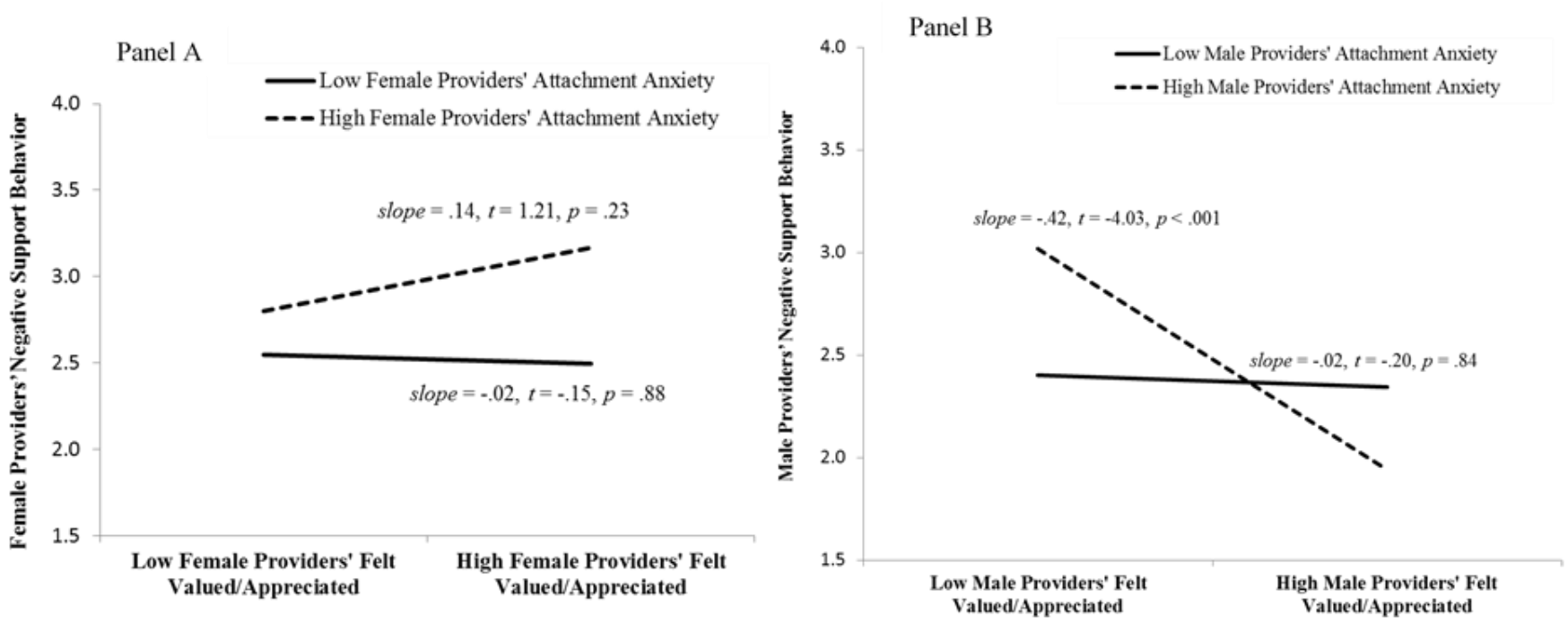
7. Effects for Female Providers in Study 2

In Study 2, Prediction A (i.e., recipients' distress x providers' attachment anxiety) and B (i.e., providers' felt valued/appreciated x providers' attachment anxiety) interaction effects were further moderated by gender, which revealed that the interactions were significant for men, but not women. The non-significant slopes for female support providers are illustrated below. The pattern for women is similar to that for men with regards to Prediction A (i.e., when male recipients are highly distressed female providers feel less valued/appreciated when they are high in attachment anxiety). However, the pattern is not similar in Prediction B (i.e., when female providers feel less valued/appreciated they exhibit lower levels of negative support behavior when they are high in attachment anxiety), and in both cases the slopes for high attachment anxiety is not significant.



The effects of support recipients' distress and female (Panel A) and male (Panel B) support providers' attachment anxiety on support providers' feelings of being valued and appreciated in Study 2 (Panel A).

Note. High and low values are indexed at 1 SD above and below the mean.



The effects of female (Panel A) and male (Panel B) support providers' felt valued and appreciated and their attachment anxiety on providers' negative support behavior in Study 2 (Panel A).

Note. High and low values are indexed at 1 SD above and below the mean.

Appendix 2 - Chapter Three Supplemental Materials

These supplemental materials include additional information on the sample, including consideration of sample size and power, and present additional analyses to support the conclusions presented in the paper.

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1. Sample Information

These types of dyadic studies are time and resource intensive which has two important implications. First, sample sizes are necessarily constrained. Second, these studies are designed to examine multiple, independent processes (as is necessary and appropriate; see APA manual, p. 14). As we describe below, both studies had adequate power to test the associations focused on in this paper and these associations were independent of any reported in prior publications using these data.

Study 1

The original use of this sample involved assessing the degree to which different types of support predict recipients' relationship evaluations and goal success across time (Overall, Fletcher, & Simpson, 2010). Full details of the sample and procedure can be found in Overall et al. (2010). The links between self-esteem and the different types of support assessed have never been previously reported. Thus, the results presented here are unique, and test novel and separate associations than those reported by Overall et al. (2010). Measures of providers' or recipients' efficacy were not gathered.

Power analyses using the Actor-Partner Interdependence Model (APIM) power module (Ackerman, Ledermann, & Kenny, 2016) indicates this sample and design (122 support interactions) provides adequate power (.90) to detect small (r = .20) actor and partner main effects when variables are moderately correlated across partners (r = .30). This fairly represents the context of the effect of self-esteem (r = .25).

Study 2

Funding was received for the recruitment of 85 couples based on the power needed to detect small actor and partner effects (Ackerman et al., 2016) and we continued data collection across the 1.5 years funded. Post-hoc power analyses focused on the specific effects in the current analyses indicate adequate power (> .80) for the majority of focal

associations, although power was reduced for the longitudinal associations due to sample attrition, which we describe further below.

We conducted post-hoc power analyses for each path in Figure 3.1 using the software G*Power (Faul, Erdfelder, Buchner, & Lang, 2009). In post-hoc power analysis the power (i.e., 1 – β err prob) is computed as a function of:

1. α (i.e., probability of Type 1 error, which is set at 0.05 by Faul et al., 2009).

2. The effect size (i.e., f^2, which was calculated in G*Power by (a) entering in the R^2 of the specific predictor under *variance explained by special effect* and (b) calculating the *residual variance* which is defined as 1 – (R^2 of the full-model) (Faul et al., 2009). PROCESS provides the R^2 for the calculation of each path, which represents the prediction of each outcome from all the predictors in the model (i.e., R^2 of the full-model). We used this R^2 value to calculate the *residual variance* value (i.e., 1 – [R^2 of the full-model]). However, to calculate the R^2 of the specific predictor in each path (i.e., *variance explained by special effect*), we used the *t* values (presented in Figures 3.2 and 3.3) given by the PROCESS macros for the calculation of each path (while controlling for the prior paths in the model) to calculate R^2 to indicate the *variance explained by special effect*.

3. Total sample size (Paths A, B, and C: $N = 85$; Paths D and E: $N = 58$).

4. Number of *tested* predictors (one focal predictor across all paths).

5. Total number of predictors (based on the number of preceding paths: Path A = 1 predictor (providers' self-esteem), Path B = 2 predictors (providers' self-esteem and efficacy), Path C = 4 predictors (providers' self-esteem, efficacy and esteem support and recipients' efficacy prior to discussions), Path D = 5 predictors (providers' self-esteem, efficacy and esteem support and recipients' efficacy prior to discussions and self-esteem at the initial session), and Path E = 6 predictors (providers' self-esteem, efficacy and esteem

support and recipients' efficacy prior to discussions, efficacy 6-months later and self-esteem at the initial session).

These post-hoc power analyses generally indicated adequate statistical power. The cross-sectional associations testing the processes within couples' support discussion had power estimates over .80 (Path A [.82], Path B [.94], Path C [.99]). The longitudinal paths would have been adequately powered with the original sample (Path D [.83] and Path E [1.00]). However, we had larger attrition than expected, probably because of the community-based sample (rather than the typical university-based samples). This meant that power to detect the longitudinal associations between esteem support and changes in recipients' efficacy across time (controlling for all other prior paths) was reduced (Path D [.67]), although Path E involving associations within the six-month follow-up assessment remained well powered (Path E [.99]).

Data from this sample has been used previously to examine the links between support recipients' attachment avoidance and reactions to support provision (Girme, Molloy, & Overall, 2016; Girme, Overall, Simpson, & Fletcher, 2015), but the links between self-esteem, feelings of efficacy, support provision, and changes in efficacy and self-esteem across time have never been reported. All of the measures and results presented here are unique, test novel and separate hypotheses, and are entirely independent of the prior papers.

2. ***Table SM 2.1.*** *Correlations Across All Time 1 Variables (Study 2)*

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Providers' Self-Esteem	-											
2. Providers' Efficacy during Couples' Discussions[a]	.31**	-										
3. Providers' Reports of Esteem Support	.23*	.40**	-									
4. Recipients' Perceptions of Esteem Support	.08	.36**	.48**	-								
5. Recipients' Efficacy Prior to Couples' Discussions[a]	.10	.15	.18	.26*	-							
6. Recipients' Efficacy during Couples' Discussions[a]	.31**	.28**	.45**	.43**	.41**	-						
7. Recipients' Self-Esteem	.23*	.05	.09	.05	.42**	.32**	-					
8. Providers' Attachment Anxiety	-.45**	-.23*	-.17	-.05	-.08	-.06	-.30**	-				
9. Providers' Depressive Symptoms	-.44**	-.30**	-.34**	-.10	-.11	-.18	-.01	.40**	-			
10. Providers' Reports of Practical Support	.19	.32**	.68**	.38**	.12	.32**	-.07	-.22*	-.33**	-		
11. Recipients' Perceptions of Practical Support	.07	.32**	.36**	.76**	.14	.34**	-.10	.09	-.15	.39**	-	
12. Providers' Relationship Quality	.27*	.32**	.59**	.27*	.15	.22*	.13	-.25*	-.43**	.44**	.20	-
13. Recipients' Relationship Quality	.13	.27*	.36**	.15	.27	.14	.30**	-.09	-.29**	.36**	.14	.64**

Note. Recipients refers to the couple members whose stressful challenge was the topic of couples' support discussions and *providers* refers to the partners who could respond to recipients' stressful challenge with support. $^{*}p < .05$. $^{**}p < .01$.

3. ***Table SM 2.2.*** *Descriptive Statistics of All Variables (Study 2)*

Variables	***Mean (SD)***	***IR***
1. Providers' Self-Esteem	5.07 (1.17)	.90
2. Providers' Efficacy during Couples' Discussions[a]	4.87 (1.20)	.52
3. Providers' Reports of Esteem Support	5.28 (1.22)	.88
4. Recipients' Perceptions of Esteem Support	5.09 (1.50)	.93
5. Recipients' Efficacy Prior to Couples' Discussions[a]	3.87 (1.38)	.40
6. Recipients' Efficacy during Couples' Discussions[a]	4.31 (1.21)	.58
7. Recipients' Efficacy 6-months Later[a]	4.96 (1.63)	.65
8. Recipients' Self-Esteem	4.66 (1.25)	.91
9. Recipients' Self-Esteem 6-months Later	5.03 (1.23)	.92
10. Providers' Attachment Anxiety	2.93 (1.16)	.81
11. Providers' Depressive Symptoms	14.22 (7.68)	.85
12. Providers' Reports of Practical Support	5.42 (1.00)	.81
13. Recipients' Perceptions of Practical Support	5.16 (1.39)	.91
14. Recipients' Relationship Quality	6.01 (.88)	.88
15. Recipients' Relationship Quality	5.94 (.93)	.88

Note. Recipients refers to the couple members whose stressful challenge was the topic of couples' support discussions and *providers* refers to the partners who could respond to recipients' stressful challenge with support. [a] The internal reliability (IR) was measured with Pearson's correlation *r* for all two-item measures. For all other measures the IR was measured with Cronbach's alphas.

4. Alternative Esteem Support Variable

As outlined in Footnote 1, our assessment of esteem support originally included additional items assessing warmth and reassurance (e.g., "I gave my partner reassurance or comfort" and "I was warm and affectionate toward my partner"). There items were included because instilling confidence and efficacy also involves expressing positive regard and faith in the partner, and thus general warmth and reassurance (e.g., Holmstrom, 2012). However, these items also overlap with emotional forms of support (see Table 3.1) and thus we removed them in response to feedback received during the review process of potential ambiguity in the overlap between esteem and emotional support. Results including these two additional items were identical to those presented in Figures 3.2-3.5 in the manuscript. We outline these results below.

Paths A, B, and C. Rerunning the base analyses replacing the 5-item with the 7-item providers' esteem support variable replicated the effects shown in Figure 3.2 (Path A: B = .32, SE = .11, t = 2.93, p = .004, 95% CI [.10, .53], Path B: B = .37, SE = .10, t = 3.59, p < .001, 95% CI [.16, .57], Path C: B = .34, SE = .09, t = 3.82, p < .001, 95% CI [.16, .51]) and the predicted serial mediation indirect effect shown in Table 3.3 (indirect effect = .04, SE = .02, 95% CI [.01, .10]). Similarly, modeling recipients' perceptions of esteem support with the 7-item assessment of esteem support also replicated the effects shown in Figure 3.3 (Path A: B = .31, SE = .11, t = 2.93, p = .004, 95% CI [.10, .53], Path B: B = .45, SE = .13, t = 3.43, p < .001, 95% CI [.19, .72], Path C: B = .26, SE = .08, t = 3.13, p = .003, 95% CI [.09, .43]) and the predicted serial mediation indirect effect shown in Table 3.4 (indirect effect = .03, SE = .02, 95% CI [.01, .10]).

Paths A, B, D, and E. Analyses with the 7-item assessment also replicated. When modeling providers' reports of esteem support, Paths D and E shown in Figure 3.4 (B = .53, .30, SE = .21, .10, t = 2.54, 2.83, p = .014 and .002, 95% CI [.11, .95], [.09, .51]) and the

predicted serial mediation indirect effect shown in Table 3.6 remained significant (indirect effect = .02, *SE* = .02, 95% CI [.01, .10]). When modeling recipients' perceptions of esteem support, Paths D and E shown in Figure 3.5 (*B* = .18, .29, *SE* = .19, .10, *t* = .95, 2.99, *p* = .345 and .004, 95% CI [-.20, .55], [.10, .49]) and the predicted serial mediation indirect effect shown in Table 3.7 were similar (indirect effect = .01, *SE* = .01, 95% CI [-.003, .055]).

5. Regression Analyses Supporting PROCESS Macros Analyses (Study 2)

We conducted a series of multiple regressions in SPSS 24 to replicate the effects presented in the paper and (1) show interested readers the drops in associations when mediating variables were controlled (see Footnote 2), and (2) test for moderators of the associations (see Section 7). These multiple regression analyses provided the same results as those calculated from PROCESS (see below Figures SM 2.1-SM 2.4). They also demonstrate the importance of the mediators in explaining links across variables.

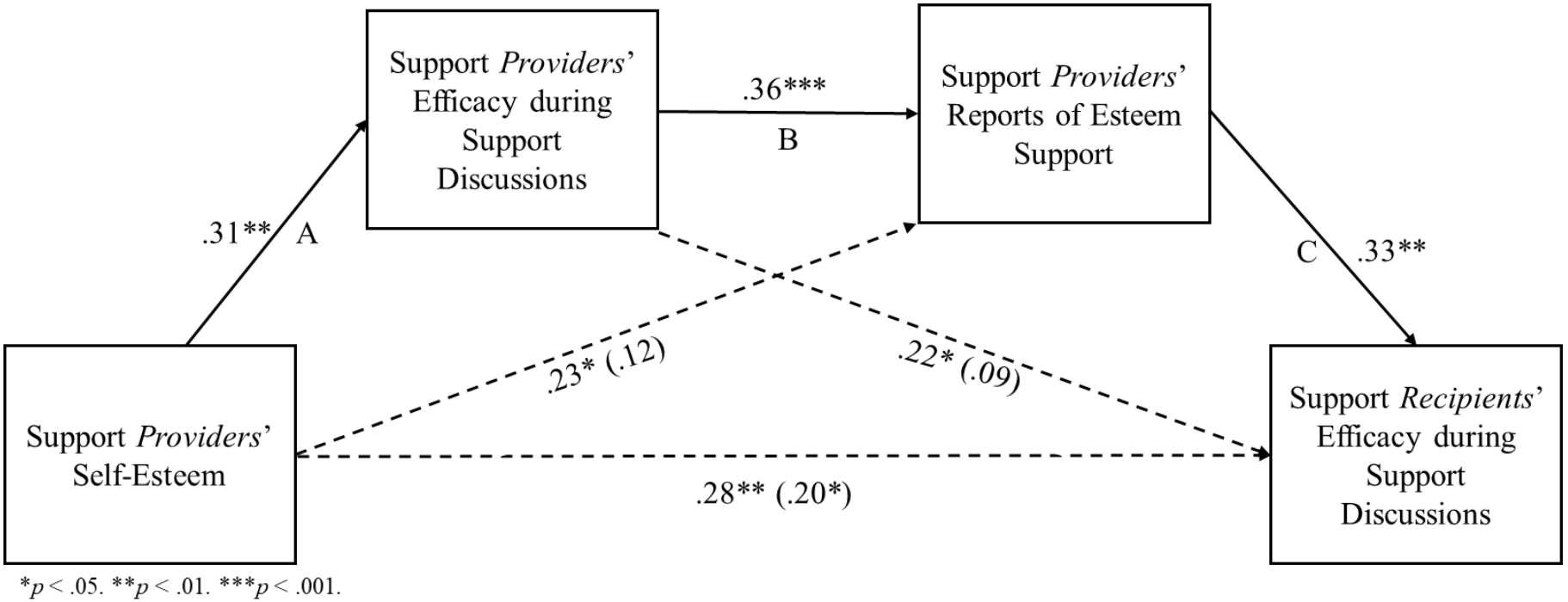

Figure SM 2.1. Regression analyses testing the predicted associations between support *providers'* self-esteem, efficacy and esteem support and support *recipients'* efficacy during couples' discussion of recipients' most stressful challenge.

Note. Paths associations are standardized regression coefficients. Coefficients on the solid line represent the effects of predicted paths (in Figure 3.1) controlling for prior paths. Coefficients on the dashed line represent the association before controlling for mediating variable(s) and, in parentheses, the association after controlling for mediating variable(s). All analyses predicting recipients' efficacy during couples' support discussions control for recipients' efficacy *prior* to couples' support discussions.

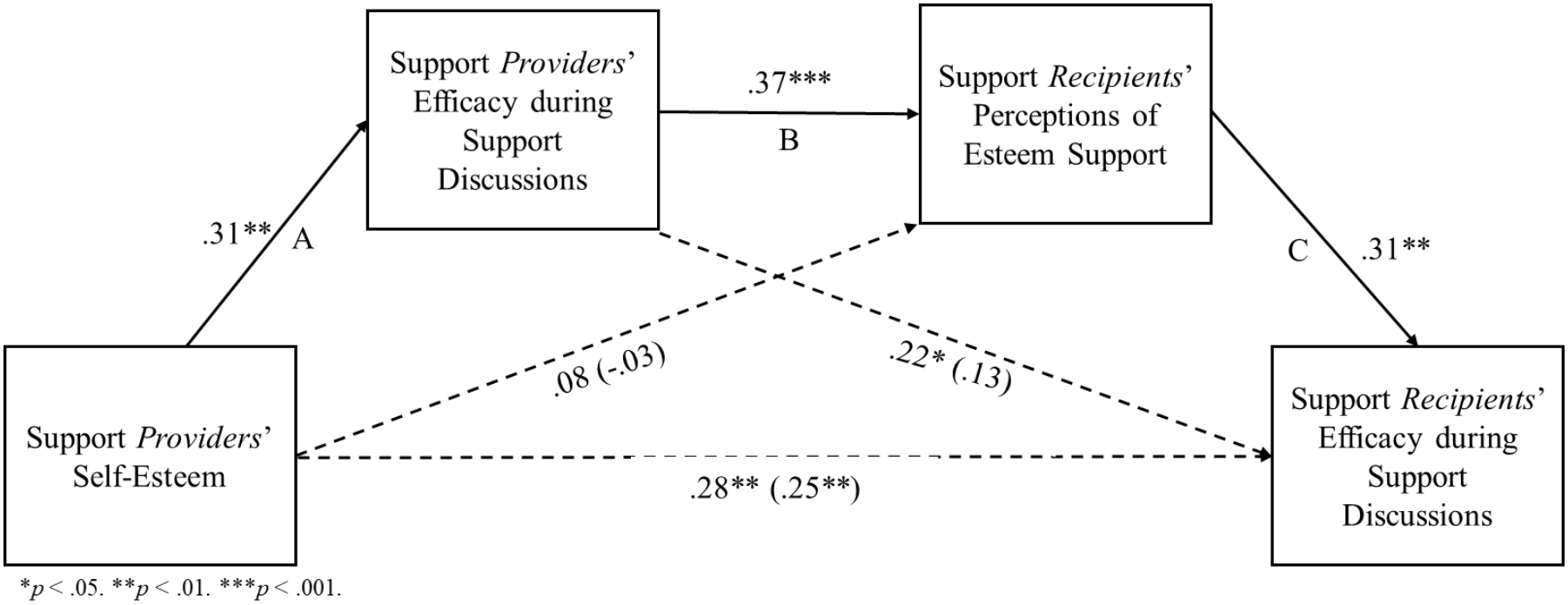

Figure SM 2.2. Regression analyses testing the predicted associations between support *providers'* self-esteem and efficacy, support *recipients'* perceptions of esteem support and efficacy during couples' discussion of recipients' most stressful challenge.

Note. Paths associations are standardized regression coefficients. Coefficients on the solid line represent the effects of predicted paths (in Figure 3.1) controlling for prior paths. Coefficients on the dashed line represent the association before controlling for mediating variable(s) and, in parentheses, the association after controlling for mediating variable(s). All analyses predicting recipients' efficacy during couples' support discussions control for recipients' efficacy *prior* to couples' support discussions.

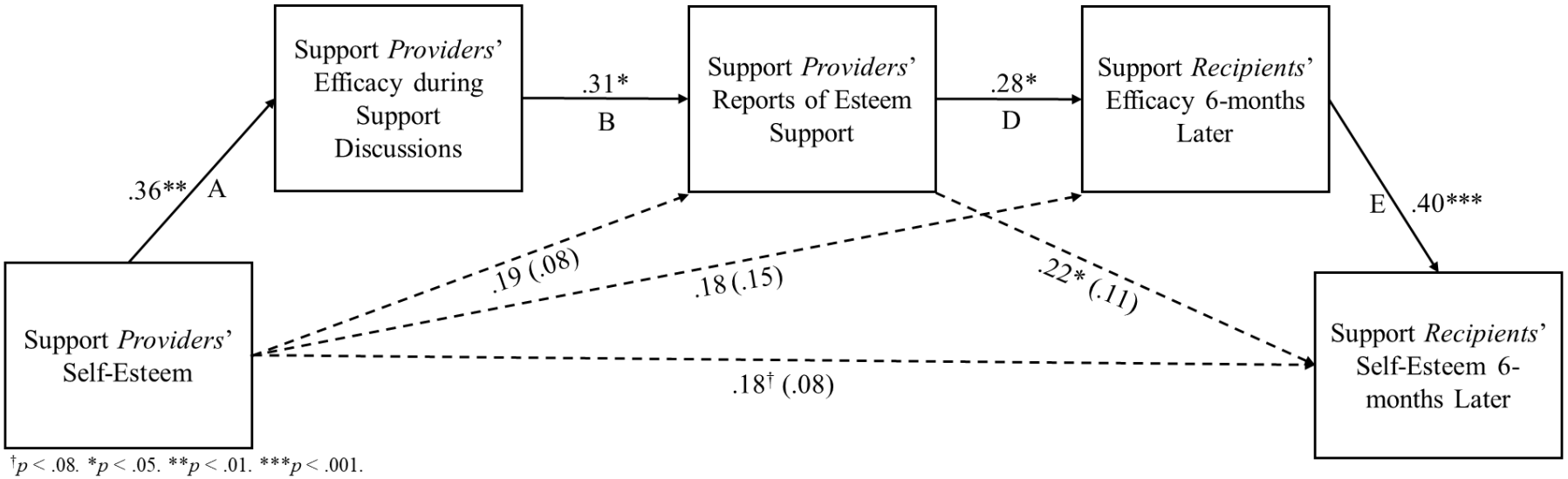

Figure SM 2.3. Regression analyses testing the predicted associations between support *providers'* self-esteem, efficacy and esteem support during couples' discussion of recipients' most stressful challenge and support *recipients'* efficacy and self-esteem 6-months later.

Note. Path associations are standardized regression coefficients. Coefficients on the solid line represent the effects of predicted paths (in Figure 3.1) controlling for prior paths. Coefficients on the dashed line represent the association before controlling for mediating variable(s) and, in parentheses, the association after controlling for mediating variable(s). All analyses predicting recipients' efficacy and self-esteem 6-months later control for recipients' efficacy *prior* to couples' support discussions and recipients' self-esteem at the initial session.

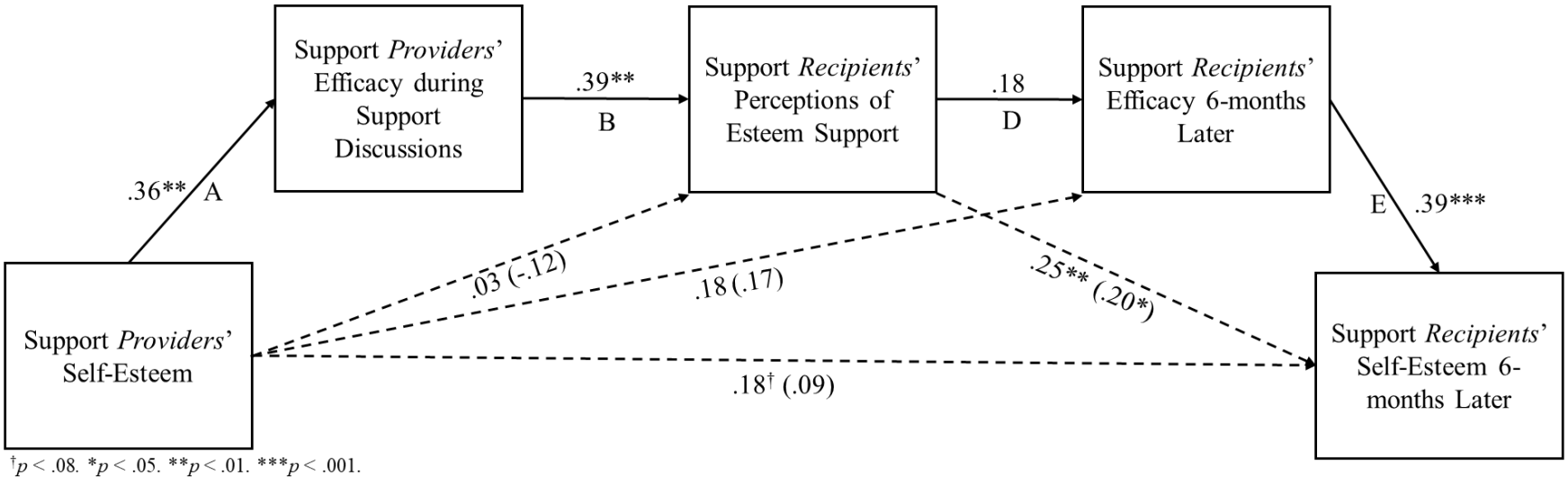

Figure SM 2.4. Regression Analyses testing the predicted associations between support *providers'* self-esteem and efficacy, support *recipients'* perceptions of esteem support during couples' discussion of recipients' most stressful challenge and support *recipients'* efficacy and self-esteem 6-months later.

Note. Paths associations are standardized regression coefficients. Coefficients on the solid line represent the effects of predicted paths (in Figure 3.1) controlling for prior paths. Coefficients on the dashed line represent the association before controlling for mediating variable(s) and, in parentheses, the association after controlling for mediating variable(s). All analyses predicting recipients' efficacy and self-esteem 6-months later control for recipients' efficacy *prior* to couples' support discussions and recipients' self-esteem at the initial session.

6. Alternative Explanations

We conducted a series of additional analyses to rule out alternative explanations. Specifically, we tested whether the effects were specific to providers' self-esteem and not due to providers' attachment anxiety (Studies 1 and 2) or depressive symptoms (Study 2). We also tested whether the results were specific to esteem support and not due to practical support (Study 2). We also controlled for relationship quality to rule out the possibility that the predicted effects were simply due to more positive vs. negative relationship evaluations.

Support Providers' Attachment Anxiety and Depressive Symptoms

Prior research has shown that attachment anxiety and general affective states, such as depressive symptoms, are also associated with lower self-evaluations and efficacy in interpersonal contexts (Maciejewski, Prigerson, & Mazure, 2000; Mallinckrodt & Wei, 2005; Wei, Russell, & Zakalik, 2005) and poorer support provision (Davila, Bradbury, Cohan, & Tochluk, 1997; Gurung, Sarason, & Sarason, 1997; Jayamaha, Girme, & Overall, 2016). To show that the predicted effects were a function of providers' self-esteem, we tested and controlled for the effects of providers' attachment anxiety and depressive symptoms.

Support Providers' Attachment Anxiety (Studies 1 and 2). In Study 1, providers' attachment anxiety was not significantly associated with providers' esteem support (r = -.14, p = .129), and controlling for *providers'* attachment anxiety did not alter the significant effect of *providers'* self-esteem on providers' esteem support (B = .22, t = 2.17, p = .032, 95% CI [.02, .42], r = .22).

In Study 2, support providers' attachment anxiety was significantly negatively associated with providers' efficacy but not esteem support (see Table SM 2.1 above). Providers' attachment anxiety was significantly associated with recipients' self-esteem across time (r = -.32, p = .013) but, unlike providers' self-esteem, did not predict recipients' efficacy during couples' support discussions. Nonetheless, the serial mediation models examining

support processes within couples' discussions (see Figures 3.2 and 3.3) indicated significant indirect effects for providers' attachment anxiety (*provider* reports of esteem support: indirect effect = -.031, *SE* = .020, 95% CI [-.092, -.005] and *recipients'* perceptions of esteem support: indirect effect = -.024, *SE* = .019, 95% CI [-.083, -.002]). However, these indirect effects were eliminated when controlling for providers' self-esteem (*provider* reports: indirect effect = -.013, *SE* = .015, 95% CI [-.058, .009] and *recipients'* perceptions: indirect effect = -.012, *SE* = .015, 95% CI [-.058, .008]), whereas the serial mediation models for providers' self-esteem continued to be significant (*provider* reports: indirect effect = .028, *SE* = .018, 95% CI [.005, .086] and *recipients'* perceptions: indirect effect = .025, *SE* = .016, 95% CI [.005, .073]). Similarly, the serial mediation in Figure 3.4 examining longitudinal analyses was supported replacing providers' self-esteem with providers' attachment anxiety (indirect effect = -.016, *SE* = .014, 95% CI [-.073, -.002]), but this was eliminated when controlling for providers' self-esteem (indirect effect = -.007, *SE* = .009, 95% CI [-.045, .002]), whereas the serial mediation modeling providers' self-esteem shown in Figure 3.4 continued to be significant (indirect effect = .014, *SE* = .014, 95% CI [.001, .069]). The serial mediation model in Figure 3.5 was also not significant when modeling providers' attachment anxiety (indirect effect = -.008, *SE* = .010, 95% CI [-.046, .002]).

Support Providers' Depressive Symptoms (Study 2). Support providers' depressive symptoms was significantly negatively associated with providers' efficacy and esteem support (see Table SM 2.1). But, unlike providers' self-esteem, providers' depressive symptoms was not significantly associated with recipients' efficacy during couples' support discussions (see Table SM 2.1) or recipients' self-esteem across time (r = -.18, p = .173). However, serial mediation analyses examining support processes within couples' discussions (see Figures 3.2 and 3.3) produced significant indirect effects for providers' depressive symptoms (*provider* reports: indirect effect = -.03, *SE* = .02, 95% CI [-.09, -.01] and

recipients' perceptions: indirect effect = -.03, *SE* = .02, 95% CI [-.09, -.01]), and these remained when controlling for providers' self-esteem (*provider* reports: indirect effect = -.02, *SE* = .02, 95% CI [-.070, -.001] and *recipients'* perceptions: indirect effect = -.02, *SE* = .02, 95% CI [-.071, -.002]). Nonetheless, the serial mediation models for providers' self-esteem shown in Figures 3.2 and 3.3 also continued to be supported (*provider* reports: indirect effect = .02, *SE* = .02, 95% CI [.0004, .0783] and *recipients'* perceptions: indirect effect = .02, *SE* = .02, 95% CI [.001, .0773]). Moreover, depressive symptoms did not have independent longitudinal associations. The serial mediation in Figure 3.4 was significant when replacing providers' self-esteem with providers' depressive symptoms (indirect effect = -.015, *SE* = .016, 95% CI [-.074, -.001]) but was eliminated when controlling for providers' self-esteem (indirect effect = -.001, *SE* = .011, 95% CI [-.048, .001]), whereas the serial mediation for providers' self-esteem shown in Figure 3.4 continued to be significant (indirect effect = .013, *SE* = .013, 95% CI [.001, .067]). The mediation model in Figure 3.5 was also not significant when modeling providers' depressive symptoms (indirect effect = -.008, *SE* = .011, 95% CI [-.049, .002]).

These results suggest that providers' self-esteem is more closely connected to the efficacy-related support processes outlined in Figure 3.1 compared to providers' attachment anxiety or depressive symptoms. These results support the theoretical connection between the self-related esteem support processes we hypothesize. In particular, these additional analyses support that self-efficacy plays a key role in the degree to which low versus high self-esteem individuals are able to provide support to intimate partners. By contrast, attachment anxiety and depressive symptoms should undermine support provision via self- and relational concerns and evaluations more closely tied to these dispositional characteristics. For instance, prior research has found that concerns of relational value interfere with the ability of individuals higher in attachment anxiety to provide responsive support to their partner

(Jayamaha et al., 2016). Prior research postulates that the association between depressive symptoms and poorer support provision could be due to highly depressed individuals' tendency for self-preoccupation (Segal, 1996) that may interfere with the awareness of the needs of the other person (see also Feeney & Collins, 2003 and Gurung et al., 1997). Thus, the efficacy and esteem-related processes paths outlined in Figure 3.1 were uniquely a function of providers' self-esteem and not providers' attachment anxiety or depressive symptoms.

Practical Support (Study 2)

As in Study 1, support providers' self-esteem was not significantly associated with providers' practical support as it was with esteem support (see Table SM 2.1 in Section 2 above). In addition, greater practical support was associated with greater recipients' efficacy during the discussion but, unlike esteem support, did not predict recipients' efficacy (r = .08, p = .554) or self-esteem (r = .02, p = .896) across time. Moreover, although the serial mediation examining support processes within couples' discussion (see Figures 3.2 and 3.3) were significant for practical support (*provider* reports: indirect effect = .02, *SE* = .01, 95% CI [.002, .063] and *recipients'* perceptions: indirect effect = .03, *SE* = .02, 95% CI [.006, .074]), these effects were eliminated when controlling for esteem support (*provider* reports: indirect effect = .0001, *SE* = .004, 95% CI [-.006, .010] and *recipients'* perceptions: indirect effect = .001, *SE* = .005, 95% CI [-.004, .020]). By contrast, the serial mediation models for esteem support shown in Figures 3.2 and 3.3 continued to be significant when controlling for practical support (*provider* reports: indirect effect = .02, *SE* = .01, 95% CI [.001, .065] and *recipients'* perceptions: indirect effect = .001, *SE* = .001, 95% CI [.0003, .0497]). Similarly, practical support did not have longitudinal effects on recipients' efficacy or self-esteem, and the sequential mediation shown in Figures 3.4 and 3.5 was not supported replacing esteem support with practical support (*provider* reports: indirect effect = .009, *SE* = .012, 95% CI [-

.003, .053] and *recipients'* perceptions: indirect effect = -.004, *SE* = .011, 95% CI [-.042, .005]). These results suggest that the support processes outlined in Figure 3.1 are due to providers' esteem support and not practical support.

Relationship Quality (Studies 1 and 2)

Support Providers' Relationship Quality. In Study 1, *providers'* relationship quality was not significantly associated with providers' esteem support (r = .15, p = .092). Controlling for *providers'* relationship quality did not alter the significant effect of *providers'* self-esteem on providers' esteem support (B = .24, t = 2.46, p = .015, 95% CI [.04, .43], r = .24), whereas the concomitant effect of *providers'* relationship quality was not significant (B = .09, t = .54, p = .593, 95% CI [-.23, .40], r = .05).

In Study 2, providers' relationship quality at the initial session was significantly positively associated with providers' efficacy, providers' esteem support and recipients' efficacy during couples' discussions (see Table SM 2.1 above) as well as recipients' efficacy (r = .32, p = .016) and self-esteem (r = .43, p < .001) across time. Nonetheless, rerunning the serial mediation models examining support processes within couples' discussions (see Figures 3.2 and 3.3) controlling for *providers'* relationship quality at the initial session did not alter the path effects shown in Figures 3.2 and 3.3 (Bs > .24, ts > 2.27, ps < .026), and the predicted serial mediation shown in Table 3.3 (indirect effect = .02, *SE* = .02, 95% CI [.003, .077]) and Table 3.4 also remained significant (indirect effect = .02, *SE* = .02, 95% CI [.003, .074]).

Support Recipients' Relationship Quality. In Study 1, *recipients'* relationship quality was significantly positively associated with providers' esteem support (r = .19, p = .032). However, controlling for *recipients'* relationship quality did not alter the significant effect of *providers'* self-esteem on providers' esteem support (B = .24, t = 2.57, p = .012, 95% CI [.06,

.43], r = .25), whereas the concomitant effect of *recipients'* relationship quality was not significant (B = .28, t = 1.83, p = .069, 95% CI [-.02, .59], r = .17).

In Study 2, *recipients'* relationship quality was significantly positively associated with providers' efficacy and esteem support during couples' discussions (see Table SM 2.1 above). Rerunning serial mediation models examining support processes within couples' discussions (see Figures 3.2 and 3.3) controlling for *recipients'* relationship quality at the initial session did not alter the paths shown in Figures 3.2 and 3.3 (Bs > .28, ts > 2.68, ps < .009,) and the predicted serial mediation shown in Table 3.3 (indirect effect = .03, SE = .02, 95% CI [.01, .09]) and Table 3.4 remained (indirect effect = .03, SE = .02, 95% CI [.01, .09]).

With regard to the longitudinal analyses, recipients' relationship quality 6-months later was not associated with providers' esteem support (r = .17, p = .211), but was significantly associated with recipients' self-esteem 6-months later (r = .37, p = .004). However, rerunning the longitudinal serial mediation analyses controlling for *recipients'* relationship quality at the initial session and *recipients'* relationship quality 6-months later did not alter Path D (B = .40, t = 2.05, p = .046) and Path E (B = .27, t = 2.66, p = .011) shown in Figure 3.4, and the predicted serial mediation shown in Table 3.6 also remained significant (indirect effect = .02, SE = .02, 95% CI [.002, .088]).

Taken together, these results provide good evidence that the self-esteem and efficacy processes outlined in the paper are not simply due to general relationship quality.

7. Potential Moderating Variables (Studies 1 and 2)

We conducted additional analyses to test whether the associations reported across the paper were moderated by (a) recipients' self-esteem, (b) relationship status, (c) relationship length, or (d) gender.

Support Recipients' Self-Esteem

In Study 1, *recipients'* self-esteem was not significantly associated with providers' esteem support (r = -.01, p = .926). Controlling for *recipients'* self-esteem did not alter the significant effect of *providers'* self-esteem on esteem support (B = .24, t = 2.33, p = .022, 95% CI [.04, .44], r = .23), and the concomitant effect of recipients' self-esteem was not significant (B = -.02, t = -.20, p = .839, 95% CI [-.23, .18], r = -.02). The effect of providers' self-esteem on esteem support was also not moderated by recipients' self-esteem (B = .0008, t = .007, p = .995).

In Study 2, the longitudinal analyses control for recipients' self-esteem (at the initial session) across all longitudinal paths. Controlling for *recipients'* self-esteem did not alter Paths A, B, and C (see Figures 3.2 and 3.3) when modeling providers' reports (Bs > .32, ts > 2.88, ps < .005) or recipients' perceptions (Bs > .26, ts > 2.88, ps < .005) of esteem support. We also tested whether the effects of providers' efficacy and esteem support had differential effects for (i.e., were moderated by) varying levels of recipients' self-esteem. The paths outlined in Figure 3.1 were not moderated by recipients' self-esteem (Bs < .02, ts < .19, ps > .831) for analyses modeling *providers'* esteem support with one (out of five) exception: the association between support provider efficacy and esteem support (Path B) was greater when recipients were high (*slope* = .63, t = 4.30, p < .001) than low (*slope* = .17, t = 1.20, p = .236) in self-esteem. However, this path (and no other paths) differed by levels of recipients' self-esteem when modeling *recipients'* perceptions of esteem support (Bs < .15, ts < 1.46, ps

> .148). Overall, then, the support processes shown in Figure 3.1 did not systematically vary according to recipients' level of self-esteem.

Relationship Status

In Study 1, the effect of providers' self-esteem on esteem support was not moderated by relationship status (-1 = dating, 1 = cohabiting/ married; B = -.12, t = -.43, p = .672).

Likewise, in Study 2, the effects were generally not moderated by relationship status when modeling providers' esteem support (Bs < .16, ts < 1.28, ps > .205) or recipients' perceptions of esteem support (Bs < .16, ts < 1.31, ps > .205) with one exception (out of ten): greater recipients' perceptions of esteem support were associated with greater recipients' efficacy 6-months later (Path D) when couples were in dating relationships (*slope* = 1.34, t = 4.70, p < .001) than when they were living together and/or married (*slope* = .07, t = .25, p = .807). Thus, the one non-significant path shown in Figure 3.5 was significant for people in dating relationships.

Relationship Length

In Study 1, the effect of providers' self-esteem on esteem support was not moderated by relationship length (B = .34, t = .98, p = .330).

Similarly, in Study 2, none of the effects were moderated by relationship length when modeling providers' esteem support (Bs < .13, ts < .72, ps > .285) or recipients' perceptions of esteem support (Bs < .17, ts < .99, ps > .222).

Gender

In Study 1, the effect of providers' self-esteem on esteem support was not moderated by gender (B = .0003, t = .003, p = .997).

In Study 2, due to differences in levels of stress reported, female partners were assigned the role of support recipient in 60% of support discussion (and thus males in 40%). We did not hypothesize in advance that the effects of self-esteem, efficacy or esteem support

would differ across men and women. Additional analyses testing whether there were gender differences in any of the paths indicated that the effects did not differ across male and female partners with two (out of ten) exceptions. First, greater provider efficacy was more strongly associated with greater provider reports of esteem support (Path B) for male (*slope* = .62, *t* = 4.29, *p* < .001) than female (*slope* = .07, *t* = .47, *p* = .637) providers. Second, however, greater providers' esteem support was more strongly associated with greater recipients' efficacy 6-months later (Path D) for female (*slope* = .62, *t* = 2.10, *p* = .041) than male (*slope* = -.26, *t* = -.88, *p* = .383) recipients. These paths (or any other paths) did not differ across men and women when modeling *recipients'* perceptions of esteem support (*B*s < .14, *t*s < 1.70, *p*s > .144). None of the other paths when modeling provider reports of esteem support differed across men and women either (*B*s < .03, *t*s < .32, *p*s > .094). Thus, the overall pattern indicated there were no systematic gender differences in the process outlined in Figure 3.1.

Appendix 3 - Chapter Four Supplemental Materials

These supplemental materials include additional information on the sample, including consideration of sample size and power, and present additional analyses to support the conclusions presented in the paper.

Table of Contents

1. Sample Information

The dyadic observational and experience sampling studies presenting in the paper are time and resource intensive, which has two important implications. First, sample sizes are necessarily constrained. Second, the studies are designed to examine multiple, independent processes (as is necessary and appropriate; see APA manual). Here we consider power for each study and describe how the associations reported in the current paper were independent of any effects reported in prior publications.

Study 1

Data from this sample has been used previously to examine the links between (a) attachment avoidance and recipients' reactions to partners' support provision (Girme, Overall, Simpson, & Fletcher, 2015; Study 2), (b) benevolent sexism and dependence-oriented support provision (Hammond & Overall, 2015), and (c) attachment anxiety, relational value, and support provision (Jayamaha, Girme, & Overall, 2017; Study 2). The links between depressive symptoms, stress, and support provision have never been reported. Thus, the results presented in the current paper are unique, test novel and separate hypotheses, and are entirely independent of the prior papers. Indeed, as reported below, additional analyses show that the current results are independent of attachment insecurity and self-esteem.

Power analyses using the Actor-Partner Interdependence Model (APIM) power module (Ackerman, Ledermann, & Kenny, 2016) indicates this sample and design (200 support interactions) provides adequate power (.987) to detect small (r = .20) actor and partner main effects when variables are moderately correlated across partners (r = .30). This fairly represents the context of the effect of depressive symptoms (Path A: r = .19) and stress (Path B: own reports of support provision: r = -.28 and *partners'* perceptions of support received: r = -.40).

Study 2

Data from this sample has been used previously to examine the links between attachment avoidance and recipients' reactions to partners' support provision (Girme et al., 2015; Study 3) and self-esteem and support provision (Jayamaha & Overall, 2018; Study 2). However, the associations between depressive symptoms, stress, and support provision have never been reported. Thus, the results presented in the current paper are unique, test novel and separate hypotheses, and are entirely independent of prior papers. Indeed, as reported below, additional analyses show that the current results are independent of attachment insecurity and self-esteem.

Funding was received for the recruitment of 85 couples based on the power needed to detect small actor and partner effects (as described above) and we continued data collection across the 1.5 years funded. Post-hoc power analyses focused on the specific effects in the current analyses indicate adequate power (> .80) to test the predicted associations. In particular, we conducted post-hoc power analyses for each path in Figure 4.1 using the software G*Power (Faul, Erdfelder, Buchner, & Lang, 2009). In post-hoc power analysis the power (i.e., 1 – β err prob) is computed as a function of:

1. α (i.e., probability of Type 1 error, which is set at 0.05 by Faul et al., 2009).

2. The effect size (i.e., f^2, which was calculated in G*Power by (a) entering in the R^2 of the specific predictor under *variance explained by special effect* and (b) calculating the *residual variance* which is defined as 1 – (R^2 of the full-model) (Faul et al., 2009). SPSS provides the R^2 for the calculation of each path, which represents the prediction of each outcome from <u>all</u> the predictors in the model (i.e., R^2 of the full-model). We used this R^2 value to calculate the *residual variance* value (i.e., 1 – [R^2 of the full-model]). However, to calculate the R^2 of the specific predictor in each path (i.e., *variance explained by special effect*), we used the *t* values (presented in the manuscript) given by SPSS for the calculation

of each path (while controlling for the prior paths in the model) to calculate R^2 to indicate the *variance explained by special effect*.

3. Total sample size (*N* = 85).

4. Number of *tested* predictors (one focal predictor across all paths).

5. Total number of predictors (based on the number of preceding paths: Path A = 1 predictor (depressive symptoms) and Path B = 2 predictors (depressive symptoms and stress during partners' stressful issue discussions).

These post-hoc power analyses indicated adequate statistical power (Path A [.85], Path B [own reports of support provision: .93 and *partners'* perceptions of support received: .95]).

Study 3

Data from this sample has been used previously to examine the links between (a) attachment insecurity, biased perceptions of partners' negative emotions, and hostile relationship behavior (Overall, Fletcher, Simpson, & Fillo, 2015; Study 2), and (b) attachment avoidance and recipients' reactions to support provision (Girme et al., 2015; Study 4). However, the links between depressive symptoms, stress, and support provision have never been previously reported, and are completely independent of the aims and analyses presented in prior papers. Thus, the results presented here are unique, test novel and separate hypotheses, and are independent of the prior papers. Indeed, as reported below, additional analyses show that the current results are independent of attachment insecurity.

At the time of funding and data collection, no established practices for calculating power for dyadic repeated measures designs were available and so apriori power analyses were not conducted. Funding was received for the recruitment of 85 couples reflecting common standards in the field for dyadic diary samples, which are deemed to be highly powered given the repeated measures nature of the method. However, due to not all couples

completing the daily diary adequately, the final sample offering daily diary data in this study was 73 couples (total N = 146), who provided 2,786 diary entries on which analyses were based. This number of diary entries is similar to or exceeds the standard dyadic repeated measures design, and is widely accepted to be a high power design.

2. Single-Item Stress Variable Analyses (Studies 1 and 2)

As outlined in Footnote 3, our assessment of stress during discussion of *partners'* goals (Study 1) and stressful issues (Study 2) included the item 'upset' in accordance with wording of items in Cohen, Kamarck, and Mermelstein's (1983) *Perceived Stress Scale* (PSS). The items 'stress' and 'upset' were highly correlated in both studies (see Table 4.1 in manuscript), and were combined before the analyses were run. Nonetheless, as shown in Table SM 3.1, rerunning the analyses using only the 'stress' item revealed identical results in both Study 1 and Study 2. Specifically, greater depressive symptoms were associated with greater stress during discussions of *partners'* goal (Study 1) and stressful issue (Study 2). Greater stress, in turn, was associated with lower reports of emotional support provision, and *partners'* reporting lower emotional support received, when discussing *partners'* goal (Study 1) or stressful issue (Study 2).

Table SM 3.1. *The Associations between Depressive Symptoms, Stress, and Support as Reported by Support Providers (first column) and Perceived by Support Recipients (second column) during Couples' Discussions of Partners' Personal Goals (Study 1) and Partners' Stressful Issues (Study 2)*

	Own Reports of Support Provision						***Partners' Perceptions of Support Received***					
				95% CI						*95% CI*		
	B	*SE*	*t*	*Low*	*High*	*r*	*B*	*SE*	*t*	*Low*	*High*	*r*
Study 1												
Path A: Depressive Symptoms→Stress	.02	.01	2.44*	.01	.05	.19	.02	.01	2.44*	.01	.05	.19
Path B: Stress→Support	-.20	.05	-3.98***	-.30	-.10	-.28	-.31	.05	-5.90***	-.41	-.20	-.40
Study 2												
Path A: Depressive Symptoms→Stress	.29	.02	2.75**	.02	.10	.29	.29	.02	2.75**	.02	.10	.29
Path B: Stress→Support	-.24	.08	-2.34*	-.33	-.03	-.25	-.34	.10	-3.15**	-.52	-.12	-.32

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

3. Items Used to Construct Support Provision Variable (Study 1 and Study 2)

Study 1

Six items assessed emotional support provision during discussions of *partners'* personal goal:

"I reassured and comforted my partner",

"I was warm and affectionate toward my partner",

"I complimented my partner's goal-related efforts and achievements",

"I was interested about my partner's goal",

"I was understanding about my partner's efforts or difficulties in achieving their goal",

"I listened to my partner".

Four items assessed esteem support provision during discussions of *partners'* personal goal:

"I expressed confidence that my partner could achieve their goal",

"I encouraged my partner to keep trying to achieve their goal",

"I communicated trust in my partner's ability to manage their goal",

"I made my partner feel like they had the ability to achieve their goal".

Study 2

Four items assessed emotional support provision during discussions of *partners'* own stressful issue:

"I gave my partner reassurance or comfort",

"I was warm and affectionate toward my partner",

"I complimented my partner's efforts and achievements",

"I was interested".

Four items assessed esteem support provision during discussions of *partners'* own stressful issue:

"I expressed confidence that my partner could cope",

"I encouraged my partner to keep trying to overcome his/her challenges",

"I communicated trust in my partner's ability to cope",

"I made my partner feel like she/he had the ability to cope".

4. Items Used to Construct *Partners'* Perceptions of Support Received Variable (Study 1 and Study 2)

Study 1

Six items assessed *partners'* perceptions of emotional support received during discussions of individuals' personal goal:

"My partner reassured and comforted me",

"My partner was warm and affectionate toward me",

"My partner complimented my goal-related efforts and achievements",

"My partner was interested about my goal",

"My partner was understanding about my goal-related efforts or difficulties",

"My partner DIDN'T care about my goal (reverse-scored)".

Four items assessed *partners'* perceptions of esteem support received during discussions of individuals' personal goal:

"My partner expressed confidence that I could achieve my goal",

"My partner encouraged me to keep trying to achieve my goal",

"My partner communicated trust in my ability to manage my goal",

"My partner made me feel that I had the ability to achieve my goal".

Study 2

Four items assessed *partners'* perceptions of emotional support received during discussions of individuals' own stressful issue:

"My partner gave me reassurance or comfort",

"My partner was warm and affectionate toward me",

"My partner complimented my efforts and achievements",

"My partner was interested".

Four items assessed *partners'* perceptions of esteem support received during discussions of individuals' own stressful issue:

"My partner expressed confidence that I could cope",

"My partner encouraged me to keep trying to overcome my challenges",

"My partner communicated trust in my ability to cope",

"My partner made me feel like I had the ability to cope".

5. Additional Analyses Examining Alternative Explanations

We conducted a series of additional analyses to rule out alternative explanations. Specifically, we tested whether the effects were specific to individuals' depressive symptoms rather than their (1) greater attachment anxiety and (2) lower self-esteem, which prior research has shown are associated with poorer support provision for different reasons. We also wanted to ensure that the results were due to individuals' own depressive symptoms rather than the *partner's* depressive symptoms (Studies 1-3).

Attachment Anxiety and Self-Esteem (Studies 1-3)

Prior research has shown that attachment anxiety and self-esteem are also associated with poorer support provision within intimate relationships due to relational and self-relevant concerns that differ than feelings of stress we examine here (Collins & Feeney, 2000; Feeney & Collins, 2001, 2003; Feeney & Hohaus, 2001; Jayamaha et al., 2017; Jayamaha & Overall, 2018). To show that the predicted effects were a function of depressive symptoms, we tested and controlled for the effects of attachment anxiety and self-esteem.

Attachment Anxiety. In Study 1, attachment anxiety was not significantly associated with stress or support provision or *partners'* perceptions of support received (see Table 4.1). In Study 2, attachment anxiety was also not significantly associated with stress or *partners'* perceptions of support received but was significantly associated with own reports of support provision (see Table 4.1). Nonetheless, controlling for attachment anxiety did not alter the significant association between depressive symptoms and stress in Study 1 (Path A: $B = .02$, $t = 2.34$, $p = .020$, 95% CI [.003, .038], $r = .18$) or Study 2 (Path A: $B = .31$, $SE = .02$, $t = 2.66$, $p = .009$, 95% CI [.01, .10], $r = .28$). Controlling for attachment anxiety also did not alter the significant associations between stress and support in Studies 1 and 2 when modeling own reports of support provision (Path B: $B = -.24$ and $-.33$, $SE = .06$ and $.08$, $t = -4.01$ and -3.28, $p < .001$ and $p = .002$, 95% CI [-.36, -.12] and [-.43, -.10], $r = -.29$ and $-.34$,

respectively) or *partners'* perceptions of support received (Path B: *B* = -.37 and -.39, *SE* = .06 and .11, *t* = -6.12 and -3.65, *p* < .001 and .001, 95% CI [-.50, -.25] and [-.63, -.18], *r* = -.41 and -.37, respectively).

In Study 3, attachment anxiety was significantly associated with greater daily stress and lower own reports of daily support provision but was not significantly associated with *partners'* perceptions of support received (see Table 4.3). Rerunning the dyadic regression model testing Path A (described in the manuscript) with the main and interaction effect of attachment anxiety as additional predictors did not alter the significant interactions shown in Table 4.4 when modeling perceptions of partners' support need (*B* = .01, *SE* = .003, *t* = 3.47, *p* < .001, 95% CI [.005, .018], *r* = .07) or *partners'* reports of support need (*B* =.01, *SE* = .004, *t* = 3.35, *p* < .001, 95% CI [.005, .019], *r* = .07). Similarly, rerunning the dyadic regression model testing Path B (described in the manuscript) with the main and interaction effect of attachment anxiety as additional predictors did not alter the significant interactions shown in Table 4.5 when modeling perceptions of partners' support need (*B* = -.02, *SE* = .01 *t* = -2.66, *p* = .008, 95% CI [-.04, -.01], *r* = -.05) or *partners'* reports of support need (*B* = -.03, *SE* = .01, *t* = -2.52, *p* = .012, 95% CI [-.05, -.01], *r* = -.05).

Self-Esteem. In Study 1, self-esteem was not significantly associated with stress or support provision or *partners'* perceptions of support received (see Table 4.1). In Study 2, self-esteem was also not significantly associated with stress or *partners'* perceptions of support received but was significantly associated with own reports of support provision (see Table 4.1). Nonetheless, controlling for self-esteem did not alter the significant association between depressive symptoms and stress in Study 1 (Path A: *B* = .04, *SE* = .01, *t* = 3.76, *p* < .001, 95% CI [.02, .06], *r* = .29) or Study 2 (Path A: *B* = .26, *SE* = .02, *t* = 2.18, *p* = .032, 95% CI [.004, .087], *r* = .23). Controlling for self-esteem also did not alter the significant association between stress and support in Studies 1 and 2 when modeling own reports of

support provision (Path B: B = -.23 and -.32, SE = .06 and .08, t = -3.83 and -3.14, p < .001 and p = .002, 95% CI [-.35, -.11] and [-.42, -.09], r = -.27 and -.32, respectively) or *partners'* perceptions of support received (Path B: B = -.35 and -.39, SE = .06 and .11, t = -5.65 and -3.61, p < .001 and .001, 95% CI [-.48, -.23] and [-.62, -.18], r = -.38 and -.36, respectively).

In Study 3, self-esteem was significantly associated with greater daily stress and poorer support provision (see Table 4.3). Rerunning the dyadic regression model testing Paths A and B (described in the manuscript) with the main and interaction effect of self-esteem as additional predictors did not reduce the significance of the primary interaction effects with one exception: the significance of the interaction testing Path A shown in Table 4.4 when modeling perceptions of partners' support need was reduced (B = .01, SE = .004, t = 1.32, p = .186, 95% CI [-.003, .014], r = .03). However, the concomitant interaction with self-esteem was also not significant when modeling perceptions of partners' support need (B = -.05, SE = .03, t = -1.59, p = .111, 95% CI [-.11, .01], r = -.03), nor were the effects of self-esteem significant in any of the other four analyses. By contrast, the effect of depressive symptoms was not reduced when modeling *partners'* reports of support need (B = .02, SE = .005, t = 3.51, p < .001, 95% CI [.01, .03], r = .07). Moreover, both tests of Path B shown in Table 4.5 were not altered when modeling perceptions of partners' support need (B = -.02, SE = .01 t = -2.38, p = .017, 95% CI [-.037, -.004], r = -.05) or *partners'* reports of support need (B = -.03, SE = .01, t = -2.48, p = .013, 95% CI [-.05, -.01], r = -.05). Thus, only one of four effects were reduced in Study 3, suggesting that this one drop is a function of the association across depressive symptoms and self-esteem (see Table 4.3). Overall, then, the results across studies revealed that the effects were due to providers' depressive symptoms and not self-esteem.

***Partners'* Depressive Symptoms (Studies 1-3)**

In Study 1, *partners'* depressive symptoms were significantly associated with stress and *partners'* perceptions of support received but were not significantly associated with own reports of support provision (see Table 4.1). However, controlling for *partners'* depressive symptoms did not alter the significant association between depressive symptoms and stress (Path A: $B = .02$, $SE = .01$, $t = 2.81$, $p = .006$, 95% CI [.01, .04], $r = .21$). Controlling for *partners'* depressive symptoms also did not alter the significant association between stress and support when modeling own reports of support provision (Path B: $B = -.22$, $SE = .06$, $t = -3.61$, $p < .001$, 95% CI [-.34, -.10], $r = -.26$) or *partners'* perceptions of support received (Path B: $B = -.33$, $SE = .06$, $t = -5.25$, $p < .001$, 95% CI [-.46, -.21], $r = -.36$).

In Study 2, *partners'* depressive symptoms were not significantly associated with stress during *partners'* stressful issue discussions but were significantly associated with own reports of support provision and *partners'* perceptions of support received (see Table 4.2). Nonetheless, controlling for *partners'* depressive symptoms did not alter the significant association between depressive symptoms and stress (Path A: $B = .28$, $SE = .02$, $t = 2.58$, $p = .012$, 95% CI [.01, .09], $r = .27$). Controlling for *partners'* depressive symptoms also did not alter the significant association between stress and support when modeling own reports of support provision (Path B: $B = -.32$, $SE = .08$, $t = -3.25$, $p = .002$, 95% CI [-.41, -.10], $r = -.33$) or *partners'* perceptions of support received (Path B: $B = -.39$, $SE = .11$, $t = -3.69$, $p < .001$, 95% CI [-.62, -.19], $r = -.37$).

In Study 3, *partners'* depressive symptoms were not significantly associated with own daily stress but were significantly associated with support provision (see Table 4.3). Rerunning the dyadic regression model testing Path A (described in the manuscript) with the main and interaction effect of *partners'* depressive symptoms as additional predictors did not alter the significant interactions shown in Table 4.4 when modeling perceptions of partners'

support need (*B* = .01, *SE* = .003, *t* = 3.22, *p* < .001, 95% CI [.004, .016], *r* = .06) or *partners'* reports of support need (*B* = .01, *SE* = .003, *t* = 3.52, *p* < .001, 95% CI [.005, .019], *r* = .08). Similarly, rerunning the dyadic regression model testing Path B (described in the manuscript) with the main and interaction effect of *partners'* depressive symptoms as additional predictors did not alter the significant interactions shown in Table 4.5 when modeling perceptions of partners' support need (*B* = -.02, *SE* = .01 *t* = -2.54, *p* = .011, 95% CI [-.038, -.005], *r* = -.05) or *partners'* reports of support need: *B* = -.03, *SE* = .01, *t* = -2.54, *p* = .011, 95% CI [-.05, -.01], *r* = -.05). Thus, the results were due to providers' and not their partners' depressive symptoms.

6. Additional Analyses Examining Potential Moderating Variables (Studies 1-3)

We conducted additional analyses to test whether the associations reported across the paper were moderated by (a) relationship status, (b) relationship length, or (c) gender.

Relationship Status

Relationship status (0 = dating, 1 = cohabiting/ married) did not moderate Path A in Study 1 (Path A: B = -.001, SE = .06, t = -.02, p = .984) or Study 2 (Path A: B = -.07, SE = .02, t = -.59, p = .556). Path B was also not moderated by relationship status in Studies 1 and 2 when modeling own reports of support provision (Path B: B = .42 and .03, SE = .84 and .10, t = .50 and .26, p = .621 and .795, respectively) or *partners'* perceptions of support received (Path B: B = -.42 and -.09, SE = 1.09 and .13, t = -.38 and -.73, p = .702 and .465, respectively).

Likewise, in Study 3, relationship status did not further moderate the significant interactions shown in Table 4.4 assessing Path A (perceptions of partners' support need: B = .01, SE = .01, t = 1.46, p = .145; *partners'* reports of support need (B = .01, SE = .01, t = 1.28, p = .224), or the significant interactions in Table 4.5 assessing Path B (perceptions of partners' support need*:* B = -.02, SE = .02, t = -1.01, p = .315; *partners'* reports of support need: B = -.02, SE = .02, t = -.77, p = .444).

Relationship Length

Relationship length (log-transformed) did not moderate Path A in Study 1 (Path A: B = -.003, SE = .04, t = -.06, p = .949) or Study 2 (Path A: B = -.08, SE = .04, t = -.78, p = .439). Path B was also not moderated by relationship status in Studies 1 and 2 when modeling own reports of support provision (Path B: B = -.21 and -.16, SE = .21 and .20, t = -1.01 and -1.62, p = .312 and .110, respectively) or *partners'* perceptions of support received (Path B: B = -.13 and -.11, SE = .24 and .27, t = -.53 and -1.07, p = .598 and .290, respectively).

In Study 3, relationship length did not further moderate the significant interactions assessing Path A and Path B shown in Table 4.4 or Table 4.5 with one exception (out of four): the significant interaction between daily stress and daily *partners'* reports of support need (see Table 4.5) was further moderated by relationship length (B = .07, SE = .03, t = 2.46, p = .014). Specifically, the negative effect of greater stress on *partners'* perceptions of support received on days when *partners'* reported support need was high (Figure 4.3, top Path B) was stronger for couples in shorter relationships (*slope* = -.11, SE = .03, t = -3.43, p < .001). None of the other significant interactions shown in Table 4.4 when modeling perceptions of partners' support need (B = -.004, SE = .01, t = -.43, p = .667) or *partners'* reports of support need (B = -.01, SE = .01, t = -1.41, p = .160), or shown in Table 4.5 when modeling perceptions of partners' support need (B = .01, SE = .02, t = .36, p = .723), was further moderated by relationship length. Thus, only 1 out of 8 tests across the three studies revealed any differences across relationship length, which suggests that the primary associations did not systematically differ according to relationship length.

Gender

Path A was not moderated by gender in Study 1 (Path A: B = -.005, SE = .01, t = -.58, p = .565) or Study 2 (Path A: B = -.01, SE = .02, t = -.11, p = .911). However, Path B was moderated by gender in Study 1 when modeling *partners'* perceptions of support received (B = -.24, SE = .06, t = -3.90, p < .001), which revealed a gender effect for men (B = -.61, SE = .09, t = -6.54, p < .001) but not women (B = -.13, SE = .08, t = -1.70, p = .092). Specifically, greater men's stress was associated with lower female *partners'* perceptions of support received during female *partners'* goal discussions. However, Path B was not moderated by gender in Study 1 when modeling own reports of support provision (B = -.06, SE = .06, t = -1.13, p = .260) or in Study 2 when modeling own reports of support provision (B = -.03, SE =

.08, t = -.27, p = .787) or *partners'* perceptions of support received (B = .04, SE = .11, t = .35, p = .726). Overall, then, the associations were evident for both men and women.

In Study 3, additional analyses testing whether there were gender differences in any of the paths indicated that the effects did not differ across male and female partners with one (out of four) exceptions. Specifically, the significant interaction between daily stress and daily *partners'* reports of support need (see Table 4.5) was further moderated by gender (B = .02, SE = .01, t = 2.40, p = .016), which revealed a significant effect for women (B = -.05, SE = .02, t = -3.25, p < .001) but not for men (B = -.001, SE = .01, t = -.10, p = .917). Women's greater daily levels of stress were associated with men perceiving they received lower levels of support on days when men's reports of support need were high (Figure 4.3, top Path B; *slope* = -.13, SE = .03, t = -3.86, p < .001), but not on days when men's reports of support need were low (Figure 4.3, bottom Path B; *slope* = .05, SE = .03, t = 1.45, p = .148). None of the other significant interactions shown in Table 4.4 when modeling perceptions of partners' support need (B = .001, SE = .003, t = .40, p = .689) or *partners'* reports of support need (B = .005, SE = .003, t = 1.45, p = .149), or Table 4.5 when modeling perceptions of partners' support need (B = .01, SE = .01, t = 1.27, p = .205), was further moderated by gender. Thus, only 2 out of 10 tests across the three studies revealed gender differences, and these two effects were not consistent, which suggests that the primary associations did not systematically differ across women and men.

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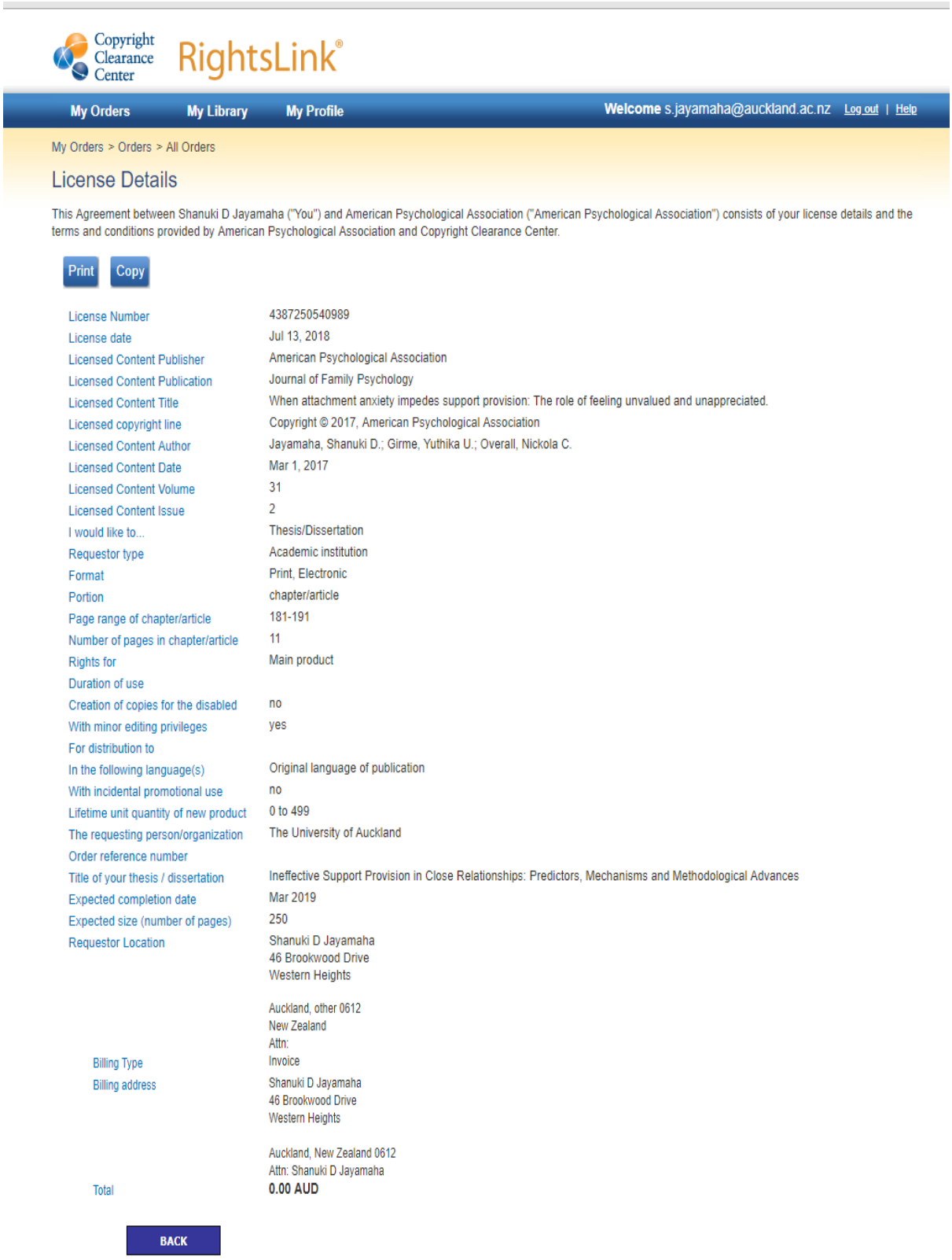

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