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The Role of Emotional Support in Emotional Well-being

Maria Sol Pound, *The University of Western Ontario*

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A thesis submitted in partial fulfillment of the requirements for the Doctor of Philosophy degree in Psychology

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THE ROLE OF EMOTIONAL SUPPORT IN EMOTIONAL WELL-BEING

(Thesis format: Monograph)

by

Maria Sol Pound

Graduate Program in Clinical Psychology

A thesis submitted in partial fulfillment

of the requirements for the degree of

Doctor of Philosophy

The School of Graduate and Postdoctoral Studies

The University of Western Ontario

London, Ontario, Canada

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Abstract

The overall purpose of this dissertation was to study the role of emotional support in emotional well-being (positive affect, negative affect, and non-clinical depressive symptoms). The research literature on social support has primarily focused on support processes occurring in the context of negative experiences and often has not included positive social interactions. This dissertation aimed to expand the study of emotional support by investigating emotional support for both positive and negative experiences, as well as emotional invalidation of negative experiences. Also, the mechanisms linking social support with well-being remain largely unclear. Two studies in this dissertation explored the role of emotion regulation self-efficacy as a mediator of the links between perceived emotional support/invalidation and emotional well-being. Moreover, past research on the link between received support and well-being has shown mixed findings. This dissertation aimed to expand this research by investigating the roles of various aspects of received emotional support in the prediction of daily affect. Furthermore, this dissertation examined the link between perceived and received emotional support. To this end, three studies were conducted: a concurrent study, a longitudinal study, and a daily diary study. All studies examined emotional support from the perspective of the recipient of support, guided by the theory of perceived partner responsiveness. Findings showed that 1) higher levels of perceived emotional support and lower levels of perceived emotional invalidation are associated with enhanced emotional well-being; 2) the link between perceived emotional support for negative experiences and depressive symptoms is bidirectional; 3) emotion regulation self-efficacy (especially perceived ability to regulate negative emotions) mediates the link between perceived emotional support/invalidation and emotional well-being, providing evidence consistent with the enabling hypothesis and interpersonal emotion

regulation models; 4) desiring emotional support may represent a marker of poor emotional well-being, but telling a close other about positive and negative events is associated with higher positive affect, 5) considering its role in positive affect, the most important aspect of received emotional support, both with regard to negative and positive events, is feeling understood; and 6) received emotional support predicts perceived emotional support, providing evidence for the association between these two constructs.

Keywords: emotional support, emotional invalidation, social support, emotion regulation, self-efficacy, feeling understood, depression, emotional well-being.

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Chapter 1: General Introduction

Main Objectives of the Dissertation

Despite the vast research literature on social support, there are a number of issues that still remain to be addressed. For example, social support is a broad term and past studies have often failed to specify the specific construct being investigated. As such, the focus of this dissertation is on one function of social support, namely, emotional support. Also, past research on social support has often been limited to the study of support for negative experiences. However, social interactions also play a supportive role in positive experiences, and sometimes can be detrimental to well-being. Accordingly, this dissertation aimed to expand the research by investigating emotional support in the context of both negative and positive experiences, as well as emotional invalidation.

Moreover, past research examining the mechanisms linking social support to well-being has mainly focused on stress buffering effects, producing mixed findings. It should be noted, however, that social support is believed to play a more ordinary (i.e., day-to-day) role in well-being, rather than being limited to the experience of major stress. Therefore, there is a need to identify and examine the role of these ordinary mechanisms. Guided by the enabling hypothesis and interpersonal emotion regulation models, this dissertation investigated emotion regulation self-efficacy as a potential mediator of the links of perceived emotional support/invalidation with emotional well-being.

Furthermore, perceived (available) social support has often been investigated separately from received social support. Interestingly, even though past research has linked increased perceived support to enhanced well-being, the link between received support and

well-being is unclear, with some studies suggesting that received support leads to poor well-being. This dissertation aimed to investigate this issue by examining how various components of an emotionally supportive interaction are associated with daily affect. This allowed a preliminary analysis of which aspects of received emotional support are associated with enhanced well-being, and which aspects are associated with poor well-being. Moreover, this dissertation aimed to investigate whether levels of daily received emotional support predict subsequent levels of perceived emotional support, in an effort to better understand the association between these two constructs.

Definition of Constructs Investigated

Emotional support and invalidation, like any other interpersonal interaction, are transactional experiences. Therefore, they could be investigated from the perspective of the person delivering the support/invalidation, or from the perspective of the person receiving the support/invalidation. Moreover, they could be investigated from the objective perspective of an observer, or from the subjective perspective of those involved in the transaction. This dissertation was guided by a broadly recognized theory of relationships (i.e., Perceived Partner Responsiveness), using this theory as a framework to assist in the conceptualization of emotional support. Perceived Partner Responsiveness is defined as “a process by which individuals come to believe that relational partners both attend to and react supportively to the central, core defining features of the self” (Reis, Clark, & Holmes, 2004, p. 203). It involves the belief that a close other understands, values, and cares for one’s needs. Based on this theory, the focus of the present dissertation was on the perceptions of recipients of emotional support/invalidation (i.e., perceived responsiveness to the emotional needs associated with negative and positive experiences).

Emotional support/invalidation transactions have implications for the relationship as well as for the well-being of the provider and recipient of support/invalidation. The overall focus of the present dissertation was on the roles that emotional support/invalidation play in the emotional well-being (i.e., positive affect, negative affect, and non-clinical depressive symptoms) of the recipient. This dissertation involved a thorough investigation of the construct of emotional support, including typical levels and daily levels, as well as in response to both negative experiences and positive experiences. Also, this dissertation had a special focus on depressive symptoms, as depression has been identified in past studies as being particularly vulnerable to social support and invalidation, as well as having an effect on perceived social support.

Overview of the Dissertation Studies

Three studies were conducted: a concurrent study, a longitudinal study, and a daily diary study. The concurrent study (Study 1) entailed an initial exploration of the roles of perceived emotional support and perceived emotional invalidation in individuals' emotional well-being (i.e., positive affect, negative affect, and depressive symptoms). This exploration included an analysis of whether the relationship between emotional support/invalidation and well-being is mediated by perceived ability to regulate both negative and positive emotions. This study was followed by a prospective longitudinal study (Study 2) that improved the measures used to assess emotional support and invalidation of negative experiences, and investigated the roles that emotional support/invalidation play in emotional well-being over time (i.e., four weeks), along with the possible mechanisms underlying these links. Study 2 also allowed for investigation of the directionality of the link between perceived emotional support/invalidation and depressive symptoms.

The final study (Study 3) assessed the immediate (i.e., daily) role of received emotional support for positive and negative experiences in individuals' daily affect. This daily diary study investigated different aspects of the received emotional support process, in order to further explore the construct of received emotional support and clarify inconsistent findings on the effects of received emotional support on the emotional well-being of recipients. The various aspects of emotional support interactions included: recounting the emotional experience; desiring comfort/an enthusiastic response; receiving comfort/an enthusiastic response; perceiving the response as responsive to relatedness, competence, and autonomy needs; and feeling understood. In order to integrate the results from Study 3 on received emotional support with those from Studies 1 and 2 on perceived emotional support, correlation analyses were conducted in Study 3 exploring the link between the received and perceived emotional support constructs.

Chapter 2: A Review of the Social Support Literature

Assessing Social Support

Social support is a very broad term encompassing a variety of constructs, with a great deal of variability in the way researchers have conceptualized and measured this term in the past (Haber, Cohen, Lucas, & Baltes, 2007; Sarason & Sarason, 2009; Winemiller, Mitchell, Stuliff, & Cline, 1993). As explained by Tardy many years ago, the multiple definitions of social support appearing in the literature are reflective of the multiple interpretations of the meaning of social support. Unfortunately, these differences in definitions are seldom mentioned in publications on social support, which contributes to misunderstanding and possibly inaccurate generalizations (Tardy, 1985). Consistent with this idea, several researchers have criticized the use of the generic term “social support” and have argued in favor of utilizing more precise sub-constructs (e.g., Barrera, 1986; Panzarella, Alloy, & Whitehouse, 2006; Vangelisti, 2009; Winemiller et al., 1993).

Despite this large variability in the conceptualization and measurement of social support, studies of social support generally assess one (or a combination) of three main constructs: social integration, perceived available support, and received support. In general, these constructs have been discussed in the past in terms of support received during negative life experiences. More recently, however, researchers have started studying support during positive life experiences. As such, this dissertation investigated support received for negative experiences separately from support received for positive experiences.

Social integration refers to the extent to which an individual has a diverse range of relationships and/or participates in a range of social activities (Barrera, 1986). Measuring social integration as an indicator of social support assumes that all social relationships are

satisfying and helpful. However, past research has found that interpersonal relationships characterized by conflicts, rejections and criticisms have a negative impact on well-being (e.g., Lepore, 1992).

Received support assesses the extent to which respondents have received various types of supportive responses from others in the past (Schwarzer & Knoll, 2007). In general, these measures ask respondents to indicate how often they have received specific supportive behaviours within a given time period (e.g., within the past day; Wills & Shinar, 2000). These measures are thought to represent actual support provided by respondents' social network more accurately than other types of support measures (Barrera, 1986; Cohen, Lakey, Tiell, & Neely, 2005). However, the type and amount of support received during a specific time is likely dependent on the type and severity of the stressors experienced at that time. Thus, it may not be representative of the support received at other points in the past, or of the support likely to be received in the future. Therefore, the assessment of received support is appropriate for studies investigating the role of specific instances of received support in well-being (e.g., daily diary studies). Study 3 in this dissertation used this daily diary method to investigate the role of received support for negative and positive experiences in daily positive and negative affect.

Even though the following distinction is rarely mentioned in the literature, perceived support has been studied with regard to perceptions of future availability of support (e.g., Quality of Relationships Inventory, Pierce, Sarason, & Sarason, 1991; Social Support Questionnaire, Sarason, Levine, Basham, & Sarason, 1983), or perceptions of typical levels of available support, based on past experiences (e.g., Perceived Social Support from Friends and Family, Procidano & Heller, 1983; Multidimensional Scale of Perceived Social Support,

Zimet, Dahlem, Zimet, & Farley, 1998). The majority of past studies investigating perceived support refer to perceived future availability of one's support network to provide a variety of support functions (Schwarzer & Knoll, 2007; Wills & Shinar, 2000). However, measuring perceived support in terms of perceived typical levels of available support is more likely to represent past support experiences. Consistent with this idea, Haber and colleagues (2007) investigated the correlation between measures of received support and measures of perceived available support, and found that the correlation was stronger when the measures of perceived available support encouraged respondents to consider recent episodes of received support when forming their answers. In contrast, when perceived support is measured in a way that does not encourage respondents to consider recent specific episodes, it is more likely to reflect stable personality traits or levels of depression (Gladstone, Parker, Malhi, & Wilhelm, 2007; Schwarzer & Knoll, 2007). Nevertheless, a recent study by Shorey and Lakey (2011) found that a measure of perceived available support not explicitly anchored in past experiences (i.e., Quality of Relationships Inventory, QRI; Pierce et al., 1991) was actually significantly more socially influenced (i.e., the scores varied as a function of interacting with specific support providers) than trait influenced. Similarly, past research has shown that higher perceptions of available social support are related to a higher frequency of receiving support following stressful events (Cutrona, 1986). Moreover, past research seems to suggest that improvements in the perception of social support tend to precede improvements in depressive symptoms (Krause, Liang, & Yatomi, 1989). Therefore, there is research supporting that measures of perceived social support (regardless of whether they explicitly ask respondents to think of past support experiences) are indeed influenced by actual social interactions.

Perceived social support has generally been found to be positively associated with

subjective well-being (e.g. Bloom, Stewart, Johnston, Banks, & Fobair, 2001; Emmons & Colby, 1995; Helgeson, 2003; Jenks Kettmann & Altmaier, 2008; Nelson, 1990; Reinhardt et al., 2006; Sarason, Sarason, & Pierce, 1994). Moreover, research has shown that perceived support is more related to psychological distress and well-being than either received support measures or counts of supportive individuals (Finch, Okun, Pool, & Ruehlman, 1999; Wethington & Kessler, 1986). This discrepancy is possibly due to the fact that measures of perceived support assess perceptions of reality that have accumulated over a long period of time, and include a large number of events and interactions; whereas measures of received support assess much more specific and recent support events that are not necessarily representative of the general pattern of interactions with others (Hobfoll, 2009). Consistent with this idea, researchers in the past have argued that individuals' past experiences with received support shape their perceptions of available support (Coyne & DeLongis, 1986).

The measures of perceived support for both negative and positive experiences used in Studies 1 and 2 of this dissertation encouraged respondents to consider past instances of received support when forming their answers, with the goal of obtaining a measure of perceptions of typical levels of available support, based on respondents' past support experiences with the selected close other. Moreover, in Study 2, respondents were asked to consider their support experiences with the selected close other over a specific period (the previous two weeks).

Measuring social support in terms of perceived support is consistent with the theory of perceived partner responsiveness. Perceived partner responsiveness refers to individuals' perceptions regarding the extent to which close others are cognizant of, sensitive to, and behaviorally supportive of the self (Reis, 2007). There are two key aspects associated with

the approach of perceived partner responsiveness. First, there is a focus on a partner's *perception* of the other partner's level of responsiveness. Focusing on how relationship partners perceive the other partner seems warranted, considering evidence from the social support literature, as well as from other literatures on interpersonal relationships, showing that individuals' perceived partner behavior is more important than the partner's actual objective behavior, with regard to both well-being and relationship quality (for a review, see Reis, 2007). Second, there is a focus on responsiveness to central defining features of the self, including emotional needs. Close others can be responsive to emotional needs by being cognizant of, sensitive to, and supportive of them (i.e., providing emotional support). The current dissertation focuses on emotional support, which can be construed as perceived responsiveness to the emotional needs associated with negative and positive experiences.

Support Providers

Perceived support for negative experiences has been investigated both with regard to the respondent's overall social networks (e.g., family, friends, etc.), and specific support providers (e.g., mother, father, a specific friend, a romantic partner, etc.). Perceived support from entire social networks might have a stronger effect on well-being than perceived support from one specific person (Abbey, Abbramis, & Caplan, 1985). However, researchers in the past have argued that the general perception of support from one's overall social network may also tap into general expectations and attributions about social relationships, which are more influenced by the respondent's personality than by social experiences (Lahey & Orehek, 2011; Pierce et al., 1991). Also, it has been argued that general measures of perceived support (i.e., perceived support from an overall social network) are limited because investigators cannot distinguish among recipient, provider, and relational influences (Lahey

& Orehek, 2011). Therefore, researchers in the social support field have recommended that studies of social support assess either multiple support providers for each respondent or a single, most important support provider. Considering these recommendation and the fact that perceived support for positive experiences has only been investigated with regard to specific support providers, the studies included in this dissertation used measures of perceived and received support from a main support provider.

Support Functions

There are multiple measures of social support, with Wills and Shinar (2000) identifying over 20. There have been many more developed since then, each one defining social support sub-constructs slightly differently. Moreover, the majority of past studies investigating the effects of social support have used measures that did not differentiate among support functions. Evidence for this issue comes from a review conducted by Winemiller and colleagues in 1993. These researchers reviewed 262 studies of social support and found that over 61% of these studies used novel measures of social support and over 68% of the studies measured support in a global or unspecified manner. This inconsistency in conceptualization and measurement of social support continues to the present date and has hampered the theoretical development of models explaining the relationship between social support and well-being (e.g., Cohen & Wills, 1985; Sarason, Pierce, & Sarason, 1990).

As described by Wills and Shinar (2000), the support functions most commonly included in studies of social support are emotional support; instrumental support; informational support; companionship support; and feedback. However, there are various other typologies of support functions (e.g., informational, tangible, and emotional support; for a review of alternative classifications see Cutrona & Russell, 1990). Instrumental support

(also labeled as tangible support or practical support) refers to the provision of practical help when necessary (e.g., helping with transportation, household chores, financial aid, etc.).

Informational support (also labeled as advice or guidance) refers to the provision of knowledge and information that may be useful for solving problems (e.g., providing information about community resources, assisting with decision-making, or providing advice). Companionship support (also labeled as socializing) refers to the availability of people with whom individuals can participate in social, leisure, and recreational activities (e.g., having a partner for sports, movies, shopping, etc.). Feedback refers to the provision of information or feedback about the appropriateness of social behaviors.

Emotional Support

There is little consensus on the definition of emotional support, as the manner in which emotional support is assessed in various social support measures varies significantly. Generally speaking, emotional support refers to behaviours that address a person's emotional/psychological needs such as expressions of love, empathy, and concern (Cutrona, 1986), and is well reflected by the construct of empathic concern (Wills & Shinar, 2000). Also, qualities of communication including affirmation and responsiveness are key to the perception of emotional support (Wills & Shinar, 2000).

There is, however, a lack of a theoretical framework for guiding the definition of emotional support. As previously stated, emotional support in this dissertation is conceptualized in terms of perceived responsiveness to the emotional needs associated with positive and negative experiences. In response to a negative experience, emotional support is motivated by a desire to lessen the distress, whereas in response to a positive experience emotional support is motivated by a desire to bask in the positive emotional experiences

associated with the event. This same theoretical framework allows for the understanding of the construct of emotional invalidation as behaviours that are perceived as being insensitive to one's emotional needs.

Emotional support has been considered a key and highly desired process in close relationships (Burlison, 2003), and is believed to be the support function most related to well-being. For example, Siewert, Antoniow, Kubiak, & Weber (2011) found emotional support to be more related to well-being than informational support. Consistent with this finding, receiving sensitive emotional support from close others has also been found to be associated with high levels of psychological, relational, and physical well-being (see reviews by Cunnigham & Barbee, 2000; Sarason, Sarason, & Gurung, 1997). Furthermore, higher parental emotional support during emerging adulthood has been linked to better self-rated health, less depressive symptoms, and more positive emotions (Poon & Knight, 2013). Despite these findings linking higher perceived emotional support with higher well-being, there is some recent research suggesting that when emotional support is measured as daily received support, it is associated with worse well-being (e.g., Bolger, Zuckerman, & Kessler, 2000). Results from these unexpected findings are discussed in more detail in the introduction to Study 3.

Regarding gender differences, women have been found to show higher levels of person centeredness (i.e., the extent to which support messages explicitly acknowledge, and elaborate on the other person's feelings and perspective) than men when providing comforting messages (e.g., MacGeorge, Clark, & Gillihan, 2002). However, individuals from different gender and cultural groups generally exhibit similar values, preferences, and priorities regarding emotional support in close relationships (although there are some

differences across nations, Burleson, 2003). Also, past research has found that men and women receive similar levels of emotional support from their spouses, although women desire higher levels (Xu & Burleson, 2001). Moreover, the effects of social support on depressive symptoms and general psychological distress do not seem to differ between the two genders (Turner & Marino 1994). Overall, past research has found little differences between men and women with regard to emotional support. Therefore, the analyses reported in this dissertation did not control for gender (although auxiliary studies controlling for gender were conducted and their results are briefly reported in footnotes).

Emotional Support for Positive Experiences

In contrast to the wide diversity of measures of social support for negative experiences, there is only one gold standard measure of perceived support for positive experiences, namely, the Perceived Responses to Capitalization Attempts Scale (PRCA, Gable, Reis, Impett, & Asher, 2004). This is likely due to the more recent focus of research on support for positive experiences. As defined by Langston (1994), capitalization in interpersonal contexts refers to disclosing personal good news to another person. Responsiveness to this type of disclosure includes enthusiastic responses, which has been found to lead to increased daily positive affect and increased perceived significance of the event (Reis et al., 2010).

The authors of the PRCA have not discussed the construct of perceived responses to capitalization attempts in terms of how it may fit within a classification of support functions. Upon closer examination, however, the items seem to reflect emotional support (i.e., enthusiastic responses reflect understanding and caring). Emotional support for positive experiences shares with emotional support for negative experiences the fact that both can

occur when one member of a relationship dyad experiences a personally significant event. Also, in both types of emotional support, the person who experienced the event communicates it (either directly or indirectly) to the other person, and the manner in which the other person responds influences the discloser emotionally. The two differ in that the process of informing others about negative circumstances is motivated by a desire to lessen the distress. In contrast, the process of informing others about positive experiences (i.e., capitalization attempt) is motivated by a desire to savor the positive emotional experiences associated with the event (Gable & Reis, 2010; Reis et al., 2010). Savoring refers to reminiscing about positive experiences as a way to embellish, retain and further benefit from a positive experience (Bryant, 1989). There is much less research on the sharing of positive experiences than on the sharing of negative experiences, even though people have been found to share both positive and negative experiences with close others (e.g., Rimé, 2007). Therefore, the additional consideration of emotional support for positive experiences in the present examination of the role of emotional support in emotional well-being represents a long overdue and necessary extension of past research on emotional support.

Emotional support for positive experiences has been investigated in terms of received and perceived support. In the assessment of received support, respondents identify daily instances in which they shared personal positive experiences with others and received enthusiastic responses from them. In the assessment of perceived support, respondents identify the extent to which a specific close other usually responds in an enthusiastic way when told about a positive experience.

The PRCA scale (Gable et al., 2004) assesses active-constructive responses, passive-constructive responses, active-destructive responses, and passive-destructive responses.

Active-constructive responses are ones in which the responder expresses support and enthusiasm about the positive experience. Passive-constructive responses are those in which the responder says very little but the recipient of support perceives a positive attitude toward the event. Active-destructive responses are those in which the responder's comments are demeaning. Finally, passive-destructive responses are those in which the responder ignores the event and re-directs the topic of conversation (Gable, Gonzaga, & Strachman, 2006; Gable & Reis, 2010).

These four different responses are illustrated in the following example. John tells his girlfriend that he received an A+ in his last exam. An active-constructive response from the girlfriend might be, "wow, this is great news! Your hard work has definitely paid off!" A passive-constructive response might be a smile followed by a simple "that sounds good". An active-destructive response might be "wow, that's a surprise; you barely studied for that exam. You probably won't get this lucky next time". A passive-destructive response might be "Guess what happened to *me* today."

Past research has shown that the way close others respond to individuals' positive affect is associated with emotional well-being. For example, Katz and colleagues (2014) found that parents of depressed adolescents were less accepting of and more likely to dampen the adolescents' positive affect, as well as less likely to try to enhance the adolescents' positive affect, compared to parents of healthy adolescents. Utilizing the PRCA scale, past research has shown that perceived higher levels of emotional support for positive experiences are associated with higher levels of positive affect and lower levels of negative affect (Demir & Davidson, 2013; Shorey & Lakey, 2011). Possibly due to the early stages of research on support for positive experiences, there is a lack of research on the mechanisms linking this

form of support with well-being. Accordingly, Studies 1 and 2 of this dissertation investigated the role of perceived emotion regulation self-efficacy as a mediating factor.

Emotional Invalidation

In the past, the literature on social support has developed largely separately from the literature on the negative effects of social interactions (e.g., social undermining/negativity), even though a fair proportion of interactions with social network members are negative (Vangelisti, 2009). Vinokur and van Ryn (1993) defined social undermining as social behaviors that display negative affect (e.g., anger or dislike) or negative evaluations of the person (e.g., criticism), or hinder the attainment of instrumental goals. Finch and colleagues (1999) suggested similar sub-constructs of social negativity, including anger (i.e., expression of hostility), interference (i.e., social hindrance), and insensitivity (i.e., communicative disengagement). Past research has shown that greater social negativity is negatively associated with positive indices of mental health (e.g., Finch et al., 1999; Lepore, 1992; Schuster, Kessler, & Aseltine, 1990; Vinokur & van Ryn, 1993).

Social undermining and social support have been found to have a strong inverse relationship, although they remain distinct constructs (Cranford, 2004). Both social support and social undermining have been found to be associated with depressive symptoms. For example, utilizing a large sample of college students, Finch et al. (1999) found that both negative social exchange and perceived support satisfaction predicted depressive symptoms, over and above the contribution of personality and coping variables. Some other studies have suggested that social undermining may have a stronger effect on individuals' well-being than social support. For example, Cranford (2004) investigated the roles that social support and social undermining from participants' spouses played in the prediction of depressive

symptoms six weeks later. The results showed that spouse undermining (but not spouse support) predicted increases in depressive symptoms over the span of six weeks. Consistent with this, Bertera (2005) analyzed data from a large random sample of U.S. adults and found that social negativity with spouses, relatives, and friends was positively associated with the number of anxiety and mood disorder episodes. Furthermore, the strength of this association was stronger than that of social support with the number of anxiety and mood disorder episodes. These findings suggest that the effects of negative social interactions on well-being should be considered alongside those of supportive social interactions.

Expressed emotion (EE) represents one way in which the effects of social negativity have been investigated in the context of depression. Expressed emotion involves the attitudes and behaviours of family members towards an ill individual. In particular, EE is a measure of the extent to which family members express criticism, hostility, emotional over-involvement, and (low) warmth towards the ill individual (McCleary & Sanford, 2002). The majority of early research on EE focused on its negative effects on individuals with schizophrenia. However, later research has shown that high levels of EE are associated with worse social functioning and more symptoms and higher relapse rates of a broad range of psychopathological conditions including depression (Butzlaff & Hooley, 1998; Coiro & Gottesman, 1996; McCleary & Sanford, 2002). Similarly, Hooley and Teasdale (1989) found that the perception of spousal criticism was the best predictor of 9-month relapse rates in a sample of clinically depressed individuals.

Invalidation represents a form of social negativity specific to the context of emotional disclosure. In particular, an invalidating social environment is one in which an individual's emotional expressions are met with punishment, avoidance or rejection (Linehan, 1993).

Families that are emotionally invalidating tend to fail to respond optimally to an individual's expressions of negative affect, emphasize control of emotional expression, and particularly disapprove the expression of negative affect. These families tend to trivialize the individual's negative experiences as well as criticize and blame the individual for experiencing negative affect.

Linehan's (1993) biosocial model of the development of borderline personality disorder suggests that growing up in an invalidating social environment results in difficulties in emotion regulation in adulthood. Even though the focus of this dissertation is not on borderline personality disorder, Linehan's model provides a conceptual understanding of how experiences with emotional invalidation may result in decreased emotion regulation ability and, consequently, worse emotional well-being. Consistent with this model, Krause, Mendelson, and Lynch (2003) found that a history of childhood emotional invalidation (i.e., parental punishment, minimization, and distress for negative emotions) was associated with chronic emotional inhibition in young adulthood; and that emotional inhibition significantly predicted psychological distress, including depression and anxiety symptoms. Moreover, past research on parent-child interactions has shown that parental invalidation of a child's emotions is associated with greater social and emotional problems in childhood (Gottman, Katz, & Hooven, 1996). As one example, Crowell and colleagues (2013) coded and analyzed mother-adolescent conflict discussions and found that higher levels of maternal invalidation were associated with higher levels of adolescent anger, and that higher levels of both invalidation and coerciveness were associated with higher levels of adolescent opposition/defiance.

The focus of this dissertation is on individuals' perception of how close others

respond to their emotional expressions. The perception of negative responses to emotional expressions was termed “emotional invalidation” in Studies 1 and 2, as the construct of interest in these two studies approximates closely the construct of invalidating social environments, as described by Linehan (1993).

Research on the invalidation of positive emotions is more recent and limited. Research on parental socialization of emotions (i.e., parental responses to children’s emotional expressions or behaviour; which affect the development of children’s understanding, experience, regulation, and expression of emotions) has shown that invalidation of positive affect is associated with increased psychopathology (Schwartz, Sheeber, Dudgeon, & Allen, 2012). Parents can respond to a child’s positive affect in an invalidating manner by restricting (e.g., telling the child to be quiet), punishing (e.g., reprimanding the child), or dampening (e.g., with a dysphoric expression) their child’s positive affect expression (Yap, Allen, & Ladouceur, 2008). For example, Yap and colleagues (2008) found that adolescents whose mothers invalidated (i.e., dampened) their display of positive emotions more often, showed more depressive symptoms and used maladaptive emotion regulation strategies more frequently. Similarly, Katz and colleagues (2014) compared the levels of emotional invalidation of positive emotion in families of depressed and healthy adolescents and found that parents of depressed adolescents were less accepting of and more likely to dampen the adolescent’s positive affect than were parents of healthy adolescents. Past studies utilizing the PRCA scale have not provided information on the specific effects of “destructive” responses, as they have often combined the scores of the active- and passive-destructive subscales of the PRCA with the scores of the other two subscales to obtain a single composite score (i.e., the scores on the passive-constructive and the active- and passive-destructive scales are subtracted from scores on the active-

constructive scale; as recommended by Gable et al., 2004).

Overall, the effects of invalidation of emotional experiences have not been as extensively studied as emotional support processes. Thus, there is a need for further research comparing its effects to those of emotional support. Studying both support and invalidation could enhance the interpretability and applicability of research findings. Therefore, a further goal of this dissertation was to assess the role of perceived emotional invalidation (with regard to negative experiences) in individuals' well-being and depressive symptoms. This goal was addressed in Studies 1 and 2.

Linking Social Support with Well-being

In a review of the role of social relationships in well-being, Diener and Oishi (2005) explained that relationships with close friends and family members are necessary for the experience of happiness, for health, and for optimal cognitive functioning. Similarly, past research has consistently found that close relationships predict physical and emotional well-being (Cohen, 2004; Cohen, Gottlieb, & Underwood, 2000; House, Landis & Umberson, 1988), above and beyond the influence of personality (Demir, 2008; Lu, 1999).

Social support represents one form of social interaction that has been found to affect emotional well-being (see Cohen & Wills, 1985, for a review). For example, using a large and representative sample of adults in the USA, Walen and Lachman (2000) examined the relation of perceived social support (defined as “the perceived notion of the caring and understanding exhibited by the [social] network”, p.7) with emotional well-being and health. The results showed that for both men and women, partner and family support were predictive of emotional well-being. These results are consistent with other smaller studies linking social support with emotional well-being (e.g., Bloom et al., 2001; Nelson, 1990; Rigby,

2000).

Social support has been found to affect a variety of physical and mental health problems, including depression (Henderson, 1992; Lakey & Cronin, 2008). Among the various interpersonal difficulties experienced by depressed individuals, deficits in social support represent a major deterrent to well-being. As one illustration, just over half of a large sample of adults with major depression reported that social support issues complicated their depression, or made it more difficult to treat (Gladstone et al., 2007). Similarly, clinically depressed individuals perceive significantly less social support, and have a significantly smaller social network and social contact than non-clinically depressed individual (Leskelä et al., 2006).

There is extensive research on the links between perceived social support and depression. Cross-sectional studies have shown that greater perceived available social support is associated with fewer depressive symptoms in both clinically depressed and community populations (e.g., Clara, Cox, Enns, Murray, & Torgrudc, 2003). However, one difficulty with these studies is that they cannot clarify whether social support is an antecedent (and thus plausible cause), concomitant, or consequence of depression (Barnett & Gotlib, 1988). This issue is important, since research suggests that social support may erode as a consequence of depression and the related strain placed upon relationships. For example, the behaviours of depressed individuals may negatively affect support provision (Coyne, 1976; Gladstone et al., 2007; Hammen, 1991, 2006). These causality-related issues can be investigated more clearly in prospective longitudinal studies that obtain measures of both social support and depression at several points in time (Cohen & Wills, 1985). In this regard, prospective studies have found that positive support from family members can facilitate

recovery from a major depressive episode (George, Blazer, Hughes, & Fowler, 1989; Keitner, Ryan, Miller, & Norman, 1992; Moos, Cronkite, & Moos, 1998; Zuroff & Blatt, 2002). Moreover, some longitudinal studies suggest that greater social support protects against the onset of major depression (Kendler, Myers, & Prescott, 2005); although other studies have failed to provide evidence for this effect (Burton, Stice, & Seeley, 2004; Wade & Kendler, 2000).

Overall, there is considerable (although not universal) evidence suggesting that greater social support can positively impact the well-being of depressed individuals. Additional research on social support has also provided strong evidence for the converse situation, namely, that deficits in social support can lead to reduced levels of well-being for depressed individuals. For example, several prospective studies have shown an association between deficits in social support and higher subsequent levels of depressive symptoms in non-clinical populations (e.g., Colarossi & Eccles, 2003; Russell & Cutrona, 1991; Sheeber, Hops, Alpert, Davis, & Andrews, 1997; Stice, Ragan & Randal, 2004), as well as in clinical populations (e.g., Lara, Leader, & Klein, 1997; Leskelä et al., 2006; Nasser & Overholser, 2005).

A review study conducted in 1994 on the effects of the social environment on the development, maintenance, and relapse of affective disorders found that absence of social support is associated with the onset and relapse of depression (Paykel, 1994). Therefore, there is evidence suggesting that higher perceived social support is negatively associated with depressive symptoms. However, the extent to which these findings also apply to the relationship between one specific social support function (i.e., emotional support) and emotional well-being, is unclear. Therefore, one of the main objectives of Study 2 was to

investigate the direction of the relationship between perceived emotional support and depressive symptoms.

Mechanisms of Action of Social Support

The most studied theoretical perspective on the mechanisms of social support is the stress and coping perspective. This perspective hypothesizes that social support reduces (or “buffers”) the effects of negative life events on well-being by facilitating coping. The assumption is that this buffering effect can occur via strengthening protective factors and/or reducing the impact of negative life events. For example, buffering effects may occur through altering perceptions of negative experiences, transferring coping resources, or facilitating change in health-related behaviors (Wills & Shinar, 2000). Most research on social support has been guided by this stress-buffering hypothesis and has used measures of received or perceived available support. When applied to depression, the buffering hypothesis posits that social support reduces the association between negative life events and the severity of depression levels, or the risk for development of depression.

There are some limitations, however, to this theory and to the way it has been investigated. For example, the only assumed mechanism of social support is through the reduction of the negative effects of stress. However, individuals receive emotional support for a variety of difficult and positive experiences. Moreover, studies testing the buffering hypothesis investigate the role of social support in buffering the effects of major negative life events. It is quite likely, however, that social support also helps individuals deal with many more ordinary, everyday events. This is consistent with past research showing that people share emotional experiences in about 90% of the cases, across cultures and types of emotions (Rimé, 2009). Therefore, researchers have recently postulated that the mechanisms of change

linking social support with well-being have to be ordinary and experienced on a daily basis (Shorey & Lakey, 2011; Thoits, 2011).

In general, evidence for the stress-buffering effects of social support on depression is mixed. Some studies have shown findings consistent with the buffering hypothesis, typically in the form of a significant interaction between the effects of social support and stressful life events. This interaction shows that the effects of stress on depression are diminished for individuals who report higher levels of social support (e.g., Gladstone et al., 2007; Nezlek & Allen, 2006, for support from friends only; Zuroff & Blatt, 2002). Other studies, however, have provided contrary evidence, with no interaction effects being evident (e.g., Burton et al., 2004; Choearom, Williams, & Haegery, 2005; Nezlek & Allen, 2006, for family support; Wade & Kendler, 2000). Emotional support, in particular, appears to be associated with depressive symptoms in a way that is not dependent on stress levels. For example, MacGeorge, Samter, and Gillihan (2005) found that while the link between academic stress and depressive symptoms decreased as informational support increased, emotional support (defined as attentive listening, sympathy, and expressions of affection) had a main effect on depression (i.e., it was associated with lower depression levels across all levels of academic stress.)

In order to investigate ordinary mechanisms linking emotional support to recipients' well-being, this dissertation investigated the roles of emotional support for both negative and positive experiences. Also, Studies 1 and 2 investigated the role of perceived ability to self-regulate emotions as a mediator of the link between emotional support and well-being. This potential mediating mechanism represents an ordinary process closely linked to emotional well-being, and is independent of the experience of major stressful life events. As such, it

represents an important construct to explore in the search for mechanisms linking perceived emotional support with emotional well-being. Finally, Study 3 allowed a detailed analysis of ordinary support experiences by investigating daily instances of received emotional support.

The Main Effect Model

The effects of social support on well-being, irrespective of the effects of stressful life events, have been typically discussed in the context of a ‘main effect’ model of social support. With respect to depression, this model is supported when studies looking at the effect of social support on depression find that there is a main effect of social support, but no interaction between social support and negative life events. In other words, higher levels of social support lead to lower levels of depression, regardless of stress levels. This model is also investigated in studies that assess the effects of social support on depression levels, without assessing the effects of negative life events.

There is substantial evidence supporting the main effect model. For example, research findings have shown a direct negative association between perceived social support and depressive symptoms over time (e.g., Stice et al., 2004). However, the main effect model does not allow an investigation of the mechanisms linking social support and well-being, as it just pertains to the link between social support and well-being, separately from the effects of stress.

The Enabling Hypothesis

The enabling hypothesis assumes that social support has an effect on well-being through the enabling of self-efficacy (Schwarzer & Knoll, 2007). Therefore, the enabling hypothesis differs from the buffering hypothesis in that it assumes a mediation mechanism between support and well-being, rather than a moderation mechanism altering the link

between negative life events and well-being. Self-efficacy refers to individuals' beliefs about their capability to perform the necessary activities to attain a given outcome (Bandura, 1977). As explained by Schwarzer and Knoll (2007), "support providers may facilitate an individual's self-regulation by enabling one's adaptive capabilities to face challenges and to overcome adversity" (p. 245). Support providers may enable individuals' self-efficacy by modeling coping attitudes and skills, providing verbal encouragement and incentives for engagement in helpful activities, providing assurance of the recipient's competency in dealing with the problem, and/or reducing the recipient's stress-related arousal (Benight & Bandura, 2004; Schwarzer & Knoll, 2007).

Consistent with the enabling hypothesis, Graziano, Bonino, & Cettelino (2009) found that high levels of perceived support from parents were related to lower levels of depressive feelings and higher levels of social self-efficacy in a sample of adolescents. Furthermore, mediational studies using diverse populations and research methods have suggested that self-efficacy mediates the link between social support and well-being. For example, Wang, Wang, and Yao (2008) conducted a concurrent study with college students, and found that the effect of perceived social support on depression was partially mediated by self-efficacy. Using a longitudinal design, Cheung and Sun (2000) showed that among a sample of Chinese adults, higher levels of perceived social support (both functional and structural) in mutual-aid groups led to improvements in mental health (i.e., lower levels of depression and anxiety), and this effect was mediated by general self-efficacy. Also, Cutrona and Troutman (1986) found that among a group of new mothers, higher levels of received social support led to increased parenting self-efficacy, which in turn led to reduced depressive symptoms three months later. Finally, Smith, Benight, and Cieslak (2013) found that, among combat veterans, both perceived and received social support predicted high post-deployment coping self-efficacy

and, in turn, high post-deployment coping self-efficacy predicted lower levels of distress. Therefore, there is research evidence suggesting that one mechanism by which social support facilitates well-being is through the enhancement of self-efficacy.

Accordingly, Studies 1 and 2 of this dissertation focused on one specific type of self-efficacy, namely, emotion regulation self-efficacy. Applying Bandura's (1977) definition of self-efficacy to emotion regulation, emotion regulation self-efficacy refers to individuals' beliefs about their capability to regulate their emotions as needed. Recently, researchers have postulated that interpersonal relationships influence emotion regulation, and that this influence may account for the effects of social support on depression (Marroquín, 2011; see discussion of this research in the section on Interpersonal Emotion Regulation). Therefore, emotion regulation self-efficacy may constitute a possible mechanism linking perceived emotional support with emotional well-being. Several benefits of investigating emotion regulation self-efficacy as a process linking emotional support to well-being are that the proposed mechanism is much broader than the reduction of stress; it allows for the examination of emotional support for positive emotions; and it represents an ordinary process independent of major stressful life events. As such, Studies 1 and 2 in this dissertation tested the enabling hypothesis in the context of emotion regulation self-efficacy. That is, these two studies investigated whether the role of perceived emotional support/invalidation in participants' emotional well-being is mediated by participants' perceived ability to regulate their emotions.

Emotion Regulation and Well-being

Emotion regulation has been conceptualized as a process through which individuals modify the magnitude and/or type of their emotional experience (Aldao, Nolen-Hoeksema,

Schweizer, 2010). In particular, people's initial/primary emotional responses are thought to reflect their emotional sensitivity (i.e., the ease with which people get into a given emotional state, Koole, van Dillen, & Sheppes, 2011); whereas their secondary/subsequent emotional responses presumably reflect emotion regulation (i.e., the ease with which people decrease, increase, or maintain a given emotional state, Koole, 2009; Koole et al., 2011).

There are a number of classification systems of emotion regulation strategies that have been proposed and investigated in the past (e.g., Gross's process model, Gross, 1998; Response Style Theory, Nolen-Hoeksema, 1991; and Koole's 2009 classification system based on the function of emotion regulation strategies). Similarly, there are numerous self-report measures that assess specific emotion regulation strategies, each measuring a different subset of emotion regulation strategies (e.g., CERQ, Garnefski & Kraaij, 2007; DERS, Gratz & Roemer, 2004; ERQ, Gross & John, 2003).

Emotion regulation has been considered a potentially unifying process among various symptom presentations and maladaptive behaviors, including depression (Gross & Muñoz, 1995). In fact, researchers have argued that individuals who cannot effectively manage their emotional responses to everyday events experience longer and more severe periods of distress that may result in depression or anxiety, and past studies have shown significant associations between emotion regulation ability and well-being (e.g., Mennin, Holaway, Fresco, Moore, & Heimberg, 2007; Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). Consistent with this, a recent meta-analysis showed that emotion dysregulation plays an important role in depression (Aldao et al., 2010). In nonclinical samples, depressive symptoms are associated with deficits in emotion regulation strategies (Gross & John, 2003; John & Gross, 2004). In this context, a recent prospective study with adolescents found that

emotion dysregulation prospectively predicts psychopathology, after controlling for baseline symptoms. In particular, rumination, dysregulated anger, and sadness expression predicted changes in depressive symptoms. In contrast, this study found that psychopathology did not predict increases in emotion dysregulation, after controlling for baseline emotion dysregulation (McLaughlin, Hatzenbuehler, Mennin, & Nolen-Hoeksema, 2011). As such, these findings suggest that emotion regulation is a determinant, and not a consequence, of psychopathology.

Since emotion regulation strategies refer to the concrete approach that people take in managing their emotions, the potential variety of emotion-regulation strategies is enormous (Kooze, 2009). In fact, any event, thought, or activity that affects people's emotions may potentially serve to regulate individuals' emotions. Moreover, the practice of assessing specific emotion regulation strategies implies that certain strategies are more adaptive than others, universally. However, past research also suggests that it is most adaptive to be able to flexibly move between coping strategies depending on the context of a situation (Barrett, Gross, Christensen, & Benvenuto, 2001; Bonanno, Papa, Lalande, Westphal, & Coifman, 2004; Gratz & Roemer, 2004). Therefore, Studies 1 and 2 in the present dissertation assessed perceived ability to regulate emotions, but without asking for the specific strategies used. Perceived ability to regulate one's emotions may be particularly relevant to emotional support (a form of external regulation of emotions) and emotional well-being. Therefore, Studies 1 and 2 investigated the role of perceived ability to regulate emotions (i.e., emotion regulation self-efficacy) as a mediator of the links between emotional support/invalidation and emotional well-being.

Regulation of Positive Emotions and Well-being

Although most research on emotion regulation has focused on the regulation of negative emotions, some researchers have focused on the up-regulation of positive emotions, also known as savoring (Bryant, 1989; Langston, 1994). Savoring refers to reminiscing about positive experiences as a way to embellish, retain and further benefit from the event; and it has been shown to lead to increased well-being (Bryant, 1989; Bryant, Smart, & King, 2005). According to Bryant (1989), savoring represents a form of regulation of positive emotions. Thus, perceived ability to savor positive experiences can also be conceptualized as falling under the construct of emotion regulation self-efficacy.

The regulation of positive emotions may be particularly relevant for depression. According to the tripartite model (Clark & Watson, 1991), anhedonia (low positive affect) is specific to depression; whereas general distress (high negative affect) is a feature common to anxiety and depression (and physiological hyper arousal is specific to anxiety). Consistent with this model, past research has shown that low positive affect is a defining characteristic of depression (see review by Gençöz, 2002). Moreover, several studies have shown that depression is related to less responsivity to positive stimuli (Henriques & Davidson, 2000; Rottenberg, Kasch, Gross, & Gotlib, 2002), and that this decreased responsivity predicts a slower recovery from depression (Rottenberg et al., 2002). Moreover, a study with college students found that higher savoring scores were associated with lower depressive symptoms and higher levels of self-esteem and happiness (Bryant, 2003). Similarly, subsequent studies have found a significant and positive association between the use of savoring strategies and subjective well-being (e.g., Quoidbach et al., 2010). Accordingly, Studies 1 and 2 investigated perceived ability to savor positive experiences, along with perceived ability to

regulate negative emotions, as potential mediators of the links of perceived emotional support/invalidation with emotional well-being.

Social Interactions and Emotion Regulation

Emotion regulation abilities are affected by an individual's social environment. The research literature in the field of developmental psychology shows that emotion regulation originates in early attachment relationships. In particular, caregiver sensitivity and responsiveness (i.e., interpreting the infant's cues correctly and responding promptly and appropriately to the infant's needs) are crucial to the development of emotion regulation in infants, who are unable to regulate their own emotional experiences without caregiver support (Calkins & Fox, 2002; Mikulincer, Shaver, & Pereg, 2003; Proper & Moore, 2006). Throughout childhood, emotion regulation continues to be influenced by parenting style and the emotional climate of the family (Morris, Silk, Steinberg, Myers, & Robinson, 2007), with caregivers playing a significant role in their children's emotion socialization (Zahn-Waxler, 2010). For example, parental validation of emotions (i.e., acknowledging, accepting, and nurturing the child's emotions) has been empirically linked with positive emotional and social outcomes for children (Roberts, 1999). Therefore, the majority of past research linking social relationships, emotion regulation, and psychopathology has focused primarily on the role caregivers play in regulating their children's emotional states (Southam-Gerow & Kendall, 2002). In contrast, little is known about the effects of emotional support from relationship partners on individuals' emotion regulation ability during adulthood. Nevertheless, it is believed that emotion regulation abilities continue to evolve through adulthood (Carstensen, Fung, & Charles, 2003; John & Gross, 2004).

Interpersonal Emotion Regulation

Recently, researchers have proposed models of interpersonal regulation that are not limited to childhood. For example, the Relational Regulation Theory (Lakey & Orehek, 2011) proposes that social relationships positively influence mental health through the provision of relational regulation, which is defined as “desired affect, action, or thought that results from interacting with or thinking about specific other people” (Lakey & Orehek, 2011, p. 485). Regarding emotion regulation in particular, one interpersonal emotion regulation model (Marroquin, 2011) proposes that emotion regulation serves as the mechanism explaining the protective role of social support against depression. This model proposes that relationship partners influence individuals’ emotion regulation by influencing attentional deployment (e.g., distraction from the negative situation and re-orientation to neutral or positive stimuli) and cognitive change (e.g., suggesting alternative interpretations, providing schema-inconsistent information, and providing additional emotional content). Since the development of this model, other similar models have been proposed. For example, Zaki and Williams (2013) proposed an interpersonal emotion regulation model that describes types of interpersonal emotion regulation processes by differentiating between intrinsic (when a person initiates social contact to regulate his/her emotions) and extrinsic (when a person regulates another persons’ emotions) processes as well as between response-dependent (when the process relies on the interaction partner responding in a particular way) and response-independent (when the process does not rely on a specific response).

Furthermore, based on a review of the literatures on the communicative function of emotions, the social development of emotion-regulation, social processes in self-regulation, and the role of social support, Hofmann (2014) proposed an interpersonal emotion regulation

model of mood and anxiety disorders. Consistent with these interpersonal emotion regulation models, Burleson & Goldsmith (1998) have proposed that relationship partners comfort individuals by encouraging reappraisal of a situation. Also, there is research suggesting that receiving support from close others is related to individuals' coping strategies. For example, Greenglass (1993) found that, among women, the levels of support received from relatives and friends were negatively related to respondents' use of maladaptive coping strategies (self-blame and wishful thinking). Overall, these interpersonal emotion regulation models suggest that interpersonal emotion regulation may represent at least part of the mechanism through which social support affects emotional well-being (Hofmann, 2014; Marroquin, 2011).

Interpersonal emotion regulation processes are likely to be particularly helpful for depressed individuals, as they can fill a gap in the individual's ability to maintain or up-regulate positive emotions, and engage in cognitive reappraisal to down-regulate negative emotions (Marroquin, 2011; Panzarella et al., 2006). Nevertheless, interpersonal emotion regulation processes are likely to influence the recipient's emotional well-being in general, and not just function as a protective factor against depression. In fact, as previously mentioned, other models of interpersonal emotion regulation that are consistent with Marroquin's model, but are not specific to depression, have been discussed in the literature (e.g., Hoffman, 2014; Rimé, 2007; Zaki & Williams, 2013). It is believed that through repeated comforting interactions, close others can broaden the individual's repertoire of emotion regulation strategies to respond more flexibly to a variety of difficult situations (Marroquin, 2011). Therefore, over time, enough instances of emotional support may strengthen the individual's own ability to access emotion regulation processes, paralleling in adulthood the process of gradual acquisition of emotion regulation in earlier development

(Marroquin, 2011).

Overall, a potential mechanism for the positive effects of emotional support on well-being is the susceptibility of the intrapersonal emotion regulation system to the interpersonal emotional support influences (Marroquin, 2011). This proposition was investigated in Study 1 with a concurrent correlational design and then in Study 2 with a cross-panel longitudinal design.

Social Interactions and the Regulation of Positive Emotions

There is limited research on the role of perceived emotional support for positive experiences (i.e., responses to capitalization attempts) in individuals' well-being. Many available studies on the relationship between emotional support for positive experiences and well-being have investigated daily effects (e.g., Gable et al., 2004; Gable et al., 2006; Reis et al., 2010). However, past concurrent correlational studies have shown that high levels of perceived emotional support for positive experiences are significantly and positively correlated with emotional well-being (e.g., Shorey & Lakey, 2011). Also, Yap and colleagues (2008) found that the more mothers reported being likely to invalidate their adolescent daughters' positive affect, the more the adolescent girls reported using maladaptive emotion regulation strategies and having depressive symptoms. One possible explanation for this pattern of findings is that higher levels of perceived emotional support for (and lower levels of perceived emotional invalidation of) positive experiences leads to higher perceived emotion regulation abilities, which in turn lead to enhanced emotional well-being. Accordingly, Studies 1 and 2 in this dissertation investigated the role of emotion regulation self-efficacy as a mediator of the link between perceived emotional support for positive experiences and emotional well-being. Study 1 investigated this in the context of a

concurrent correlational design and Study 2 furthered this investigation with a longitudinal design.

Chapter 3: Study 1 – Exploring the Concurrent Links of Perceived Emotional Support and Invalidation With Emotional Well-being

This first study was a concurrent examination of the links of perceived emotional support for, and invalidation of, negative experiences, and perceived emotional support for positive experiences, with emotional well-being (i.e., positive affect, negative affect, and depressive symptoms). This study also assessed the role of emotion regulation self-efficacy (i.e., perceived difficulty regulating negative emotions and perceived savoring ability) in mediating the associations between perceived emotional support/invalidation and emotional well-being. Figure 1 depicts this mediation model, which was also investigated in Study 2.

The effects of social support interactions are tied to relationship-specific factors, including the qualities of the support provider and the relationship itself (Marroquin, 2011). Therefore, this study assessed perceived emotional support from the one person that participants rely on the most to share both positive and negative emotional experiences. In this way, all participants were expected to select a close other who is available for emotional support, and with whom they felt close enough to reveal significant personal experiences.

A second issue addressed in this study was the assessment of emotion regulation self-efficacy. The majority of emotion regulation measures in previous studies assess specific strategies used to down-regulate (i.e., decrease) negative emotions. In contrast, the goal of this study was to assess perceived ability to regulate emotions (i.e., self-efficacy with respect to emotion regulation), including the perceived ability to down-regulate negative emotions and maintain or up-regulate positive emotions by savoring, without focusing on the specific emotion regulation strategies used. This approach is consistent with past research showing that well-being is affected by the ability to flexibly use emotion regulation strategies in a way

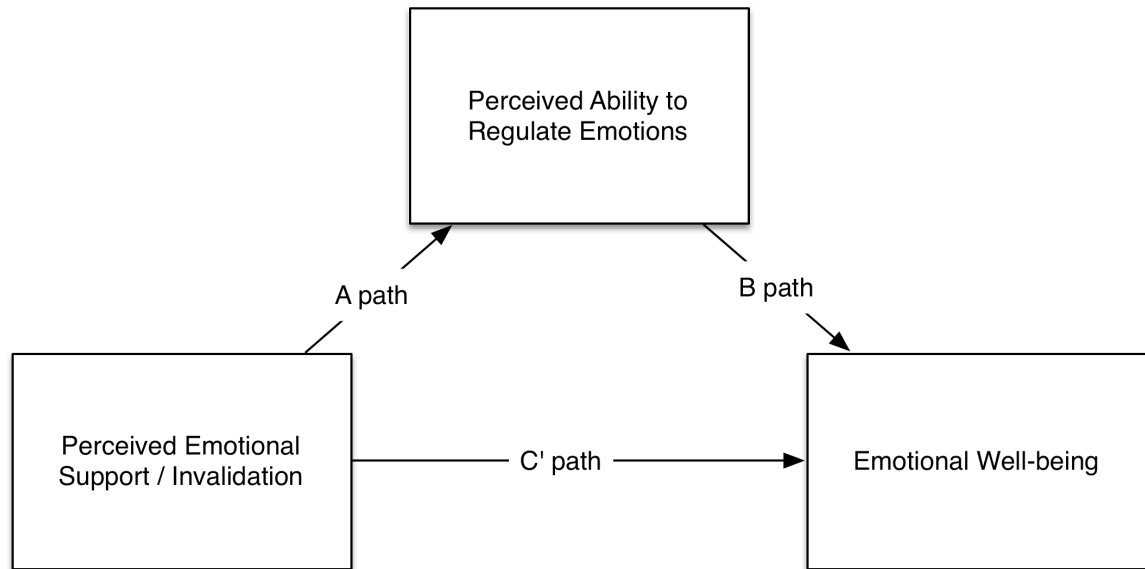


Figure 1. Mediation Model utilized in Studies 1 and 2 showing the individual indirect effects (A path and B path) for mediator variables on the relationship between the predictor variable and the outcome variable and the remaining direct effect (C prime path) of the predictor variable on the outcome variable, after taking into account all indirect (mediating) effects. The total mediation effect (C path) is composed of the total effect of the predictor variable plus the mediator variables on the outcome variable.

that fits the context, rather than on the use of specific strategies (Bonanno et al., 2004). In particular, this study investigated the possibility that higher levels of perceived emotional support are related to higher levels of perceived emotion regulation ability, which are in turn related to lower levels of depressive symptoms and negative affect and higher levels of positive affect. In addition, this study investigated the possibility that higher levels of perceived emotional invalidation are related to lower levels of perceived emotion regulation ability, which are, in turn, related to higher levels of depressive symptoms and negative affect and lower levels of positive affect.

Study 1 Objectives.

- 1) To investigate the concurrent relationship of perceived emotional support variables (i.e., perceived emotional support for and invalidation of negative experiences and perceived emotional support for positive experiences) with emotional well-being variables (i.e.,

- positive affect, negative affect, and depressive symptoms). Here, it was predicted that higher levels of perceived emotional support for negative and positive experiences would be associated with higher levels of positive affect and with lower levels of negative affect and depressive symptoms. In contrast, higher levels of emotional invalidation of negative experiences were predicted to be associated with lower levels of positive affect and with higher levels of negative affect and depressive symptoms.
- 2) To explore whether emotion regulation self-efficacy variables (i.e., perceived difficulty regulating negative emotions and perceived savoring ability) act as mediators of the relationships between perceived emotional support/invalidation and emotional well-being. In particular, as depicted in Figure 1, it was predicted that higher levels of perceived emotional support for negative and positive experiences would be associated with lower levels of perceived difficulty regulating negative emotions and/or with higher levels of perceived savoring ability, which in turn were expected to be associated with lower levels of depressive symptoms and negative affect, and higher levels of positive affect. Similarly, it was predicted that higher levels of perceived emotional invalidation of negative experiences would be associated with higher levels of perceived difficulty regulating negative emotions and/or with lower levels of perceived savoring ability, which in turn were expected to be associated with higher levels of negative affect and depressive symptoms, as with lower levels of positive affect.

Methods

Participants. Participants were 138 university students taking an introductory course in psychology, of which 106 were female (76.8%). The age of participants ranged from 18 to 32 ($M = 18.58$, $SD = 1.43$). The majority of participants were Caucasian (66.7%), followed by

Asian (21%), with the remainder reporting other ethnicities. Participants were recruited using the Psychology Department research participation pool at the University of Western Ontario. There were no exclusion criteria. Participants completed questionnaires in groups of less than 15 and received a course credit for participation. No participants were excluded from the analyses.

Measures

Selection of a close person. Participants were asked to select the one person in their lives with whom they shared their emotional experiences (both positive and negative) the most. Participants were asked to write down the initials of the person, and to identify the type of relationship they had with this person, how long they had known the person for, whether they lived with the person, how often they had talked with the person in the past two months, and how satisfied they were with their relationship with this person (see Appendix A). Participants were asked to re-write the initials of this person at the beginning of each questionnaire that assessed the participant's perceptions of this selected person.

Emotional reliance. In order to check whether participants selected a close other on whom they relied emotionally, they were asked to complete the Emotional Reliance Questionnaire (Ryan, La Guardia, Solky-Butzel, Chirkov, & Kim; 2005). This is a 10-item questionnaire assessing willingness to turn to a specific person during emotionally salient events (e.g., "when I am alone or depressed, I would turn to this person; "when I am anxious or scared about something, I would turn to this person"). Past research has shown the items on this scale measure a single construct (i.e., emotional reliance). Therefore, an overall emotional reliance score was formed by calculating the mean for all 10 items. Past research has shown this measure has good psychometric properties (Ryan et al., 2005). The internal

reliability of this measure in Study 1 was high (Cronbach Alpha = .91).

Perceived emotional support and invalidation of negative experiences. The Perceived Emotion Validation and Invalidation scale (PEVI; see Appendix B) was developed for this study as a measure of perceived typical levels of emotional support for/invalidation of negative experiences. There are few pre-existent measures of perceived support from one specific person (e.g., the Quality of Relationships Inventory, Pierce et al., 1991; Desired and Experienced Spousal Support; Xu & Burlison, 2001); and these scales either do not distinguish among support functions, or do not assess perceived emotional support/invalidation in response to negative emotional experiences. Also, existent self-report measures of perceived emotional support tend to focus on the perceived availability of (future) emotional support (i.e., the perception that one could count on close others to share important thoughts and feelings if needed; e.g., Interpersonal Support Evaluation List, Cohen et al., 1985; the Malmo social support scale, Hanson & Ostergren, 1987; Hobfoll & Lieberman, 1987), rather than on typical levels of available emotional support.

Accordingly, the PEVI was developed for the present research study to assess the extent to which the person selected by a participant generally responds in an emotionally supportive or invalidating way, when the participant feels sad, anxious, stressed, and angry. The perceived emotional support subscale aimed to measure the perception of supportive responses such as active listening, understanding/empathy, and comforting. This subscale included the following items: “this person is willing to listen to you talk about this feeling”, “this person understands how you feel”, and “this person comforts you”. The perceived emotional invalidation subscale aimed to measure the perception of negative responses such as minimization, criticism, and ignoring. This subscale included the following items: “this

person ignores your feeling”, “this person minimizes your feeling”, and “this person criticizes you”. Participants responded to these items using a Likert scale ranging from 1 (*never*) to 5 (*all of the time*).

Participants’ scores for each subscale were obtained by computing the mean of their responses across all 12 items in the subscale. Mean scores were calculated to form the perceived emotional support and perceived emotional invalidation scale scores. The internal consistency of both scales was quite good (Cronbach alphas were .90 for emotional support and .81 for emotional invalidation). A moderate negative correlation between the two scales ($r = -.35$) suggested a fair degree of independence of the two subscales.

Validation analyses for this new scale showed a significant positive correlation ($r = .63$) between the perceived emotional support subscale and a measure of willingness to seek emotional support from the selected person (i.e., the Emotional Reliance Questionnaire, ERQ; Ryan et al., 2005), as well as a significant positive correlation ($r = .69$) with a measure of (general) social support from the selected person (i.e., the social support subscale of the Quality of Relationships Inventory, QRI; Pierce et al., 1991). These results showed appropriate convergent validity for the emotional support subscale. Finally, a significant positive correlation ($r = .55$) between the emotional invalidation subscale and a measure of relationship conflict with the selected person (i.e., the conflict subscale of the Quality of Relationships Inventory, QRI; Pierce et al., 1991) showed appropriate convergent validity for the emotional invalidation subscale.

Perceived emotional support for positive experiences. Perceived emotional support for positive experiences was assessed with the Perceived Responses to Capitalization Attempts scale (PRCA; Gable et al., 2004). There are a total of 12 items in this scale,

measuring four types of emotional responses, namely, active-constructive, passive-constructive, active-destructive, and passive-destructive responses. Each subscale is assessed with three items. Participants rated each item using the stem, “When I tell this person about something good that has happened to me . . . ” using a 7-point scale ranging from 1 (*not at all true*) to 7 (*very true*). For example, one item of the active-constructive scale states: “this person usually reacts to my good fortune enthusiastically”, one item of the passive-constructive scale states: “this person says little, but I know he/she is happy for me”, one item of the active-destructive scale states “this person often finds a problem with it”, and one item of the passive-destructive scale states: “this person does not pay much attention to me”. Recent research has confirmed the reliability and validity properties of this scale (Pagani, Donato, & Iafrate, 2013).

Previous research has found that only the active-constructive subscale is positively associated with relationship well-being, whereas the other three subscales are negatively associated with relationship well-being (Gable et al., 2004). Therefore, based on recommendations from Gable and colleagues (2004), and consistent with all previous studies utilizing the PRCA scale, a single composite score was obtained by subtracting the means of the passive-constructive, active-destructive, and passive-destructive subscales from the mean of the active-constructive subscale. This way of computing a composite score does not allow for a separate study of supportive and invalidating responses, as higher scores indicated more emotionally supportive and less emotionally invalidating responses to capitalization attempts. Nevertheless, this composite score will be referred to as “perceived emotional support for positive experiences” in order to simplify discussion of the results. The internal reliability of this composite score was found to be good in this study ($\alpha = .88$). Past research has shown this composite score is a valid measure of responses to capitalization attempts (Gable et al.,

2004).¹

Emotion regulation self-efficacy. The perceived ability to regulate emotions (i.e., emotion regulation self-efficacy) was measured with two scales: The Difficulties with the Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) and the Savoring Beliefs Inventory (SBI; Bryant, 2003). The DERS is a 36-item, self-report questionnaire that assesses multiple aspects of perceived dysregulation of negative emotions (lack of emotional awareness, lack of emotional clarity, non-acceptance of emotional responses, limited access to emotion regulation strategies, difficulties engaging in goal-directed behavior, and impulse control difficulties). Only the limited access to emotion regulation strategies subscale was used to assess participants' perceived difficulty regulating negative emotions, as this scale assesses the specific construct of interest in this study (i.e., emotion regulation self-efficacy).

This subscale has eight items, which are answered using a scale ranging from 1 (*almost never*) to 5 (*almost always*). As an example, one item from this scale states “When I’m upset, I believe there is nothing I can do to make myself feel better”. This subscale score was calculated by adding the scores from the subscale items (as described in Gratz & Roemer, 2004). In a college sample, the full DERS measure and its subscales have been found to have good internal consistency, test–retest reliability, and construct validity (Gratz & Roemer, 2004). In this study, the internal reliability of the limited access to emotion regulation strategies subscale was high (Cronbach alpha = .90). For clarity, this construct is referred in the remainder of this dissertation as “perceived difficulty regulating negative emotions”.

The SBI was used to measure perceived savoring ability, which is an effective way to maintain or up-regulate positive emotions (Quoidbach, Berry, Hansenne, & Mikolajczak,

2010). The SBI has three subscales that assess savoring with respect to future events (i.e., anticipating), present events (i.e., savoring the moment), and past events (i.e., reminiscing). In remaining consistent with the temporal focus of the dissertation (i.e., present moment experiences), only the savoring the present moment subscale was used. This subscale consists of 8 items that are answered on a Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). For example, item 1 states, “It’s hard for me to hang onto a good feeling for very long”. Total scores for this scale were calculated by summing responses to the 4 positively-anchored items and subtracting responses to the 4 negatively-anchored items (as described in Bryant, 2003). Past research has shown that the SBI is a valid measure of perceived savoring ability (Bryant, 2003). The internal reliability of this scale was good in the present study (Chronbach alpha = .84).

Emotional well-being. Emotional well-being was measured with respect to positive and negative affect as well as depressive symptoms. Positive and negative affect were measured with the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS has 10 items measuring positive affect and 10 items measuring negative affect. Participants rated each item on a 5-point scale ranging from 1 (*very slightly or not at all*) to 5 (*extremely*) to indicate the extent to which they had felt this way in the past week. For example, items from the positive affect scale include “interested”, “excited”, and “strong”. Items from the negative affect scale include “distressed”, “upset”, and “guilty”. As described by Watson and colleagues (1988), a total score for each subscale was computed by adding the scores of all items composing each scale. Past research has shown evidence for the validity of the PANAS (Watson et al., 1988). In the present study, the internal reliability of these scales was good (Chronbach alpha was .86 for the positive affect scale and .84 for the negative affect scale).

Depressive symptoms were measured with the Depression, Anxiety, and Stress Scale – short version (DASS-21: Lovibond & Lovibond, 1995; Henry & Crawford, 2005). This is a 21-item self-report scale assessing levels of depression, anxiety and stress over the past week. Each of these subscales contains 7 items that utilize a four-point Likert response scale ranging from 0 (*did not apply to me at all*) to 3 (*applied to me very much, or most of the time*). Only the depression subscale was included in the present study. As examples, one item from the depression subscale states “I found it difficult to work up the initiative to do things” and another item states from this scale states “I felt down-hearted and blue”. Past research has shown the DASS-21 is a valid measure of depressive symptoms (Lovibond & Lovibond, 1995; Henry & Crawford, 2005). Total scores for the depression subscale were computed by adding the scores from all the subscale items and multiplying these total scores by two, in order to convert them to full scale (i.e., DASS-42) scores. The internal reliability of the depression subscale was good in this study (Chronbach alpha = .88).

Procedure

After receiving ethics approval from the Psychology Department at the University of Western Ontario (see Appendix C), participants were recruited through the research participation pool in the Psychology Department. Participants were tested in a seminar room in groups of less than 15 individuals. Upon arrival in the room, participants were given a letter of information to read, and signed an informed consent form to participate in the study (letter of information, and consent form are shown in Appendix D). They were then given a booklet of questionnaires to complete where they were asked to provide demographic information (see Appendix E), select a close person in their lives, and complete a number of questionnaires, including the PEVI, PRCA, ERQ, DERS, SBI, PANAS, and DASS-21.²

Participants were randomly assigned to one of two versions of these booklets, which varied only with regard to the order of the questionnaires. Upon completing the booklet (which took less than one hour), participants were given a debriefing letter that explained the purpose of the study (see Appendix F).

Results and Discussion

Characteristics of the Close Person

When participants were asked to identify the one person with whom they shared their emotional experiences the most (positive and negative), the largest percentage of participants selected a friend (40.6%), followed by mother (25.4%), romantic partner (16.7%), sibling (8%), father (5%), and 'other' (4.3%). The majority of participants reported knowing this person for over 3 years (83.3%). Fewer than 10% reported knowing this person for 1-2 years, and the remainder of participants reported knowing this person for less than a year. The majority of participants also reported not living with the selected person (89.1%). The largest percentage of participants reported talking with the selected person every day (44.9%), followed by several times a week (29.7%), once a week (13%), and the remainder of participants reporting talking less than once a week. Finally, the majority of participants reported feeling moderately satisfied to very satisfied with their relationship with the selected person (80.4%), 5.8% reported feeling somewhat satisfied, and the remainder reported feeling less than satisfied. The average amount of emotional reliance on the selected person (i.e., extent to which the respondent was willing to share negative and positive emotions with the selected person) was high ($M = 4.27$, $SD = 0.66$), where the maximum score possible was 5.00). Therefore, the majority of participants selected a friend or family member who they knew for a long time, with whom they had frequent conversations and a satisfying

relationship, and to whom they often recounted their positive and negative emotional experiences.

Descriptive Statistics

The range of scores, means and standard deviations of the measures used to assess the main constructs in Study 1 are shown in Table 1.

Addressing Objective One

As predicted, and as shown in row 1 of Table 2, higher levels of perceived emotional support for negative experiences were significantly associated with higher levels of positive affect and with lower levels of depressive symptoms, but were not significantly associated with negative affect. Similarly, as shown in row 2 of Table 2, higher levels of perceived emotional support for positive experiences were associated with higher levels of positive affect and with lower levels of depressive symptoms and negative affect. These results suggest that perceiving a close other as being emotionally supportive, both in difficult and good times, is associated with enhanced emotional well-being.

Contrary to expectations, as shown in row 3 of Table 2, perceived emotional invalidation of negative experiences was not significantly associated with positive affect or depressive symptoms. Nevertheless, higher levels of perceived emotional invalidation of negative experiences were associated with higher levels of negative affect. Therefore, these results suggest that the more someone perceives a close other as being emotionally invalidating, the higher their levels of negative affect.

Addressing Objective Two

To explore whether emotion regulation self-efficacy can be considered a mediator of

Table 1
Descriptive Statistics of Measures Used in Study 1

Constructs (Corresponding Measures)	Range of Scores	<i>M (SD)</i>
Perceived emotional support for negative experiences (PEVI)	2.58 – 5.00	4.20 (0.57)
Perceived emotional invalidation of negative experiences (PEVI)	1.00 – 4.00	2.02 (0.55)
Perceived emotional support for positive experiences (PRCA)	-12.00 – 4.00	-1.28 (3.73)
Emotional reliance (ERQ)	2.20 – 5.00	4.27 (0.66)
Perceived difficulty regulating negative emotions (DERS)	8.00 – 39.00	18.64 (7.09)
Perceived savoring ability (SBI)	-16.00 – 23.00	7.84 (8.39)
Positive affect (PANAS)	12.00 – 45.00	30.26 (6.99)
Negative affect (PANAS)	10.00 – 42.00	21.81 (7.27)
Depressive symptoms (DASS)	0.00 – 42.00	11.23 (9.55)

Table 2
Correlations of Perceived Emotional Support/Invalidation Variables with Emotional Well-being Variables

	Positive affect	Negative affect	Depressive symptoms
Perceived emotional support for negative experiences	.21*	-.15	-.24**
Perceived emotional support for positive experiences	.19*	-.31***	-.35***
Perceived emotional invalidation of negative experiences	-.06	.23**	.15

Note. * = $p < .05$; ** = $p < .01$; *** = $p < .001$.

the relationship between perceived emotional support and emotional well-being, multiple mediation analyses were conducted. Prior to conducting these analyses, Baron and Kenny (1986) recommend testing for three pre-conditions that need to be met. First, the predictor variables should be significantly correlated with the outcome variables. Second, the predictor variables should be correlated with the mediator variables. Finally, the mediator variables

should be significantly correlated with the outcome variables.

Table 3 describes the correlations between the predictor and mediator variables. Most of these correlations were statistically significant. In particular, higher levels of perceived emotional support for negative experiences were significantly associated with higher levels of perceived savoring ability and with lower levels of perceived difficulty regulating negative emotions. Similarly, higher levels of perceived emotional support for positive experiences were significantly associated with higher levels of perceived savoring ability and with lower levels of perceived difficulty regulating negative emotions. Finally, higher levels of perceived emotional invalidation of negative experiences were significantly associated with higher levels of perceived difficulty regulating negative emotions, but were not significantly associated with perceived savoring ability.

Table 4 describes the correlations between the mediator and the outcome variables. In particular, higher levels of perceived savoring ability were significantly associated with lower levels of negative affect and depressive symptoms and higher levels of positive affect. Also, higher levels of perceived difficulty regulating negative emotions were significantly associated with higher levels of negative affect and depressive symptoms and lower levels of positive affect.

Multiple Mediation Analyses

The multiple mediation analyses followed the procedures described by Preacher and Hayes (2008). This procedure estimates the total, direct, and single-step indirect effects (specific and total) of predictor variables on outcome variables through a set of mediator variables, while controlling for potential effects of all other mediators. SPSS was used to perform a bootstrap sampling procedure developed by Preacher and Hayes (2008) that uses

Table 3

Correlations of Perceived Emotional Support/Invalidation Variables with Emotion Regulation Self-efficacy Variables

Predictor Variables	Mediator Variables	
	Perceived savoring ability	Perceived difficulty regulating negative emotions
Perceived emotional support for negative experiences	.27**	-.21*
Perceived emotional support for positive experiences	.40***	-.38***
Perceived emotional invalidation of negative experiences	-.16	.19*

Note. *** = $p < .001$, ** = $p < .01$, * = $p < .05$.

Table 4

Correlations of Emotion Regulation Self-efficacy Variables with Emotional Well-being Variables

Outcome Variables	Mediator Variables	
	Perceived savoring ability	Perceived difficulty regulating negative emotions
Negative affect	-.35***	.64***
Depressive symptoms	-.66***	.68***
Positive affect	.53***	-.37***

Note. *** = $p < .001$

sampling with replacement to draw a large number of samples (i.e., 5000) from the data set and calculate path coefficients for each sample. Then, based on the estimates from the 5000 bootstrap samples, this procedure estimates mean direct and indirect effects and their 95% confidence intervals, and uses this information to determine if each effect is statistically significant (e.g., testing whether the zero lies within the 95% bias corrected bootstrapped confidence interval).

Multiple mediation analyses were conducted separately for each predictor variable

(i.e., perceived emotional support for negative experiences, perceived emotional invalidation of negative experiences, and perceived emotional support for positive experiences), and for each outcome variable (i.e., negative affect, positive affect, depressive symptoms).

Figure 1 provides a depiction of the mediation model followed by the analyses conducted both in this Study and in Study 2. In particular, the model involves individual indirect effects (A path and B path) for mediator variables on the relationship between the predictor variable and the outcome variable; the remaining direct effect (C' path) of the predictor variable on the outcome variable, after taking into account all indirect (mediating) effects; and the total mediation effect (C path), which represents the total effect of the predictor variable plus the mediator variables on the outcome variable. Before conducting the multiple mediation analyses, all variables were standardized by subtracting the mean from the value for each case, and then dividing the difference by the standard deviation. This was done in order to obtain standardized regression coefficients.

As it can be seen in Figure 2, the link of perceived emotional support for negative experiences with depressive symptoms was mediated by both constructs of emotion regulation self-efficacy: perceived difficulty regulating negative emotions and perceived savoring ability. The overall mediation model was statistically significant (C path: $\beta = -0.24$, $p = .005$; Adjusted $R^2 = .59$). Therefore, higher perceived emotional support for negative experiences was linked to lower perceived difficulty regulating negative emotions and higher perceived savoring ability, which in turn were related to lower depressive symptoms.

As seen in Figure 3, the link between perceived emotional support for negative experiences and positive affect was significantly mediated by perceived savoring ability, but was not mediated by perceived difficulty regulating negative emotions. The overall

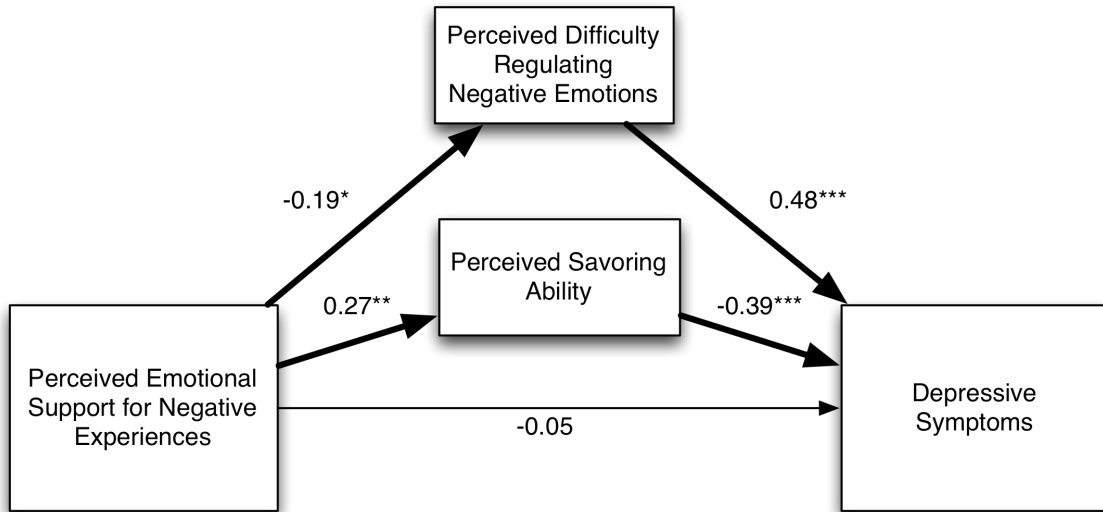


Figure 2. Mediation analysis testing the mediating role of perceived difficulty regulating negative emotions and perceived savoring ability in the link between perceived emotional support for negative experiences and depressive symptoms. * = $p < .05$; ** = $p < .01$; *** = $p < .001$.

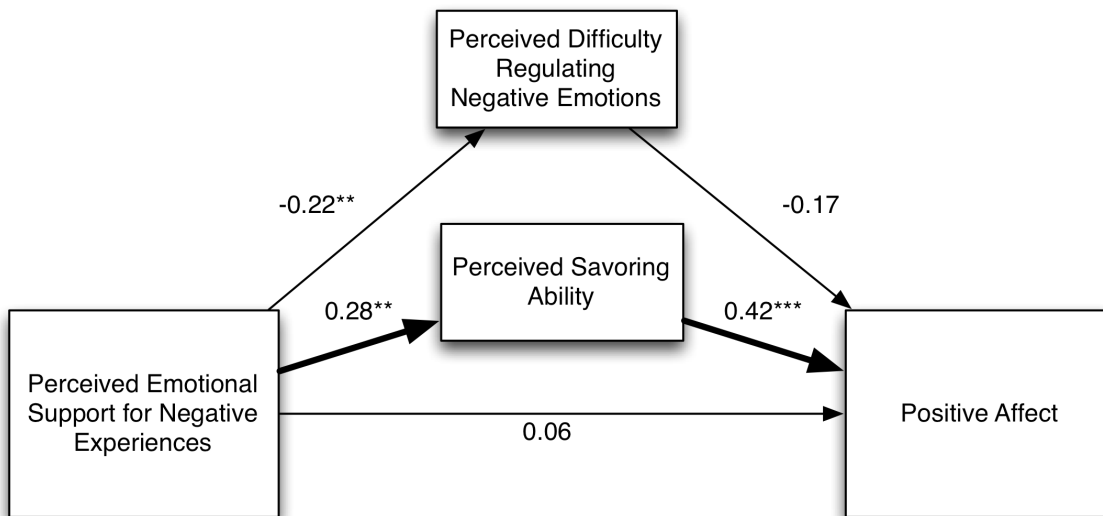


Figure 3. Mediation analysis testing the mediating role of perceived difficulty regulating negative emotions and perceived savoring ability in the link between perceived emotional support for negative experiences and positive affect. ** = $p < .01$; *** = $p < .001$.

mediation model was statistically significant (C path: $\beta = 0.22$, $p = .013$; Adjusted $R^2 = .29$).

Therefore, higher perceived emotional support for negative experiences was linked to higher perceived savoring ability, which in turn was related to higher positive affect.

As it can be seen in Figure 4, the link of perceived emotional support for positive

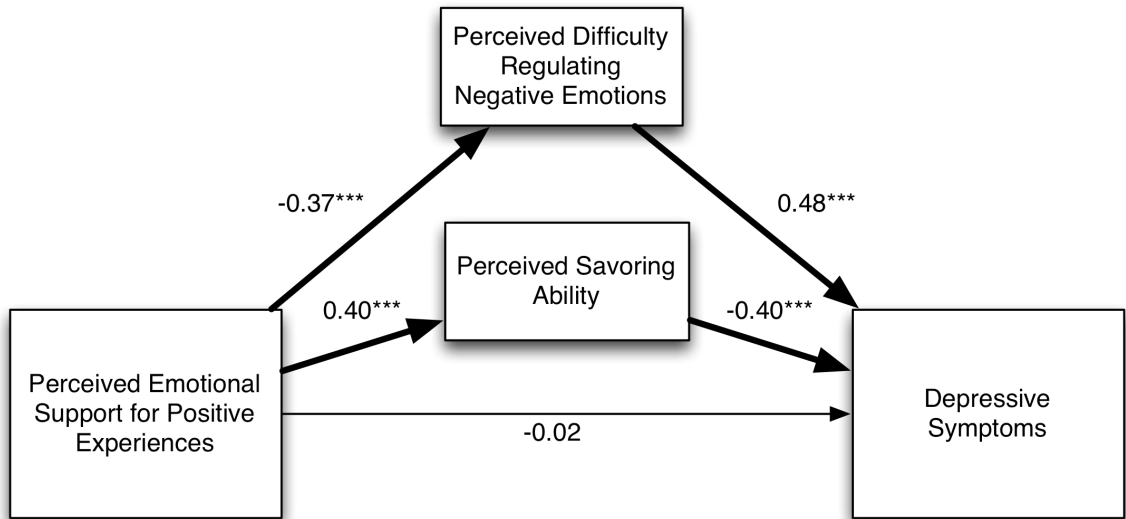


Figure 4. Mediation analysis testing the mediating role of perceived difficulty regulating negative emotions and perceived savoring ability in the link between perceived emotional support for positive experiences and depressive symptoms. *** = $p < .001$.

experiences with depressive symptoms was mediated by both difficulty regulating negative emotions and perceived savoring ability. The overall mediation model was statistically significant (C path: $\beta = -0.35$, $p < .001$; Adjusted $R^2 = .59$). Therefore, higher perceived emotional support for positive experiences was linked to lower perceived difficulty regulating negative emotions and higher perceived savoring ability, which in turn were both related to lower depressive symptoms.

As seen in Figure 5, the link between perceived support for positive experiences and negative affect was significantly mediated by perceived difficulties regulating negative emotions, but not by perceived savoring ability. The overall mediation model was statistically significant (C path: $\beta = -0.31$; Adjusted $R^2 = .36$). Therefore, higher perceived emotional support for positive experiences was linked to lower perceived difficulty regulating negative emotions, which in turn was related to lower negative affect.

As seen in Figure 6, the link between perceived emotional support for positive experiences and positive affect was fully mediated both by perceived savoring ability and by

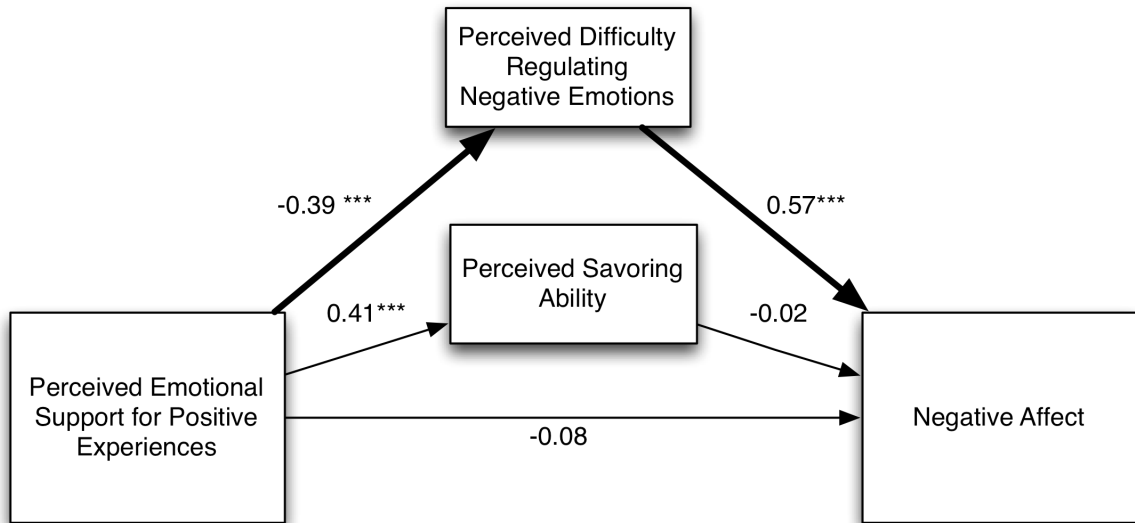


Figure 5. Mediation analysis testing the mediating role of perceived difficulty regulating negative emotions and perceived savoring ability in the link between perceived emotional support for positive experiences and negative affect. *** = $p < .001$.

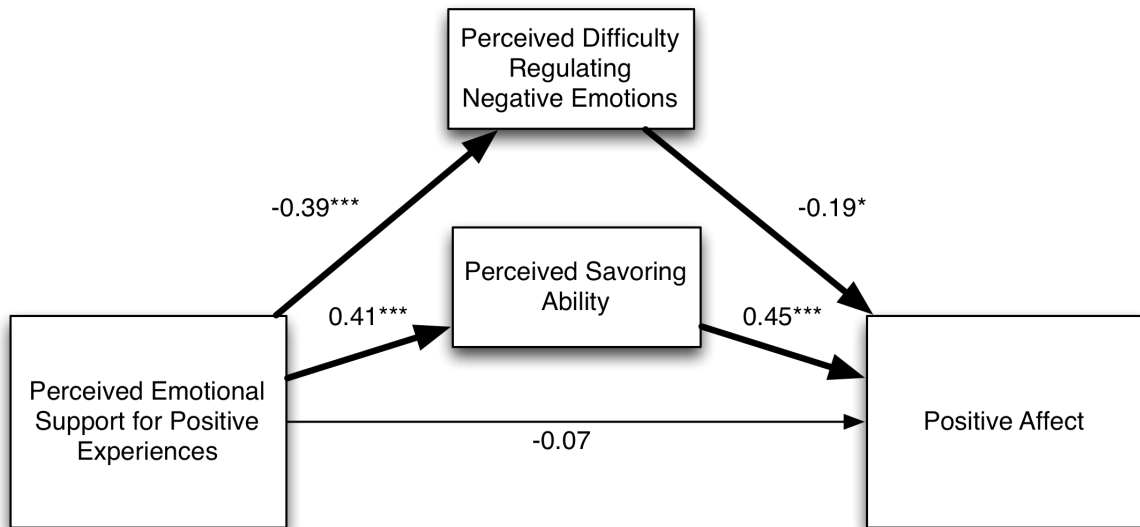


Figure 6. Mediation analysis testing the mediating role of perceived difficulty regulating negative emotions and perceived savoring ability in the link between perceived emotional support for positive experiences and positive affect. * = $p < .05$; *** = $p < .001$.

perceived difficulty regulating negative emotions. The overall mediation model was statistically significant (C path: $\beta = 0.19$, $p = .025$; Adjusted $R^2 = .29$). Therefore, higher perceived emotional support for positive experiences was linked to higher perceived savoring ability and lower difficulty regulating negative emotions, which in turn were related to higher

positive affect.

In contrast, as seen in Figure 7, the link between perceived invalidation of negative experiences and negative affect was not mediated by perceived difficulty regulating negative emotions. Therefore, the link between perceived emotional invalidation of negative experiences and negative affect was not explained by difficulty regulating negative emotions. The mediation role of perceived savoring ability was not tested in this model as the correlation between perceived invalidation of negative experiences and perceived savoring ability had been found to be non-significant in the previous analyses.

Therefore, Study 1 found that, as predicted, higher perceived emotional support for negative and positive experiences were significantly associated with lower depressive symptoms; and these associations were mediated by both lower perceived difficulty regulating negative emotions and higher perceived savoring ability. Also, higher perceived emotional support for negative experiences was associated with higher positive affect and this link was mediated by higher perceived savoring ability. Similarly, higher perceived emotional support for positive experiences was associated with higher positive affect, and both higher perceived savoring ability and lower perceived difficulty regulating negative emotions mediated this link. Moreover, higher perceived emotional support for positive experiences was significantly associated with lower negative affect and this link was significantly mediated by lower perceived difficulty regulating negative emotions. Finally, higher perceived emotional invalidation was significantly associated with higher negative affect, but this association was not mediated by emotion regulation self-efficacy.³

The above findings shed some light on the mechanisms by which perceived emotional support may affect well-being, suggesting that close others may influence individuals'

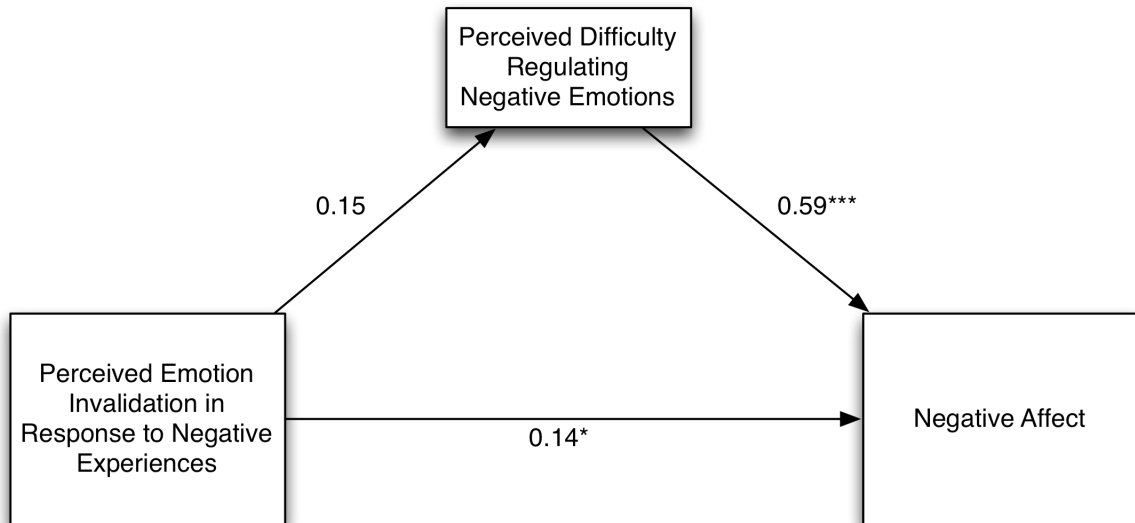


Figure 7. Mediation analysis testing the mediating role of perceived difficulty regulating negative emotions in the link between perceived emotion invalidation in response to negative experiences and negative affect.
* = $p < .05$; *** = $p < .001$.

emotional well-being through the strengthening of individuals' perceived ability regulating emotions. The current findings are also consistent with past studies showing that perceived emotional support affects well-being by enhancing self-efficacy (Benight & Bandura, 2004; Schroder, Schwarzer, & Konertz, 1998; Wang et al., 2008), and with recent models of interpersonal emotion regulation (e.g., Hofmann, 2014; Marroquin, 2011).

To the extent that perceived emotional support is closely related to actual provision of emotional support, the findings from this study suggest that family and friends of individuals with higher levels of depressive symptoms may do well to provide emotional support for negative and positive experiences, in order to enhance the depressed individual's perceived ability to regulate emotions. This could then facilitate a reduction in depressive symptoms and negative affect and an increase in positive affect. Future research could test the feasibility of this application of the current findings.

One limitation of this study is that its focus was solely on perceptions of emotional support from the recipient of support. This focus was based on the understanding that

interpersonal interactions affect individuals through their perceptions of those interactions (Reis et al., 2010). However, other aspects of the dyadic emotional support interaction were not investigated (e.g., perceptions from the provider of emotional support/invalidation) and should be included in future studies. Also, the focus of this Study was on perceived typical emotional support, rather than on specific instances of received emotional support. As previously discussed, these two constructs (i.e., received and perceived emotional support) are related. That is, individuals base their perception on how a close other tends to respond to their emotional experiences based on actual past experiences of received emotional support (Coyne & DeLongis, 1986; Hobfoll, 2009). However, perceived available emotional support may also be affected by the respondent's personality characteristics and/or cognitive appraisals (Paykel, 1994). Therefore, future studies could expand this research by measuring specific instances of received emotional support. This could include the use of daily diaries, such as the one used in Study 3 of this dissertation. The use of self-report measures in this Study allowed the study of recipients' perceptions of emotional support, which was the focus of this dissertation. However, there are limitations associated with this type of information-gathering method (e.g., response biases, social desirability, understanding of items/scales, memory biases, etc.). Therefore, future studies could expand this research by measuring the direct observation of supportive interactions.

Another limitation of this study is that it used a concurrent correlational design. Due to the nature of this design, it is impossible to discern whether perceived emotional support leads to enhanced emotional well-being, whether emotional well-being predicts perceived emotional support, whether the relationship is bidirectional, or whether the relationship is spurious. Past research on depression suggests the relationship between perceived social support and depression may be bidirectional (e.g., Stice et al., 2004).

One way to improve on the methodology used in Study 1 would be to conduct a prospective cross-lagged design study. Even though an absolute test of causality would necessitate an experimental design, the use of a prospective longitudinal cross-lagged design could provide further information on the likely direction of this relationship, while maintaining the external validity of the results. Therefore, as described next, Study 2 aimed to extend the findings from Study 1 by assessing the mediating role of emotion regulation self-efficacy in the link of perceived emotional support with emotional well-being, in the context of a prospective longitudinal cross-lagged design. Moreover, Study 2 also tested the fit of a bidirectional model linking perceived emotional support with depressive symptoms.

Chapter 4: Study 2 – Exploring the Prospective Links of Perceived Emotional Support and Invalidation with Emotional Well-being

Study 2 aimed to expand on the results obtained from Study 1 by using a cross-lagged panel design, rather than a concurrent design, to allow for stronger inferences to be made. Study 2 also aimed to expand on the results from Study 1 by encouraging participants to select a close other with whom they interacted most frequently and felt closest to. This is in contrast to Study 1, which asked participants to select a close other with whom they shared positive and negative emotional experiences with the most. This change in Study 2 was motivated by a desire to assess the role that perceived emotional support from a close other who most regularly interacted with (and thus possibly influenced) participants played in their emotional well-being. Also, Study 2 used a measure of perceived emotional support for negative experiences that approximated much more closely the way perceived responses to capitalization attempts were measured. The scale used in Study 1 for the assessment of perceived emotional support for/invalidation of negative experiences (the PEVI) measures perceived emotional support and emotional invalidation with respect to a specific set of negative *emotions* (i.e., sad, anxious, stressed, and angry). In contrast, the PRCA measures perceived emotional support in response to positive experiences. In order to make more appropriate comparisons between perceived emotional support for negative and positive experiences, Study 2 assessed perceived emotional support for negative experiences using a scale measuring perceived emotional support and emotional invalidation of negative experiences (as opposed to *emotions*) – the Perceived Emotional Support and Emotional Invalidation scale (PESEI).

Furthermore, Study 2 also aimed to investigate the directionality of the links of

perceived emotional support for positive and negative experiences with depressive symptoms, as past research has shown that depression can have a negative effect on supportive relationships. In particular, there are two characteristics of depression that could affect individuals' perceptions of emotional support: negative cognitive style and interpersonal stress generation. Depressed individuals' negative cognitive style makes them more likely to interpret social interactions in a negative way, particularly in the context of ambiguous interactions, and they tend to be more attentive to any information that may indicate rejection (Tse & Bond, 2001). Therefore, negative cognitive style has the potential to affect perceptions of emotional support.

Depression is believed to negatively affect social support by causing strains on interpersonal relationships (Gladstone, Parker, Malhi, & Wilhelm, 2007). In particular, past research has consistently found that depressed individuals play an active role in the generation of interpersonal stress. Several studies looking at this phenomenon of interpersonal stress generation have found that individuals with depression experience more dependent interpersonal difficulties, rather than independent or fateful events, compared to non-depressed individuals (Hammen, 2006). This finding has been replicated in several studies that assessed a wide variety of populations differing in age, gender, and diagnostic status (for a review see Hammen, 2006).

The generation of interpersonal stress in depression is problematic, given that relationship satisfaction plays a significant role in the prediction of provision of social support (Iida, Seidman, Shrout, Fujita, & Bolger, 2008). Moreover, past research has shown that for both depressed and non-depressed individuals the characteristics of the social interaction play a significant role in ratings of supportiveness (Lakey, Drew, & Sirl, 1999).

Past research has found a bidirectional relationship between social support and depressive symptoms. For example, in a study of adolescent girls, Stice and colleagues (2004) found that initial depressive symptoms and major depression predicted lower peer support, although not parental support. In contrast, initial deficits in parental support, but not peer support, predicted increases in depressive symptoms and the onset of major depression. Overall, past findings showing negative effects of depression on supportive relationships suggest that studies investigating social support processes in depressed individuals should consider the possibility of a bidirectional relationship between social support and depressive symptoms. This possibility was investigated in Study 2.

Overall, Study 2 aimed to further investigate the role of perceived emotional support from a close other in emotional well-being (i.e., positive affect, negative affect, and depressive symptoms) over time, as well as the mediating role of emotion regulation self-efficacy. To this end, participants in Study 2 were asked to complete measures of perceived emotional support/invalidation, emotion regulation self-efficacy, and emotional well-being at three points in time: at baseline (Time 1), two weeks after Time 1 (Time 2) and four weeks after Time 1 (Time 3). Given the general lack of theoretical guidance in the literature about the time frame needed for the effects of perceived emotional support on the recipient's well-being to show, the current study explored the various possible time frames: two weeks (i.e., from Time 1 to Time 2 and from Time 2 to Time 3) and four weeks (i.e., from Time 1 to Time 3). For the prospective regression analyses, a special focus was given to the longest, and thus most conservative, possible time frame (i.e., four weeks; from Time 1 to Time 3). All the regression analyses conducted in this study controlled for initial levels of emotional well-being. Finally, based on past research findings on the negative effects of depression on interpersonal relationships (Gladstone et al., 2007), Study 2 tested the opposite direction of

the relationship between perceived emotional support and depressive symptoms, namely, that depressive symptoms predict subsequent levels of perceived emotional support.

Objectives

- 1) To replicate findings from Study 1, utilizing a new measure of perceived emotional support for/invalidation of negative experiences (i.e., the PESEI), using a more sophisticated cross-lagged panel design.
 - a. It was expected that a pattern of correlations similar to that found in Study 1 would be replicated in Study 2 for all study waves (i.e., Times 1, 2 and 3). In particular, higher levels of perceived emotional support for negative and positive experiences were expected to be negatively related to negative affect and depressive symptoms and positively related to positive affect. Also, despite null findings from study 1, and based on past research showing a negative relationship between social undermining and depressive symptoms (Cranford, 2004), it was expected that perceived emotional invalidation would be positively correlated with depressive symptoms and negative affect and negatively correlated with positive affect. This relationship was tested again in this study as it used a more robust measure of perceived emotional invalidation and participants were encouraged to select close others with whom they interacted most frequently – potentially increasing the chances of detecting the role that negative interactions with the selected close other play in participants' emotional well-being.
- 2) To assess whether perceived emotional support/invalidation variables would predict subsequent levels of emotional well-being (four weeks later), controlling for initial

levels of emotional well-being.

- a. It was expected that perceived emotional support/invalidation variables would significantly predict subsequent levels of emotional well-being. In particular, Time 1 emotional support/invalidation variables (predictors) were expected to significantly predict Time 3 emotional well-being variables (outcome variables). Specifically, higher levels of perceived emotional support variables were expected to lead to lower levels of depressive symptoms and negative affect and higher levels of positive affect, controlling for initial levels of these outcome variables. Conversely, higher levels of perceived emotional invalidation were expected to lead to higher levels of depressive symptoms and negative affect and lower levels of positive affect, controlling for initial levels of these outcome variables.
- 3) Given past research findings on the effects of depression on supportive relationships (e.g., stress generation, Hammen, 1991; excessive reassurance seeking, Coyne, 1976), the third objective was to assess whether baseline levels of depressive symptoms predicted subsequent levels of perceived emotional support and perceived emotional invalidation.
- a. Specifically, higher levels of depressive symptoms at Time 1 were expected to predict lower levels of perceived emotional support variables and higher levels of perceived emotional invalidation at Time 3 (four weeks later), controlling for Time 1 levels of these perceived emotional support/invalidation variables.
- 4) To investigate the mediation role of emotion regulation self-efficacy in the prediction

of depressive symptoms, positive affect, and negative affect at Time 3 from initial levels of perceived emotional support/invalidation.

- a. Specifically, higher levels of perceived emotional support variables were expected to lead to higher levels of perceived savoring ability and/or lower levels of perceived difficulty regulating negative emotions, which in turn were expected to lead to lower levels of depressive symptoms and negative affect, and higher levels of positive affect. Conversely, higher levels of perceived emotional invalidation were expected to lead to lower levels of perceived savoring ability and/or higher levels of perceived difficulty regulating negative emotions, which in turn were expected to lead to higher levels of depressive symptoms and negative affect and lower levels of positive affect.

Methods

Participants

Participants were 199 university students taking an introductory course of psychology. They were recruited using the Psychology Department research participation pool at the University of Western Ontario. There were no exclusion criteria, except for participation in Study 3. Participants completed questionnaires utilizing an on-line system developed specifically for this study (see Procedure section) and received a course credit for participation. Nine participants submitted completely blank forms on one or more of the three questionnaires, even though the online program generated a warning message when participants submitted uncompleted questionnaires. Therefore, these nine participants knowingly submitted blank questionnaires and their data were removed from the analyses. Moreover, 14 other participants appeared to respond in a random manner (i.e., selected the

exact same response from a Likert scale for all items in a questionnaire). Therefore, their data were removed from the analyses as well. In the end, data from 176 participants was included in the analyses. There were 120 females (68%) and 56 males (32%). The age of participants ranged from 18 to 26 ($M = 18.70$, $SD = 1.18$). The majority of participants were Caucasian (70.5%), followed by Asian (12.5%), with the remainder reporting other ethnicities.⁴

Measures

Selection of a close person. In the first wave of on-line testing, participants were first asked to think of the people they interacted with most frequently, and identify the one that they felt closest to. They were told this person could be a family member, a friend, or a romantic partner (see Appendix G). Participants were asked to write down the initials of the selected person and to complete the questionnaires based on their experiences with this person over the past two weeks. For study waves 2 and 3, the online system reminded each participant of the person they had selected during wave 1 by providing them with the initials.

Emotional reliance. In order to assess whether participants tended to rely on the selected person for emotional support, they were asked to complete the Emotional Reliance Questionnaire (Ryan et al., 2005), as described in Study 1. The internal reliability of this measure in Study 2 was high in all three study waves (Cronbach Alpha was .92 in wave 1, .94 in wave 2, and .95 in wave 3).

Perceived emotional support and invalidation of negative experiences. Perceived emotional support and invalidation of negative experiences from the selected close person was measured with the Perceived Emotional Support and Emotional invalidation (PESEI) scale, developed specifically for this study. This scale was developed in order to assess perceived level of emotionally supportive and emotionally invalidating responses typically

available from the selected person when sharing negative experiences. This means of assessing emotional support for negative experiences parallels the way perceived responses to capitalization are measured via the Perceived Responses to Capitalization Scale (PRCA; Gable et al., 2004).

The items included in the emotional support subscale of the PESEI were adapted from the (Lack of) Emotional Support subscale, which measures the perception of a supportive and accepting attitude from a close other (Gerlsma, Van Der Lubbe, & Van Nieuwenhuizen, 1992); and is part of the Level of Expressed Emotion Scale (LEE), a measure known to have good psychometric properties (Nelis, Rae, & Liddell, 2011). The PESEI has 12 items measuring perceived emotional support and 10 items measuring perceived emotional invalidation. The items included in the emotional invalidation subscale of the PESEI were adapted from those included in the Irritability subscale of the LEE, which measures the perception of general annoyance and intolerance from a close other (Gerlsma et al., 1992). Consistent with the format used in the PRCA scale, but with regard to negative experiences; participants rated each item using the stem “When I tell this person about something bad that has happened to me, this person . . . ” using a 7-point scale ranging from 1 (*not at all true*) to 7 (*very true*). Items from the emotional support subscale aimed to assess the perception of supportive responses such as comforting, acceptance, understanding, and care. As examples, two items from the perceived emotional support subscale read “calms me down”, and “is sympathetic towards me”. Items from the emotional invalidation subscale aimed to assess the perception of negative responses such as invalidation, irritation, and ignoring. As examples, two items from the perceived emotional invalidation subscale read “says I just want attention” and “makes me feel guilty” (see Appendix H). Subscale scores were formed by computing the mean of all subscale item scores. Participants completed this measure at each

of three time points (i.e., baseline, two weeks after baseline, and four weeks after baseline), based on their experiences with the selected close other over the previous two weeks. Before conducting Study 2, the reliability and validity of the PESEI were investigated by conducting a separate auxiliary study (reported in Appendix I). In summary, results from this auxiliary study showed good levels of internal consistency, as well as convergent, divergent, and concurrent validity of the two PESEI scales. In the present study, it was once again found that the internal consistencies of the two scales were excellent (Cronbach alphas were .91, .92, and .94 for the Emotional Support scale at times 1, 2, and 3, respectively; and .90, .92, and .94 for the Emotional invalidation scale at times 1, 2, and 3, respectively).

Perceived emotional support for positive experiences. Perceived emotional support for positive experiences was assessed with the Perceived Responses to Capitalization scale (PRCA; Gable et al., 2004). This scale was described previously in Study 1. Participants completed this measure at each of the three time points, based on their experiences over the previous two weeks. The internal consistency of this scale score was good in the first, second, and third study waves (respective Cronbach alpha's of .85, .88, and .88).

Emotion regulation self-efficacy. Emotion regulation self-efficacy was measured with two scales: The Difficulties with the Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) and the Savoring Beliefs Inventory (SBI; Bryant, 2003). These measures were described in Study 1. Consistent with the first study, only the limited access to emotion regulation strategies subscale from the DERS (referred in this dissertation as perceived difficulty regulating negative emotions) and the savoring the moment subscale from the SBI were used in the present study. Participants completed these measures at each of the three time points, based on their experiences over the previous two weeks. The internal

consistency of these subscales was good in all three waves (i.e., the Cronbach alphas of the limited access to emotion regulation strategies subscale were .90 in wave 1, .91 in wave 2, and .93 in wave 3; the Cronbach alphas of the savoring the moment subscale were .84 in wave 1, .81 in wave 2, and .83 in wave 3).

Emotional well-being. Emotional well-being was studied in this Study in terms of positive and negative affect as well as depressive symptoms. Consistent with Study 1, positive and negative affect were measured with the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). This scale is described in Study 1. The only difference is that for the present study participants were asked to respond to this measure based on their experiences over the previous two weeks. The internal consistencies of the two subscales were good in Study 2 (i.e., Cronbach alphas for the positive affect subscale of the PANAS were .87 in wave 1, .87 in wave 2, and .90 in wave 3; and Cronbach alphas for the negative affect subscale of the PANAS were .88 in wave 1, .89 in wave 2, and .91 in wave 3).

Depressive symptoms were measured with the depression subscale of the Depression, Anxiety, and Stress Scale – short version (DASS-21; Lovibond & Lovibond, 1995). This scale is described in Study 1. The only difference is that for the present study participants were asked to respond to this measure based on their experiences over the previous two weeks. The internal reliability of this measure was good in Study 2 (Cronbach alphas for the depression scale of the DASS-21 were .89 in wave 1, .89 in wave 2, and .91 in wave 3).

Procedure

After receiving ethics approval (see Appendix J) from the Psychology Department at the University of Western Ontario, participants signed up for the study through that department's research participation pool system. The study was conducted utilizing online

questionnaires. In order to participate, the students had to commit to completing a set of questionnaires three times (i.e., three study waves), two weeks apart, with each session lasting less than 40 minutes. Those who were interested in doing so were directed to a webpage where they read a letter of information and consent form (see Appendix K). Then, those who agreed to participate in the study were redirected to a web page where they entered their name, their research participant id, and a primary and secondary email accounts, in order to register for the study. The on-line system automatically assigned a study id number to each registered participant. This number was then used for the entire study to identify participants' responses in each of the three waves.

The first morning after registration participants received an email with a link to the first set of questionnaires (wave 1), where they were asked to provide demographic information (same demographic questions as described in Appendix E), identify a close person in their lives with whom they interacted most frequently (i.e., a family, friend, or romantic partner), provide the initials of this selected person and information regarding the quality of the relationship with this person, and complete a number of questionnaires, including the PESEI, PRCA, ERQ, DERS, SBI, PANAS, and DASS-21.⁵ Two weeks after completing the first set of questionnaires, the online system sent participants an email with a link to the second set of questionnaires (wave 2), and then two weeks after this participants received an email with a link to the third set of questionnaires (wave 3). At each of the three waves, emails were sent in the morning and if participants had not completed the corresponding questionnaire by the following day, they were sent a remainder email at that time. Those participants who still had not completed a questionnaire after the first remainder email, were sent up to two additional reminder emails (once a day in the morning) prompting them to complete the corresponding set of questionnaires (see the text of all emails in

Appendix L). The first reminder email was sent to participants' primary email address and the subsequent reminder emails were sent to both their primary and secondary email addresses. The online system put participants who did not complete the corresponding set of questionnaires after receiving the three reminder emails into a non-responder list and did not send them any more emails.

Waves 2 and 3 contained the exact same questionnaires as wave 1, without the questions about demographic information or identification of a close person. In the instructions to the questionnaires that referred to experiences with the close person participants selected (i.e., PESEI, PRCA), the online system automatically included the initials of the close person each participant had selected in wave 1, to remind them of the person they had selected. There were two versions of each set of questionnaires, which varied only with regard to the order of the questionnaires. At each wave, the computer system randomly sent one of the two versions of questionnaires to each participant. After completion of wave 3, participants received an email thanking them for their participation, reminding them that they would receive two research course credits for their participation, and providing them with a debriefing form that specified the nature of the study (see Appendix L).

Results and Discussion

When participants were asked to identify a close person with whom they interacted frequently, 38% selected a romantic partner, 37% selected a friend, and 26% selected a family member. Out of those who selected a family member, 65% selected their mother and 23% selected a sibling, with the rest selecting other family members. Therefore, the close others selected in this study were comparable to those selected by participants in Study 1,

except that in the present study participants selected somewhat more romantic partners and less family members.

When looking at the gender of the selected other, 62% of participants identified a female person. The majority of participants reported knowing this person for over 3 years (72%); 13% reported knowing this person for 1-2 years, and 15% reported knowing this person for less than a year. Also, most participants reported interacting very frequently with the selected person. A large percentage of participants reported talking with the selected person several times a day (68%); 11% reported talking with the selected person once a day, 14% several times a week, 5% once a week, and 2% less than once a week. Finally, the majority of participants reported feeling very satisfied with their relationship with the person they identified (72%), followed by somewhat satisfied (22%), dissatisfied (4%), and neutral (2%). Finally, based on participants' responses to the Emotional Reliance Questionnaire (ERQ) in the first wave of the study, it appears that they selected close others on whom they relied emotionally to a large extent. The average amount of emotional reliance on the selected person was high ($M = 4.21$, $SD = 0.73$; where the maximum score possible was 5.00).

In summary, consistent with Study 1, the majority of participants in the present study selected a close person who they knew for a long time, talked with very frequently, with whom they had a satisfying relationship, and on whom they relied emotionally for both negative and positive experiences. However, when comparing the relationship with the close others identified in Studies 1 and 2, some differences emerge. Consistent with the goal of Study 2 of studying emotional support from close others with whom participants interacted most frequently, participants in Study 2 reported interacting more frequently with the

identified close other than participants in Study 1. However, the length of the relationship and the level of relationship satisfaction with the relationship reported by participants in Study 2 were lower than those reported by participants in Study 1. Also, as previously stated, participants in Study 2 selected more romantic partners and less family members than participants in Study 1. Overall, when compared to Study 1, it appears as if Study 2 assessed perceived emotional support from close others with whom participants interacted more frequently but also had a shorter and somewhat less satisfying relationship, and who were more likely to be romantic partners than family members.

Descriptive statistics

The obtained range of scores, means and standard deviations of the measures used to assess the main constructs in Study 2, for each of the three waves of data, are shown in Table 5. As it can be seen in this table, the scores on the measures used in this study remained relatively stable across study waves, except for perceived emotional support for positive experiences, which appeared to decline over time, and perceived emotional invalidation of negative experiences, which appeared to increase across time. Paired samples t-tests between Time 1 and Time 3 levels of perceived emotional invalidation showed the increase in these levels was statistically significant ($t[174] = 2.738, p = .007$). Similarly, paired samples t-tests between levels of perceived emotional support for positive experiences at Time 1 and Time 3 ($t[175] = 3.40, p = .001$), and at Time 2 and Time 3 ($t[175] = 1.99, p = .049$), showed that the decrease in these levels across time was statistically significant. It is unclear why the scores on these measures varied across study waves while the scores of the other measures did not.

Addressing Objective One

In an attempt to replicate the findings from Study 1, the concurrent bivariate

Table 5

Descriptive Statistics of Measures Used in Study 2 Across the Three Study Waves

Variables and Corresponding Measures		Time 1	Time 2	Time 3
Perceived emotional support for negative experiences (PESEI)	<i>M (SD)</i>	5.78 (0.87)	5.56 (0.90)	5.57 (1.03)
	Range of Scores	3.17 – 7.00	3.00 – 7.00	2.67 – 7.00
Perceived emotional invalidation of negative experiences (PESEI)	<i>M (SD)</i>	1.89 (0.88)	1.98 (0.98)	2.08 (1.06)
	Range of Scores	1.00 – 5.50	1.00 – 5.00	1.00 – 5.50
Perceived emotional support for positive experiences (PRCA)	<i>M (SD)</i>	-1.87 (3.45)	-2.23 (3.62)	-2.62 (3.83)
	Range of Scores	-11.67 - 4.00	-14.0 – 4.00	-12.3 – 4.00
Perceived difficulty regulating negative emotions (DERS)	<i>M (SD)</i>	17.37 (6.78)	17.93 (6.89)	17.54 (7.18)
	Range of Scores	8 – 40	8 - 40	8 – 40
Perceived savoring ability (SBI)	<i>M (SD)</i>	7.95 (8.03)	7.07 (7.87)	7.67 (8.59)
	Range of Scores	-11 – 23	-18 - 23	-21 - 24
Positive affect (PANAS)	<i>M (SD)</i>	32.29 (7.33)	31.94 (7.18)	32.52 (7.68)
	Range of Scores	11 - 48	11 - 47	10 - 48
Negative affect (PANAS)	<i>M (SD)</i>	21.64 (7.65)	22.04 (7.66)	21.55 (8.15)
	Range of Scores	10 - 44	10 - 50	10 - 50
Depressive symptoms (DASS)	<i>M (SD)</i>	9.71 (8.93)	10.23 (9.28)	9.30 (9.05)
	Range of Scores	0 - 42	0 - 42	0 - 42

correlations of perceived emotional support/invalidation variables with positive and negative affect and depressive symptoms were calculated. As it can be seen in Table 6 (first row), perceived emotional support for negative experiences was consistently negatively associated with depressive symptoms and negative affect across the three study waves. Also, in two of the three waves it was positively associated with positive affect. When taken together, these results replicate those of Study 1 and show that the associations of perceived emotional support for negative experiences with emotional well-being (especially negative affect and depressive symptoms) can be found even when utilizing a different measure of perceived emotional support for negative experiences and a different way of asking participants to identify a close other.

As seen in row 2 of Table 6, the concurrent association between perceived emotional support for positive experiences and positive affect was not significant at any Study wave. In

Table 6

Concurrent Correlations of Perceived Emotional Support/Invalidation Variables with Emotional Well-being Variables in Study Waves 1, 2, and 3

	Positive Affect	Negative Affect	Depressive symptoms
Perceived emotional support for negative experiences	Wave 1: .22** Wave 2: .13 Wave 3: .36***	Wave 1: -.18* Wave 2: -.25** Wave 3: -.26**	Wave 1: -.27*** Wave 2: -.26** Wave 3: -.37***
Perceived emotional support for positive experiences	Wave 1: .13 Wave 2: .04 Wave 3: .13	Wave 1: -.12 Wave 2: -.20** Wave 3: -.43***	Wave 1: -.33*** Wave 2: -.26** Wave 3: -.44***
Perceived emotional invalidation of negative experiences	Wave 1: -.07 Wave 2: -.02 Wave 3: -.13	Wave 1: .20* Wave 2: .35*** Wave 3: .49***	Wave 1: .32*** Wave 2: .32*** Wave 3: .47***

Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$.

contrast, perceived emotional support for positive experiences was negatively associated with depressive symptoms in all three waves and negatively associated with negative affect in two of the three waves. These results approximate well those found in Study 1 and provide more confidence in the relationships of perceived emotional support for positive experiences with depressive symptoms (and, to some extent, with negative affect) as they were found utilizing two different ways of asking participants to identify a close other.

As seen in row 3 of Table 6, perceived emotional invalidation of negative experiences was not significantly associated with positive affect at any study wave. However, in contrast to findings from Study 1, perceived emotional invalidation of negative experiences was consistently positively associated with depressive symptoms and negative affect across all three study waves. This discrepancy in findings between Study 1 and 2 may be due to the fact that the items used in the emotional invalidation scale of Study 2 were modified from the irritability subscale of the Level of Expressed Emotion scale (LEE); and expressed emotion is a construct that has been repeatedly found to be associated with depression (Coiro & Gottesman, 1996). Alternatively, the stronger links between perceived emotional invalidation

of negative experiences and depressive symptoms and negative affect may be associated with the difference in the way participants were asked to identify a close other (i.e., in Study 2 participants were more likely to choose a close other with whom they interacted more frequently, which may have increased to opportunity to assess the impact of invalidating interactions).

Overall, the findings from these concurrent correlation analyses suggest that the more an individual perceives a close other to be emotionally supportive in response to both negative and positive experiences, the lower the individual's depressive symptoms and, to some extent, negative affect. Moreover, the more an individual perceives a close other to be emotionally invalidating, the higher the individual's depressive symptoms and, to some extent, negative affect. Interestingly, the links of emotional support/invalidation with positive affect were almost non-existent, especially with regard to perceived emotional support for positive experiences and perceived emotional invalidation. These findings are unexpected, as past research findings have suggested that recounting positive experiences to close others and receiving positive responses increase positive affect (e.g., Gable et al., 2006; Gable & Reis, 2010). However, it is important to keep in mind that these past findings regarded the immediate effects of sharing positive experiences and receiving encouraging responses from others on affect (which is the focus of Study 3), rather than the effects of perceived typical levels of available emotional support for positive experiences.

These concurrent correlation analyses do not address whether the perceived emotional support/invalidation constructs included in this study predict *subsequent* levels of emotional well-being. Although only experimental approaches could determine this, a cross-panel longitudinal method, as discussed in more detail below, was included in this study to shed

some light on this matter.

Addressing Objective Two

Correlation analyses were conducted to assess the relationship between perceived emotional support/invalidation variables assessed at Time 1 and emotional well-being assessed two weeks later (Time 2) and four weeks later (Time 3). As shown in Table 7 (row 1), higher Time 1 levels of perceived emotional support for negative experiences were associated with higher levels of positive affect and lower levels of depressive symptoms two and four weeks later; as well as with lower levels of negative affect four (but not two) weeks later.

Also, as seen in Table 7 (row 2), higher levels of perceived emotional support for positive experiences at Time 1 were associated with lower levels of depressive symptoms two and four weeks later; as well as with higher levels of positive affect and lower levels of negative affect four (but not two) weeks later.

Finally, as seen in row 3 of Table 7, perceived emotional invalidation of negative experiences at Time 1 was associated with higher depressive symptoms and negative affect two and four weeks later. However, it was unrelated to positive affect either two or four weeks later.

A similar pattern of associations was found between emotional support variables at Time 2 and emotional well-being at Time 3. In particular, as shown in Table 8 (row 1), higher levels of perceived emotional support for negative experiences at Time 2 were associated with higher levels of positive affect and lower levels of negative affect and depressive symptoms two weeks later. Also, as seen in Table 8 (row 2), higher levels of perceived emotional support for positive experiences at time 2 were associated with lower

Table 7

Correlations Between Time 1 Emotional Support/Invalidation Variables and Time 2 and 3 Emotional Well-being Variables (Two and Four Weeks Later)

	Positive affect	Negative Affect	Depressive symptoms
Perceived emotional support for negative experiences T1	T2: .19* T3: .24**	T2: -.13 T3: -.23**	T2: -.22** T3: -.29***
Perceived emotional support for positive experiences T1	T2: .10 T3: .17*	T2: -.14 T3: -.29***	T2: -.22** T3: -.31***
Perceived emotional invalidation of negative experiences T1	T2: -.05 T3: -.13	T2: .21** T3: .28***	T2: .24** T3: .32***

Note. * = $p < .05$; ** = $p < .01$; *** = $p < .001$.

Table 8

Correlations Between Time 2 Emotional Support/Invalidation Variables and Time 3 Emotional Well-being Variables (Two Weeks Later)

	Positive affect	Negative Affect	Depressive symptoms
Perceived emotional support for negative experiences T2	T3: .21**	T3: -.30***	T3: -.33***
Perceived emotional support for positive experiences T2	T3: .10	T3: -.36***	T3: -.31***
Perceived emotional invalidation of negative experiences T2	T3: -.08	T3: .40***	T3: .38***

Note. * = $p < .05$; ** = $p < .01$; *** = $p < .001$.

levels of negative affect and depressive symptoms two weeks later, but it was not associated with positive affect two weeks later. Finally, as seen in row 3 of Table 8, perceived emotional invalidation of negative experiences at Time 2 was associated with higher negative affect and depressive symptoms (but unrelated to positive affect) two weeks later.

Regression analyses were conducted next to test whether the perceived emotional support/invalidation variables predicted subsequent levels of emotional well-being, after accounting for initial levels of these outcome variables. This was done by first including in the regression model the initial level of the outcome variable, and then adding, as a second

block, the predictor variable. Prospective regression analyses were conducted using data from predictors at Time 1 and outcome measures at Time 3 (i.e., four weeks later), as this was the longest, and thus most conservative, time frame. It is important to note that the prospective regression analyses conducted were stringent, as removing the effects of baseline levels of the outcome variables removes part of their variance associated with baseline levels of the predictors. Therefore, the results from these analyses were expected to show the association of perceived emotional support variables with subsequent levels of emotional well-being, above and beyond their association with concurrent levels of emotional well-being. The prospective relationship of perceived emotional invalidation of negative experiences with positive affect was not investigated, as the bivariate correlation was non-significant.

As depicted in Table 9 (rows 1 and 3), the results showed that higher levels of perceived emotional support for negative experiences at Time 1 significantly predicted lower levels of negative affect and depressive symptoms four weeks later (at Time 3), after controlling for initial levels of these outcome variables. However, perceived emotional support for negative experiences at Time 1 did not predict positive affect at Time 3 (as shown in Table 9 row 2) after controlling for initial levels of positive affect. As shown in Table 10 (rows 1 and 3), higher levels of perceived emotional invalidation of negative experiences at Time 1 significantly predicted higher levels of negative affect and depressive symptoms at Time 3, after controlling for initial levels of these outcome variables. Moreover, as seen in Table 11, higher levels of perceived emotional support for positive experiences significantly predicted lower levels of negative affect four weeks later, after controlling for initial levels of negative affect. The link between perceived emotional support for positive experiences and depressive symptoms approached but did not reach significance.⁶ Finally, the link between

Table 9

Regression Analyses Testing the Predictive Ability of Perceived Emotional Support for Negative Experiences in the Prediction of Emotional Well-being Variables Four Weeks Later, Controlling for Initial levels of the Outcome Variables

Outcome variables	Step	Predictors	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i> -level	Adj <i>R</i> ²	<i>F</i> for change in <i>R</i> ²
Depression T3	1	Depression T1	0.74	0.06	0.71	12.92	<.001	.51	6.06*
	2	Depression T1	0.70	0.06	0.68	12.06	<.001	.52	
		PES-NE T1	-1.43	0.58	-0.14	-2.46	.015		
Positive Affect T3	1	Positive Affect T1	0.66	0.06	0.63	10.31	<.001	.39	2.56
	2	Positive Affect T1	0.64	0.07	0.60	9.73	<.001	.39	
		PES-NE T1	0.87	0.54	0.10	1.60	.112		
Negative Affect T3	1	Negative Affect T1	0.60	0.07	0.56	8.61	<.001	.31	6.00*
	2	Negative Affect T1	0.58	0.07	0.53	8.21	<.001	.33	
		PES-NE T1	-1.47	0.60	-0.16	-2.45	.015		

Note. PES-NE = perceived emotional support for negative experiences; T1 = time 1; T3 = time 3; * = $p < .05$.

Table 10

Regression Analyses Testing the Predictive Ability of Perceived Emotional Invalidation of Negative Experiences in the Prediction of Emotional Well-being Variables Four Weeks Later, Controlling for Initial levels of the Outcome Variables

Outcome variables	Step	Predictors	<i>B</i>	<i>SE</i>	<i>B</i>	<i>t</i>	<i>p</i> -level	Adj <i>R</i> ²	<i>F</i> for change in <i>R</i> ²
Depression T3	1	Depression T1	0.74	0.06	0.72	13.03	<.001	.51	4.43*
	2	Depression T1	0.70	0.06	0.68	11.85	<.001	.52	
		PEI-NE T1	1.22	0.58	0.12	2.11	.037		
Negative Affect T3	1	Negative Affect T1	0.61	0.07	0.56	8.72	<.001	.31	9.93**
	2	Negative Affect T1	0.57	.07	0.53	8.26	<.001	.35	
		PEI-NE T1	1.87	0.59	0.20	3.15	.002		

Note. PEI-NE = perceived emotional invalidation of negative experiences; T1 = time 1; T3 = time 3; * = $p < .05$; ** = $p < .01$.

Table 11

Regression Analyses Testing the Predictive Ability of Perceived Emotional Support for Positive Experiences in the Prediction of Emotional Well-being Variables Four Weeks Later, Controlling for Initial levels of the Outcome Variables

Outcome variables	Step	Predictors	<i>B</i>	<i>SE</i>	<i>B</i>	<i>t</i>	<i>p</i> -level	Adj <i>R</i> ²	<i>F</i> for change in <i>R</i> ²
Depression T3	1	Depression T1	0.72	0.06	0.72	13.14	< .001	.51	3.35
	2	Depression T1	0.69	0.06	0.69	12.03	< .001	.52	
		PES-PE T1	-0.27	0.15	-0.10	-1.83	.069		
Negative Affect T3	1	Negative Affect T1	0.60	0.07	0.56	8.77	< .001	.31	13.25***
	2	Negative Affect T1	0.57	0.07	0.53	8.54	< .001	.36	
		PES-PE T1	-0.53	0.15	-0.23	-3.64	< .001		
Positive Affect T3	1	Positive Affect T1	0.66	0.06	0.63	10.42	< .001	.40	2.27
	2	Positive Affect T1	0.64	0.06	0.62	10.14	< .001	.40	
		PES-PE T1	0.20	0.14	0.09	1.51	.134		

Note. PES-PE = perceived emotional support for positive experiences; T1 = time 1; T3 = time 3; *** = $p < .001$.

perceived emotional support for positive experiences and positive affect four weeks later was not significant after controlling for initial levels of positive affect.

Overall, these results from the prospective regression analyses showed that higher levels of perceived emotional support for, and lower levels of perceived emotional invalidation of, negative experiences predicted lower levels of negative affect and depressive symptoms four weeks later, when controlling for the role of initial levels of these outcome variables. These results suggest that when considering the perceived responses of others to negative experiences, both emotional support and emotional invalidation play a role in the development of negative affect and depressive symptoms. This conclusion is consistent with past theories (e.g., Linehan, 1993) and studies (e.g., Finch et al., 1999) highlighting the role of both emotional support and emotional invalidation in changes in emotional well-being.

This study also found that higher levels of perceived emotional support for positive experiences predicted decreased levels of negative affect four weeks later, even when controlling for initial levels of negative affect, but did not predict subsequent levels of positive affect. Therefore, these results suggest that when measured in terms of perceived support, emotional support for positive experiences may be predictive of negative, but not positive, affect. This finding is consistent with concurrent associations investigated in Studies 1 and 2 but contrasts findings from past studies showing that when emotional support for positive experiences is measured in terms of received support, it does lead to higher positive affect (e.g., Gable et al., 2004; Gable et al., 2006; Reis et al., 2010).

Addressing Objective Three

In order to investigate the bidirectionality of the link between perceived emotional support/invalidation and depression, regression analyses were conducted to investigate whether depressive symptoms prospectively predict perceived emotional support/invalidation, controlling for initial levels of perceived emotional support/invalidation. These analyses were conducted separately for perceived emotional support for and perceived emotional invalidation of negative experiences, the two variables previously shown to prospectively predict depressive symptoms.

As shown in Table 12 (row 1), results showed that depressive symptoms at Time 1 significantly predicted perceived emotional support for negative experiences at Time 3, after controlling for baseline levels of perceived emotional support for negative experiences. These results suggest that relationship of perceived emotional support for negative experiences with depressive symptoms is bi-directional. This is consistent with past theoretical models (e.g., stress generation, Hammen, 1991; excessive reassurance seeking,

Table 12

Regression Analyses Testing the Predictive Ability of Depressive symptoms in the Prediction of Perceived Emotional Support for and Invalidation of Negative Experiences, Controlling for Initial levels of Perceived Emotional Support/Invalidation Variables

Outcome variables	Step	Predictors	<i>B</i>	<i>SE</i>	<i>B</i>	<i>t</i>	<i>p</i> -level	Adj <i>R</i> ²	<i>F</i> for change in <i>R</i> ²
PES-NE T3	1	PES-NE T1	0.83	0.07	0.70	12.68	<.001	.49	7.51**
	2	PES-NE T1	0.78	0.07	0.66	11.70	<.001	.51	
		Depression T1	-0.02	0.01	-0.15	-2.74	.007		
PEI-NE T3	1	PEI-NE T1	0.67	0.08	0.55	8.50	<.001	.30	2.00
	2	PEI-NE T1	0.63	0.08	0.52	7.62	<.001	.30	
		Depression T1	0.01	0.01	0.10	1.41	.159		

Note. PES-NE = perceived emotional support for negative experiences; PEI-NE = perceived emotional invalidation of negative experiences; T1 = time 1; T3 = time 3; ** = $p < .01$.

Coyne, 1976; Joiner et al., 1999); as well as numerous past studies (e.g., Haefffel, Voelz, & Joiner, 2007; Stice et al., 2004) showing that depression leads to worse interpersonal interactions, which then leads to worse depression. Conversely (as seen in Table 12, row 2), depressive symptoms were not found to prospectively predict perceived emotional invalidation of negative experiences, suggesting that, in contrast to the relationship between depressive symptoms and perceived emotional support for negative experiences, the relationship between depressive symptoms and perceived emotional invalidation may not be bidirectional. This possibility should be further investigated in future research.

Addressing Objective Four

The present study also tested the role of emotion regulation self-efficacy as a mediator of the link between perceived emotional support and emotional well-being. To this author's knowledge, there is no past research on the time it may take for perceived emotional support to affect individuals' emotion regulation self-efficacy, or on the time it may take for changes in emotion regulation self-efficacy to affect emotional well-being. Therefore, it was

unclear whether data from waves 1, 2, or 3 should be used to assess the mediation role of emotion regulation self-efficacy. In light of this, composite scores were formed by averaging emotion regulation self-efficacy scores from waves 1, 2, and 3. These composite scores were calculated separately for perceived savoring ability and perceived difficulty regulating negative emotions.

Before conducting the mediation analyses, correlation analyses were performed to test the relationships of perceived emotional support/invalidation variables with emotion regulation self-efficacy variables. As it can be seen in Table 13 (row 1), higher levels of perceived emotional support for negative experiences (at Time 1) were associated with higher levels of perceived savoring ability and with lower levels of difficulty regulating negative emotions. In contrast (as seen in rows 2 and 3), higher levels of perceived emotional invalidation of negative experiences at Time 1 were associated with lower levels of perceived savoring ability and with higher levels of difficulty regulating negative emotions. Finally, as seen in row 3, higher levels of perceived emotional support for positive experiences at Time 1 were associated with higher perceived savoring ability and lower perceived difficulties regulating negative emotions.

Then, correlation analyses tested the relationships of emotion regulation self-efficacy variables (average scores) with negative affect and depressive symptoms (at time 3). As it can be seen in Table 14, higher levels of perceived savoring ability were associated with lower levels of negative affect and depressive symptoms at Time 3. Similarly, lower levels of difficulty regulating negative emotions were also associated with lower levels of negative affect and depressive symptoms at Time 3.

Based on results from these correlation analyses, multiple mediation analyses were

Table 13

Correlation Between Perceived Emotional Support/Invalidation Variables and Emotion Regulation Self-efficacy Variables

	Perceived savoring ability (average score)	Perceived difficulty regulating negative emotions (average score)
Perceived emotional support for negative experiences T1	.45***	-.28***
Perceived emotional invalidation of negative experiences T1	-.31***	.31***
Perceived emotional support for positive experiences	.35***	-.28***

Note. * = $p < .05$; ** = $p < .01$; *** = $p < .001$.

Table 14

Correlations Between Emotion Regulation Self-efficacy Variables (Average Scores) and Negative Affect and Depressive symptoms at Time 3

	Negative Affect T3	Depressive symptoms T3
Perceived savoring ability (average score)	-.47***	-.63***
Perceived difficulty regulating negative emotions (average score)	.59***	.76***

Note. * = $p < .05$; ** = $p < .01$; *** = $p < .001$.

conducted to test whether emotion regulation self-efficacy mediates the relationships of perceived emotional support and perceived emotional invalidation of negative experiences (at Time 1) with negative affect and depressive symptoms (at Time 3), as well as the relationship between perceived emotional support for positive experiences (at Time 1) and negative affect (at Time 3; i.e., the prospective relationships found to be statistically significant in the analyses addressing objective 2). These analyses followed the same procedures used in Study 1 (i.e., those described by Preacher & Hays, 2008). The analyses were conducted separately for each predictor and outcome variables. Also, in all analyses, the level of the outcome variable at Time 1 was entered as a covariate and partialled out both of the outcome variable at Time 3 and the mediator variables (the results below report the partial regression weight

for the covariate in the model of the outcome variable). Before conducting the multiple mediation analyses, all variables were standardized by subtracting the mean from the value for each case, and then dividing the difference by the standard deviation. This was done in order to obtain standardized regression coefficients.

As it can be observed in Figure 8, perceived difficulty regulating negative emotions was a significant mediator of the relationship between perceived emotional support for negative experiences and depressive symptoms four weeks later. In contrast, perceived savoring ability was not found to be a significant mediator. The overall mediation model was statistically significant (C path: $\beta = -0.13, p = .025$; partial effect of depressive symptoms at Time 1: $\beta = 0.37, p < .001$; Adjusted $R^2 = .64$). Therefore, this finding showed that, accounting for the effects of depressive symptoms at Time 1, higher levels of perceived emotional support for negative experiences at Time 1 were associated with lower levels of perceived difficulty regulating negative emotions, which in turn were associated with lower depressive symptoms four weeks later.

In contrast, as shown in Figure 9, neither perceived difficulty regulating negative emotions or perceived savoring ability were significant mediators of the relationship between perceived emotional invalidation of negative experiences and depressive symptoms four weeks later; while the partial effect of depressive symptoms at Time 1 was significant ($\beta = 0.37, p < .001$). This finding suggest that while emotion regulation self-efficacy (specifically with regard to negative emotions) may mediate the link between perceived emotional support for negative experiences and subsequent depressive symptoms, it may not mediate the link between perceived emotional invalidation of negative experiences and subsequent depressive symptoms.

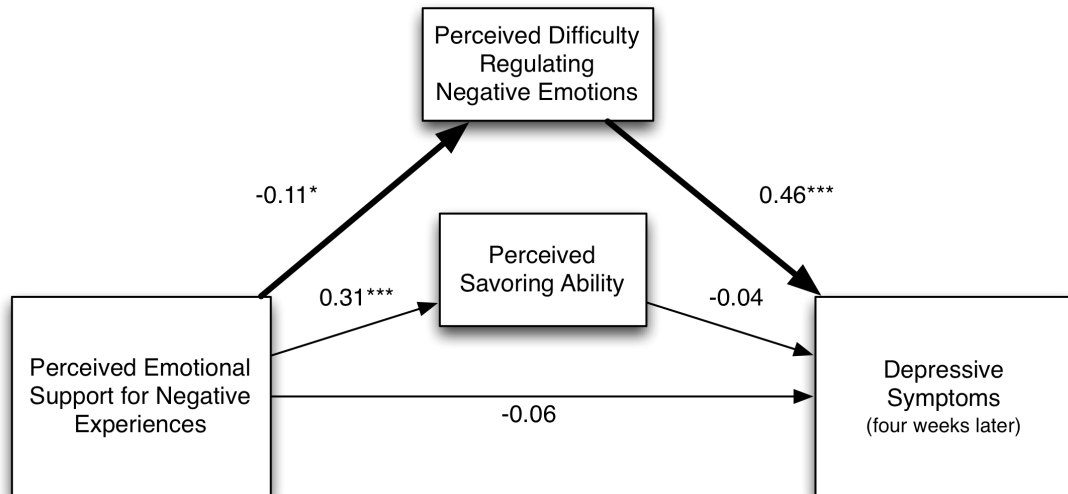


Figure 8. Multiple mediation analyses testing the mediating role of perceived difficulty regulating negative emotions and perceived savoring ability in the link between perceived emotional support for negative experiences and depressive symptoms four weeks later. * = $p < .05$; *** = $p < .001$.

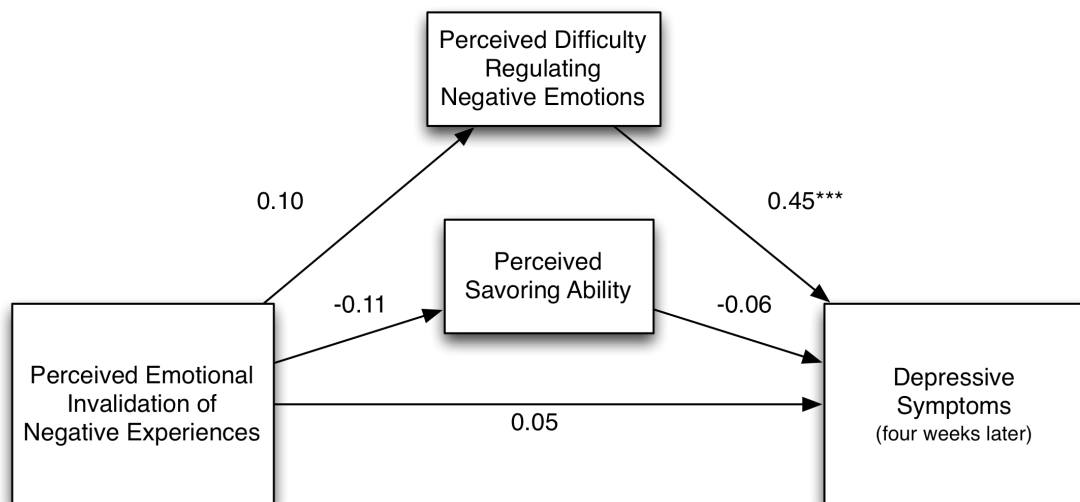


Figure 9. Multiple mediation analyses testing the mediating role of perceived difficulty regulating negative emotions and perceived savoring ability in the link between perceived emotional invalidation of negative experiences and depressive symptoms four weeks later. *** = $p < .001$.

When considering negative affect, as shown in Figure 10, the mediation analyses showed that perceived difficulty regulating negative emotions was a significant mediator of the relationship between perceived emotional support for negative experiences and negative affect four weeks later. In contrast, perceived savoring ability was not a significant mediator.

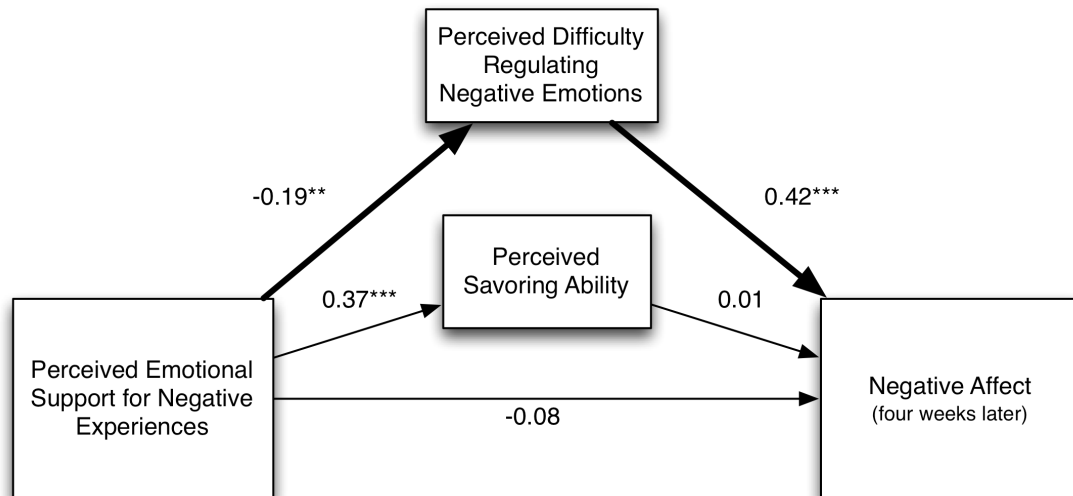


Figure 10. Multiple mediation analyses testing the mediating role of perceived difficulty regulating negative emotions and perceived savoring ability in the link between perceived emotional support for negative experiences and negative affect four weeks later. $** = p < .01$; $*** = p < .001$.

The overall mediation model was statistically significant (C path: $\beta = -0.15$, $p = .018$; partial effect of negative affect at Time 1: $\beta = 0.34$, $p < .001$; Adjusted $R^2 = .43$). Therefore, this finding showed that, controlling for levels of negative affect at Time 1, higher levels of perceived emotional support for negative experiences were associated with lower levels of perceived difficulty regulating negative emotions, which, in turn, were associated with lower negative affect four weeks later.

Similarly, as shown in Figure 11, the mediation analyses showed that perceived difficulty regulating negative emotions mediated the relationship between perceived emotional invalidation of negative experiences and negative affect four weeks later. In contrast, perceived savoring ability was not a significant mediator. The overall mediation model was statistically significant (C path: $\beta = 0.20$, $p = .002$; partial effect of negative affect at Time 1: $\beta = 0.34$, $p < .001$; Adjusted $R^2 = .44$). Therefore, this finding showed that, controlling for levels of negative affect at Time 1, higher levels of perceived emotional invalidation in response to negative experiences were associated with higher levels of

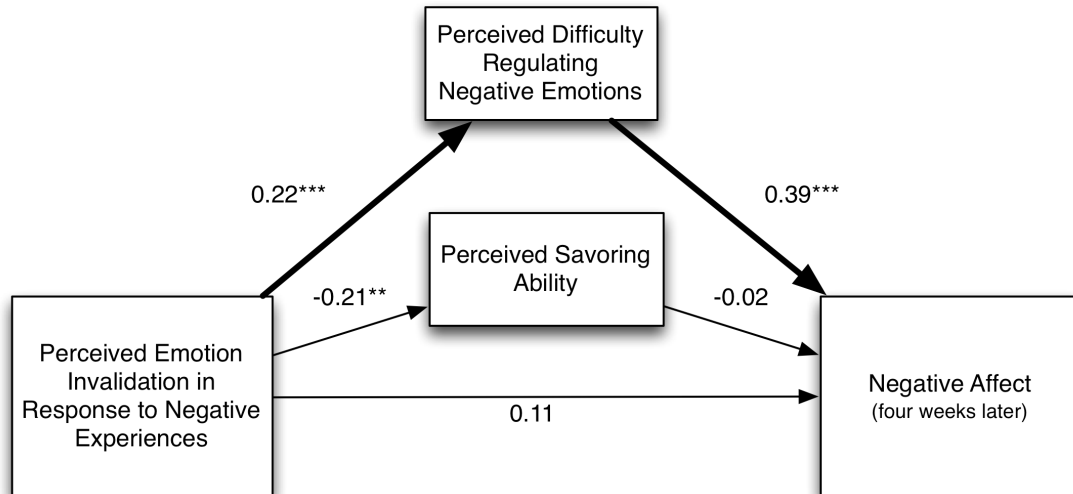


Figure 11. Mediation analysis testing the mediating role of perceived difficulty regulating negative emotions and perceived savoring ability in the link between perceived emotion invalidation in response to negative experiences and negative affect four weeks later. ** = $p < .01$; *** = $p < .001$.

perceived difficulty regulating negative emotions, which, in turn, were associated with higher negative affect four weeks later.

Finally, as shown in Figure 12 mediation analyses showed that perceived difficulty regulating negative emotions was a significant mediator of the relationship between perceived emotional support for positive experiences and negative affect four weeks later. In contrast, perceived savoring ability was not a significant mediator. The overall mediation model was statistically significant (but partial; C path: $\beta = -0.23$, $p < .001$; partial effect of negative affect at Time 1: $\beta = 0.35$, $p < .001$; Adjusted $R^2 = .45$). Therefore, this finding showed that, controlling for levels of negative affect at Time 1, part of the mechanism linking higher perceived emotional support for positive experiences with lower negative affect four weeks later includes lower perceived difficulty regulating negative emotions.

In summary, the multiple mediation analyses found that higher levels of perceived emotional support for negative experiences predicted lower levels of depressive symptoms and negative affect four weeks later by decreasing individuals' perceived difficulty

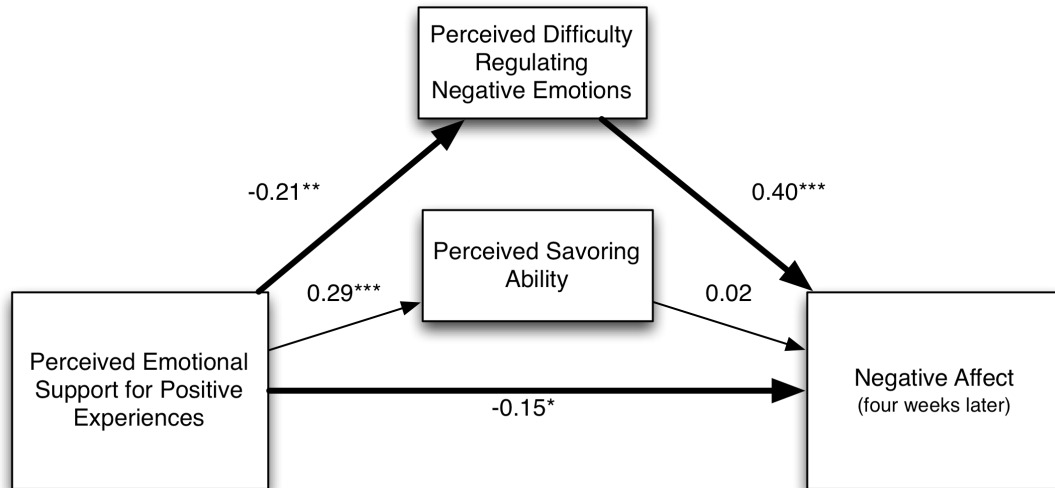


Figure 12. Mediation analysis testing the mediating role of perceived difficulty regulating negative emotions and perceived savoring ability in the link between perceived emotional support for positive experiences and negative affect four weeks later. * = $p < .05$; ** = $p < .01$; *** = $p < .001$.

regulating negative emotions. These findings suggest that individuals who perceive higher levels of emotional support for negative experiences in their lives perceive having a higher capacity to cope with their negative emotions, which then makes them less vulnerable to depressive symptoms. These findings are consistent with findings from a research study that examined retrospective survey data from a large number of bullied victims and found that emotional support enhanced positive reappraisal of the bullying episode, as well as post-bullying behavioural and psychological adjustment (Matsunaga, 2011).

Contrary to expectations, emotion regulation self-efficacy was not found to explain the prospective link of perceived emotional invalidation of negative experiences with depressive symptoms four weeks later. This finding runs contrary to theories linking invalidation with emotion dysregulation and psychopathology (e.g., Linehan, 1993), as well as research findings suggesting that maternal invalidation of positive affect in adolescent leads to maladaptive use of emotion regulation strategies, which, in turn, leads to higher depressive symptoms (Yap et al., 2008). There are important differences, however, between

the current study and those theories. For example, Linehan's (1993) theory and past studies on the effects of emotional invalidation refer to the effects of early life experiences of emotional invalidation on emotional well-being later in life; whereas the current study investigated a much shorter span (4 weeks) during young adulthood. Moreover, when negative affect was investigated, the results did show that higher perceived difficulty regulating negative emotions mediated the link between higher levels of perceived emotional invalidation of negative experiences and subsequently higher levels of negative affect. In particular, higher levels of perceived emotional invalidation of negative experiences led to higher perceived difficulty regulating negative emotions, which in turn led to higher negative affect.

Finally, the mediation analyses also suggested that part of the mechanism linking higher levels of perceived emotional support for positive experiences with subsequently lower levels of negative affect involve reduced perceived difficulty regulating negative emotions. Given the limited past research on the mechanisms linking perceived emotional support for positive experiences with emotional well-being, this finding provides an initial idea for the type of mechanism that could be investigated in future studies.⁷

General Discussion of Results from Study 2

Study 2 provided interesting results that helped shed light on the role of perceived emotional support/invalidation in emotional well-being. First, the levels of perceived emotional support and emotional well-being were studied concurrently in order to replicate findings from Study 1. For the most part, the results replicated those found in Study 1. In particular, the results showed that the more an individual perceives a close other to be emotionally supportive in response to negative and positive experiences, and the less this

close other is perceived to be emotionally invalidating in response to negative experiences, the lower the individual's depressive symptoms and negative affect. The links with positive affect were minimal. Therefore, these findings suggest that the constructs of perceived emotional support and invalidation are more related to negative affect and depressive symptoms than to positive affect. This possibility should be further investigated in future research.

Second, longitudinal regression analyses were conducted to investigate the role of perceived emotional support/invalidation in emotional well-being over the span of four weeks. These results showed that perceiving higher levels of emotional support for negative and positive experiences and lower levels of emotional invalidation of negative experiences from a close other was related to decreased negative affect four weeks later, even after accounting for the role of initial levels of negative affect. Moreover, the results showed that perceiving higher levels of emotional support for negative experiences as well as lower levels of emotional invalidation of negative experiences from a close other was related to decreased depressive symptoms four weeks later, even after accounting for the role of initial levels of depressive symptoms. In contrast, positive affect was not prospectively predicted by any of the emotional support/invalidation constructs, suggesting that this aspect of emotional well-being is less susceptible to the influence of emotional support/invalidation than other aspects of emotional well-being, such as negative affect and depressive symptoms.

Third, consistent with past theoretical models (e.g., stress generation, Hammen, 1991; excessive reassurance seeking, Coyne, 1976; Joiner et al., 1999; negative feedback seeking, Swann, Wenzlaff, Krull, & Pelham, 1992), results from regression analyses testing the role of depressive symptoms in the prediction of perceived emotional support and invalidation

suggested that the relationship of perceived emotional support (but not perceived emotional invalidation) with depressive symptoms is bi-directional, as higher levels of depressive symptoms at baseline predicted lower levels of perceived emotional support for negative experiences four weeks later, controlling for initial levels of perceived emotional support. As such, these results provided further evidence for the importance of perceived emotional support in depression.

Fourth, findings from the multiple mediation analyses suggest that emotion regulation self-efficacy (especially perceived difficulty regulating negative emotions) is a viable mechanism linking perceived emotional support for negative experiences with subsequent levels of negative affect and depressive symptoms, and perceived emotional invalidation of negative experiences with subsequent levels of negative affect (as well as being part of the mechanism linking perceived emotional support for positive experiences with subsequent levels of negative affect).

Given that respondent's ratings reflected their perceived ability regulating emotions (i.e., emotion regulation self-efficacy), the findings provide evidence for the enabling hypothesis (i.e., self-efficacy as a mediator of the link between social support and well-being). Also, to the extent that respondent's ratings of perceived difficulty regulating negative emotions reflect actual difficulties doing so, these findings also provide evidence for recent interpersonal emotion regulation models such as that of Marroquin (2011), which posits that interpersonal interactions protect against depressive symptoms through their influence on individuals' emotion regulation. Both the enabling hypothesis and interpersonal emotion regulation models have been largely understudied, but are promising models explaining the link between support processes and individuals' emotional well-being, and

findings from this study provide preliminary evidence consistent with both models. Past research has alluded to the need to identify ordinary mechanisms linking social support to depression (Shorey & Lakey, 2011; Thoits, 2011), and perceived ability to regulate negative emotions appears to be a good candidate. Moreover, the findings from Studies 1 and 2 are consistent with past theory (Gross & Munoz, 1995; Kring & Sloan, 2010) and research findings (Mennin et al., 2007; Nolen-Hoeksema et al., 2008) linking emotion regulation to emotional well-being.

Limitations, Future Research, and Implications

As described in the introduction of this study, a true test of the effects of perceived emotional support on emotional well-being would necessitate an experimental design. However, given the preliminary nature of this work, a cross-lagged longitudinal design provided a good initial way to investigate the direction of the relationship between perceived emotional support/invalidation and emotional well-being, as well as the mechanisms of action of perceived emotional support/invalidation, while retaining external validity. Given the preliminary findings from this study, future research could investigate the mediation role of emotion regulation self-efficacy further by utilizing an experimental design. This type of design would involve testing whether manipulating levels of perceived emotional support/invalidation (e.g., by eliciting or prompting these perceptions to varying levels) leads to changes in emotion regulation self-efficacy, and whether these, in turn, lead to changes in emotional well-being.

As in Study 1, the use of self-report measures in this study allowed the study of perceptions of emotional support, but suffers from the limitations associated with this type of information-gathering method (described in the discussion section of Study 1). Related to

this, the focus of this Study was solely on the perceptions of the recipient of emotional support. Therefore, other aspects of dyadic emotional support interactions (e.g., perceptions of the provider of support) were not investigated. These other aspects of emotional support interactions should be included in future research. Another limitation of this Study is that it investigated perceived emotional support and invalidation from one close other. This methodology was implemented based on the understanding that support processes are relationship-specific. However, individuals' emotional well-being is likely affected by the emotional support and invalidation of more than one close person in their lives. Therefore, future research should replicate this study in a way that increases its external validity, by asking participants to identify more than one close other (e.g., three close people in their lives with whom they interact often) and report their perceived levels of emotional support and invalidation from each of these close others. Researchers could then average these reported levels of perceived emotional support and invalidation to create a measure of perceived emotional support/invalidation that remains relationship-specific but is more representative of all the influential emotional support/invalidation experiences participants have within their social network. Investigating emotional support from more than one person other would also allow testing whether the effects of low perceived emotional support from one close person could be countered by the effects of high perceived emotional support from another close person.

Also, future studies interested in replicating this study should include a more representative population (e.g., not limited to undergraduate students, with diverse age groups). These replications would provide further confidence in the results and would extend the understanding of the mechanisms linking perceived emotional support with emotional well-being for different populations. Future research could also investigate specific forms of

emotion regulation potentially linking perceived emotional support with emotional well-being, such as cognitive reappraisal. For example, using retrospective survey data from victims of bullying, Matsunaga (2011) showed that emotional support led to increased positive reappraisal, which, in turn, led to enhanced post-bullying psychological adjustment. Similarly, Jones and Wirtz (2006) found that discussing an upsetting event with a confederate who provided comfort facilitated cognitive reappraisals, which, in turn, led to emotional improvement.

Upon confirmation from experimental research, the findings from the present study suggest that individuals interested in improving their emotional well-being would do well to foster close relationships in which they tend to feel emotionally supported and from which they feel little emotional invalidation, and to reduce their contact with close others who tend to be less emotionally supportive and more emotionally invalidating. Similarly, family members and close friends of individuals at risk of depression should consider the impact that they have on their loved one's emotional well-being and reduce as much as possible instances of emotional invalidation and increase as much as possible instances of emotional support. These family members and friends may also benefit from knowing ahead of time that their loved one with depressive symptoms may behave in ways that hinder their attempts to be more emotionally supportive and less emotionally invalidating. This knowledge may help these family members and friends take these behaviours less personally and continue their attempts at increasing emotional support and reducing emotional invalidation.

Also, psychotherapists might explore and target clients' perceptions of emotional support and emotional invalidation from close others, especially with clients prone to negative emotions and depressive symptoms. Considering the bi-directional relationship

between perceived emotional support and depressive symptoms found in the current study, it is likely that helping individuals at risk of depression perceive close others as being more emotionally supportive would require facilitating positive changes in the way the close others interact with the individual as well as in the way the individual responds to these changes.

Chapter 5: Study 3 - Daily Received Emotional Support and Daily Affect

Sharing emotional experiences is a natural behaviour that people do willingly and frequently (Rimé, Mesquita, Philippot, & Boca, 1991). Most people have the view that talking about an emotional experience is relieving (Zech & Rimé, 2005), and distressed people often report feeling better as a direct outcome of having talked with others about an upsetting event (Jones & Wirtz, 2006; Pasupathi, 2003). Also, research has shown that the more emotionally salient the experience, the more likely individuals are to tell others about it. For example, experimental studies have shown that watching a film that evokes intense emotions leads to more social sharing than watching non-emotional or moderately emotional films (Luminet, Bouts, Delie, Manstead, & Rimé, 2000). Moreover, research suggests that in about 60% of the cases, people share their emotions about salient events with others on the same day the event took place (Finkenauer & Rimé, 1998; as cited in Rimé, 2007).

When the effects of sharing emotional memories are empirically investigated, however, researchers have failed to find a difference in the emotional arousal evoked by shared and non-shared emotional memories (Zech & Rimé, 2005); or in the emotional arousal evoked by an emotional experience before and after it is shared with close others (Nils & Rimé, 2012). Moreover, research focusing on reports of daily received emotional support has shown a negative association between received emotional support (for negative experiences) and well-being. For example, Bolger and colleagues (2000) investigated the effects of daily received support (operationalized as feeling “listened to and comforted”) from romantic partners on a sample of individuals who were preparing for a major examination (the New York State Bar Examination). Results from that study showed that in a phase of high stress, reports of daily received support were associated with a significant

increase in daily reports of depression and anxiety symptoms. In contrast, the romantic partner's report of provided support during this phase was associated with no change in daily reports of anxiety and with a decrease in daily reports of depressive symptoms. Similarly, Shrout, Herman, and Bolger (2006) studied couples in which one partner was preparing for the New York State Bar Examination and also found that daily received emotional support led to increases in daily anger, anxious, and depressed mood. Similarly, a recent study conducted by Reis and colleagues (2010; study 5) found that recounting bad news to close others, and receiving responses perceived as helpful and comforting, led to more negative ratings of those events 17 days later. Finally, Warner, Schuz, Wurm, Ziegelmann, and Tesch-Romer (2010) found that self-reported frequency of received emotional support over the past 12 months negatively predicted quality of life.

One explanation offered by Bolger and colleagues (2000) is that emotional support is beneficial only when it is 'invisible' (the provider of the support reports provision but the receiver of the support does not report having received it), as 'visible' support (i.e., reported as received) might have a self-esteem cost (i.e., it might challenge the recipient's sense of personal competence in a valued domain).

The negative link between received emotional support and well-being found in past studies could also be related to a reactivation of the effects of negative emotional experiences on well-being, created by recounting those events. As explained by Nils and Rimé (2012), simply verbalizing an emotion involves re-accessing the corresponding memory of the event, re-appraising the event along the same lines as it had been appraised initially and re-activating the original experience. In their study, Nils and Rimé (2012) found that when participants shared their experience of an emotional video sequence with a member of their

intimate network, recounting their experience exacerbated the negative impact of the film and their negative affect, although this effect was no longer apparent two days later. Nils and Rimé (2012) termed this effect the emotional reactivation effect. Therefore, the mere verbalization of a negative experience could lead to a temporary exacerbation of negative affect due to a re-activation of the original experience.

It is important, however, to also consider that some studies have found a positive link between received support and well-being. For example Biehle and Michelson (2012) tested received emotional support in married couples during the early years of marriage utilizing a daily diary method. Results from their study showed that higher levels of reported emotional support (operationalized as the recipient's perception of the extent to which their romantic partner showed they cared about them that day) was strongly related to better well-being, including higher positive affect and lower depression and anxiety symptoms. Interestingly, these authors found that invisible emotional support receipt was only minimally related to well-being. Also, Nils and Rimé (2012) found that when participants recounted their experience watching an emotional film to a close other, empathic responses from the close other led to an increased sense of proximity and reduced loneliness. In addition, responses from the close other that encouraged cognitive reframing led to reduced negative affect and reduced negative impact of the film.

Overall, there is considerable evidence showing that most people want to share negative emotional experiences with close others, and that they believe these disclosures are beneficial. However, some past studies have failed to show any emotional recovery effects and, to the contrary, sharing negative emotional experiences has been found to exacerbate the negative affect evoked by the original negative experience through emotion reactivation.

Moreover, it has been suggested that receiving emotional support for negative experiences might leave people feeling indebted or incompetent. These findings are inconsistent with people's tendency to want to share emotional experiences with close others and with other findings (e.g., Biehle & Michelson, 2012; Nils & Rimé, 2012), and also run contrary to what would be expected based on findings from the perceived emotional support literature. In order to better understand this discrepancy, there are aspects of received emotional support that deserve to be investigated in greater detail, which is the primary focus of Study 3.

First, research on received emotional support should include both positive and negative outcome variables. The majority of the past studies on received emotional support have focused on sharing negative events and subsequent effects on psychopathology and negative affect. Study 3 will consider the role of received emotional support in both positive affect and negative affect. Positive and negative affect have been found to be separate constructs (Watson & Tellegen, 1985). As such, it is possible that received emotional support for negative experiences influences positive affect independent of the way it influences negative affect.

Second, it may be important for research on received emotional support to investigate the role that level of desirability for emotional support (i.e., the level of desire for emotional support an individual has at a given time) has on the link between received emotional support and well-being. The majority of past studies on received emotional support (e.g., Bolger et al., 2000; Maisel & Gable, 2009; Shrout, Herman, & Bolger, 2006) have included in their analyses such factors as characteristics of the situation (e.g., importance of the event) and characteristics of the supportive communication (e.g., level of responsiveness). They have not accounted, however, for temporary characteristics of the person receiving the support,

such as level of desire for support. Past research has suggested that more intense emotions are shared more often (Rimé, 2007) and that people share their everyday experiences with the goal of regulating their emotions, especially regarding negative experiences (Pasupathi, 2003).

Therefore, including level of desire for emotional support in investigations of received emotional support could be important, as (in the context of negative experiences) it may represent a marker of the individual's level of distress prior to seeking emotional support. This would be an imperfect marker, as there are individual differences in attachment styles affecting the extent to which individuals rely on others for emotion regulation (e.g., individuals with more avoidant and ambivalent attachment styles are less likely to seek emotional support from partners compared to individuals with more secure attachment styles; Florian, Mikulincer, & Bucholtz, 1995). Consistent with this suggestion, one recent study that investigated the effects of needing support on a given day found that needing emotional support was associated with higher health complaints and negative affect that day (Wolff et al., 2013). Therefore, as a way of accounting for the incidental circumstances under which emotional support was received, Study 3 investigated not only the role of perceived importance of the event (as it has been done in previous studies of received emotional support), but also the role of level of desire for emotional support (i.e., desire for comfort/shared enthusiasm) with regard to daily emotional well-being.

Third, received emotional support includes not only noticing the behavioural response of the provider of support (i.e., being comforted/receiving an enthusiastic response), but also noticing the quality of the response. Perceived partner responsiveness (i.e., a process by which individuals come to believe that relational partners both attend to and react

supportively to the central, core defining features of the self; Reis et al., 2004, p. 203) represents one way in which quality of social interactions can be examined. The current study investigated two aspects of perceived partner responsiveness: 1) feeling understood by the close other and 2) feeling cared for by the close other, and feeling like the close other values one's opinions and abilities.

Regarding the first aspect of perceived partner responsiveness (i.e., feeling understood by the close other), researchers have suggested that received emotional support might have a positive effect on recipients when the support received comes from someone who is perceived to truly understand the recipient's circumstances (Thoits, 2011). Consistent with this proposition, findings from a study by Pasupathi (2003, study 2) suggest that retelling personal experiences to others leads to greater positive affect when the listener agrees with the speaker's stories. Telling a close other about an emotionally salient experience from the past and feeling understood by the close other may promote the formation of a coherent autobiographical narrative. This then provides the individual with an internal sense of connection to the past, allowing him/her to live mindfully in the present and prepare for the future based on information from the past and the present. This form of collaborative communication has been discussed extensively by Daniel Siegel (e.g., 2001) in the context of how parent-child relationships can facilitate the development of a coherent autobiographical sense of self in children.

The second aspect of perceived partner responsiveness (i.e., feeling cared for by the close other and feeling like the close other values one's opinions and abilities) is closely related to the construct of perceived satisfaction of basic psychological needs (i.e., belongingness, autonomy, competence) in relationships proposed by La Guardia, Ryan,

Couchman, and Deci (2000). Therefore, this second aspect of perceived partner responsiveness is referred to in this Study as perceived responsiveness to basic psychological needs. As explained in a theoretical model I developed in 2011 (Ibarra-Rovillard & Kuiper, 2011), emotional support represents a way in which close others can be responsive to basic psychological needs. For example, while providing emotional support, individuals demonstrate validation of the other person's interest, preferences, and perspectives (responsiveness to autonomy needs), help the other person develop strategies to face challenges optimally (responsiveness to competence needs), and show interest in the other person, conveying that the person is significant and cared for (responsiveness to relatedness needs).

Findings by Bolger and Amarel (2007) highlight the importance of quality of the support received. These researchers employed a large sample of undergraduate students to investigate the effects of receiving advice (i.e., informational support) on how to give a speech. This advice was portrayed as coming from a peer, but was actually a confederate of the experimenter. Results showed that there was a detrimental effect of peer provided support (i.e., advice) on levels of distress, but removing the communication of inefficiency from the advice undid the effect. Thus these findings also provide some evidence for the suggestion that support perceived to be unresponsive to basic psychological needs (e.g., competence needs, in this case), has a negative effect on emotional well-being.

Moreover, a study conducted by Maisel and Gable (2009) found that on days in which emotional support was reported as both provided and received, higher levels of perceived partner responsiveness were associated with less sadness than lower responsiveness (particularly when both recipient and provider reported high responsiveness).

Moreover, in a recent longitudinal study, individuals' perceptions of their romantic partner's responsive support while discussing a personal problem with them predicted both personal (i.e., affect, coping, and self-efficacy) and interpersonal (i.e., more positive feelings toward the romantic partner) well-being immediately after receiving the support, as well as two weeks and six months later (Lemay & Neal, 2013).

Past research findings thus highlight the importance of considering the quality of received emotional support, including the extent to which one feels understood and perceived responsiveness to basic psychological needs. Study 3 investigated the extent to which these two qualities of received emotional support are associated with daily positive and negative affect. These two qualities of received emotional support were investigated separately, in order to identify and better understand their unique relevance to daily emotional well-being.

Fifth, the research on social sharing of emotional experiences and received emotional support has largely focused on the social sharing of negative emotional experiences. However, people share both positive and negative emotional experiences with close others, and both forms of sharing can result in received emotional support. Therefore, a main contribution of Study 3 is the examination of the role of received emotional support in response to sharing both negative and positive experiences in individuals' daily affect.

Past Findings on the Role of Received Emotional Support for Positive Experiences in Daily Affect

The act of telling others about positive experiences has been termed capitalization. This is because sharing positive experiences with others has been found to increase positive affect, and thus represents a way in which individuals capitalize on their positive experiences (Langston, 1994). Using a daily diary method, Gable and colleagues (2004, Study 1) found

that on days in which participants told others about their most positive experience in the day, their positive affect and life satisfaction were significantly higher, controlling for the effects of the event itself. In a similar study that also used a daily diary approach, Gable and colleagues (2004, study 4) found that telling someone else about the best positive experience of the day was associated with higher positive affect and life satisfaction, controlling for the importance of the most positive and most negative experience of the day. Moreover, the outcomes were even more positive when the response was perceived to be more active and constructive.

Since the above research studies employed a correlational design, Reis and colleagues (2010) conducted a series of studies that used an experimental design to test the hypothesis that communicating positive experiences with others is causally responsible for these benefits (Reis et al., 2010; Study 1 and 2). They also used a daily diary design to test the hypothesis that for capitalization attempts to be successful, the partner's response must be perceived as supportive (i.e., recognizing and appreciating the personal significance of the good news; Reis et al., 2010, study 5). Results from the first two experiments revealed that socially sharing, not simply reliving, positive experiences led to enhanced feelings about those events, and that receiving enthusiastic responses led to improved mood from pre- to post-interaction. Moreover, results from the daily diary study revealed that when participants told others about their best daily events, and when these others responded in an enthusiastic manner (rather than in a neutral and withdrawn manner), the rated feelings about those events increased over two weeks. Overall, there is research evidence for the positive role of receiving emotional support for positive experiences in emotional well-being.

Comparing the Roles of Received Emotional Support for Negative and Positive Experiences

Two daily diary studies have compared the relative roles of emotional support for negative and positive experiences in daily well-being. Gable (2008; unpublished study as cited in Gable & Reis, 2010) conducted a study in which participants logged the most important negative and positive experiences of every day, whether they had shared these with someone else, and how the other person responded. Received emotional support for positive experiences was assessed with items based on the PRCA scale (described in Study 1). Received emotional support for negative experiences was measured with items from Barbee and Cunningham's (1995) measure of social support (as cited in Gable & Reis, 2010). This study found that, controlling for the importance of the events, received emotional support for positive experiences predicted improvements in daily positive and negative affect, life satisfaction, and acceptance feelings; whereas received emotional support for negative experiences did not. In another study, Maisel & Gable (2009) conducted a daily diary study with a sample of co-habiting couples to compare days in which the partner was perceived as being responsive (or unresponsive) to positive and negative experience disclosures, to days in which events were not discussed with partners (baseline). They found that when respondents disclosed positive experiences, perceived responsiveness led to significantly less sadness than baseline, and when respondents disclosed negative experiences, perceived unresponsiveness led to significantly more sadness than baseline.

Study 3 aimed to compare the role of sharing positive versus negative experiences with others, and the role of receiving emotional support for these events, in daily affect. Also, Study 3 aimed to investigate the role played by various aspects of an emotionally supportive

communication (i.e., telling the close other about the negative/positive experience; desiring comfort/shared enthusiasm; receiving comfort/an enthusiastic response, feeling understood; and perceiving responsiveness to basic psychological needs) in daily affect. In doing so, Study 3 also explored whether the roles of these aspects of received emotional support in daily affect are different for emotional support for negative experiences versus positive experiences. Finally, in order to better understand the links between received emotional support and perceived emotional support, Study 3 investigated the extent to which daily received emotional support predicted participants' reports of perceived emotional support at the conclusion of the study.

In order to address the above objectives, Study 3 participants were asked to complete each day (for 10 days) an online diary where they reported the worst and best events of the day, how important each event was, and whether they wanted someone to help them feel better/to share their enthusiasm with. Participants were also asked to report whether they had shared the event with the identified close other and, if so, whether the identified close other tried to help them feel better/reacted in an enthusiastic way, made them feel cared for and feel like he/she valued their abilities and opinions, and understood them. In the last daily diary participants also reported their perceived emotional support from the selected close other, based on their experiences over the previous 10 days.

Objectives

1. To explore the link between desire for comfort/shared enthusiasm and daily affect.

The investigation of this link was exploratory in nature.

2. To investigate the role of telling a close other about a positive and negative experience in daily affect, accounting for level of importance of the event and level of

desirability for support. It was predicted that telling a close other about a positive experience would be associated with higher positive affect, consistent with past research on capitalization. In contrast, it was predicted that telling a close other about a negative experience would be associated with higher negative affect, consistent with past research on the emotion reactivation effect.

3. To investigate the role of receiving comfort/an enthusiastic response, accounting for participants' rankings of the level of importance of the event and their level of desire for comfort/shared enthusiasm. The analyses linking received comfort with daily affect were exploratory, given inconsistent findings from previous studies. Receiving enthusiastic responses when telling the close other about a positive experience were predicted to be associated with higher positive affect, consistent with past research on perceived responses to capitalization attempts.
4. To investigate the role of receiving good quality emotional support for both negative and positive experiences in daily affect. Both feeling understood and perceiving responsiveness to one's basic psychological needs were expected to be associated with higher daily positive affect, consistent with previous research on perceived partner responsiveness.
5. To investigate the link between daily received emotional support and perceived emotional support. It was predicted that, for both positive and negative experiences, the various aspects of received emotional support investigated in this Study would predict levels of perceived emotional support at the conclusion of the study, providing evidence for the influence that real past instances of received emotional support have on reports of perceived emotional support.

Methods

Participants

Participants were 98 university students taking an introductory course of psychology. Out of the 98 participants, 62 were female (65%), 34 were male (35%) and two participants did not report gender. Participants' age ranged from 17 to 21 years old ($M = 18.42$, $SD = 0.61$). The majority of participants were Caucasian (69.5%), followed by Asian (20.5%), with the remainder reporting other ethnicities. Participants were recruited using the Psychology Department research participation pool at the University of Western Ontario. The only exclusion criterion was participation in Study 2. The majority of participants (90%) completed all 10 online diaries, and only 4% of participants completed less than 5 diaries. The data from all participants were included in the analyses. After the last online diary was completed, participants received two course credits for participation.

Measures

For the first online diary, participants were asked to identify a close person in their lives with whom they interacted frequently (a friend, romantic partner, or family member). This was the same process used by participants to identify a close other in Study 2 (see Appendix G). Participants also completed the same demographic information form used previously in Studies 1 and 2 (see Appendix E). Following this, participants were then asked to report the best and worst events of the day (open-ended questions) and the significance of these two events, using a Likert scale ranging from 1 (*not important at all*) to 7 (*very important*). Participants were also asked the extent to which they wanted someone to help them feel better (for the negative experience), or to share their enthusiasm with someone (for the positive experience). Participants responded to this question using a Likert scale ranging

from 1 (*not at all*) to 7 (*very much so*). Then, participants indicated whether they recounted these two events to the person they identified (yes/no), and whether this person was involved in the events (yes/no). Participants then completed a series of questions about received emotional support when the close other knew about the best/worst event. If the close other did not know about the event, the participants were asked to indicate that each of the received emotional support questions were not applicable.

To assess received emotional support, participants were asked the extent to which the close other provided emotionally supportive responses (i.e., comfort for negative experiences or enthusiastic response for positive experiences), the extent to which they thought the other person was responsive to their need for relatedness, competence, and autonomy (responses to these three questions were added to create a measure of perceived responsiveness to basic psychological needs), and the extent to which they (i.e., the participants) felt understood by the close other (see Appendix M). All of these questions were answered using a Likert scale ranging from 1 (*not at all*) to 7 (*very much so*) or as N/A (not applicable; e.g., if the close other did not know about the best/worst event of the day).

The questions used in this study were based on those used by Reis and colleagues (2010, study 5), and Maisel and Gable (2009). Daily diaries 2 through 10 did not ask participants to identify the close other again. Instead, the online system automatically filled in the initials of the person participants had identified in daily diary 1, to remind participants. There were two versions of each daily diary, which only varied with respect to whether participants were asked to report first on their best or worst event of the day, and the questions about received support experiences associated with each event. Each day participants were randomly assigned to one of these two versions. At the end of both questionnaire versions, participants

were asked to report their levels of negative and positive affect that day, utilizing the PANAS questionnaire (Watson et al., 1988; described in Study 1). Participants were asked to report their affect during the previous 24 hours. Positive and negative affect were used as separate outcome measures, as past research has found that daily positive and negative emotional states are largely independent (Watson & Tellegen, 1985).

Perceived emotional support. The measure of perceived emotional support for negative experiences was the emotional support subscale of the PESEI (described in Study 2, see Appendix H). The measure of perceived emotional support for positive experiences was the active constructive subscale of the PRCAS (also described in Study 1).

Procedure

After receiving ethics approval from the Psychology Department at the University of Western Ontario (see Appendix N), participants signed up for the study using the research participation pool system. The only exclusion criteria was having participated in Study 2 (which was conducted in the same academic year). After registering for this online study, participants were directed to a webpage that contained a letter of information and a consent form (see Appendix O). Upon provision of informed consent, participants were directed to a webpage that asked them to provide their name, research participant id, and email addresses (both a primary and a secondary email address). Primary email addresses were used as the default to send participants emails with links to the diaries and confirmations and reminders of diary completion. Secondary email addresses were only used when participants had not completed a diary after having received one reminder email. Every day, participants received an email with a link to the corresponding online diary at 6pm. Participants were asked to complete the diary by the end of the day. Those who had not completed the diary by 9pm

received a reminder email. After having sent three emails to a given participant requesting completion of a given diary, the system removed the participant from the study. When participants completed each online diary, they received a confirmation email, which also reminded them about the email they would receive the following evening with a link to the next diary. On the 10th day, participants also completed measures of perceived emotional support (i.e., PESEI and PRCA).⁸ Upon completion of all 10 diaries, participants received an email that debriefed them about the nature and purpose of the study (see the content of all emails sent in Study 3 in Appendix P). Completion of each online diary was estimated to take about 10 minutes.

Results and Discussion

When participants were asked to identify a close person with whom they interacted frequently, the most common relationship was a friend (41.7%), followed by a romantic partner (34.3%), and a family member (24%). Out of those who selected a family member, 42% selected their mother, 25% selected a sibling, and 25% selected their father, and the remainder selected other family members. When looking at the gender of the selected other, the majority of participants identified a female person (55.7%). The majority of participants reported knowing this person for over 3 years (66%), 12.4% reported knowing this person for 1-2 years, and 21.6% reported knowing this person for less than a year. A large percentage of participants reported talking with the selected person several times a day (71.1%); 5.2% reported talking with the selected person once a day, 13.4% several times a week, 7.2% once a week, and 3.1% less than once a week. Finally, the majority of participants reported feeling very satisfied with their relationship with the person they identified (64.5%), followed by somewhat satisfied (21.9%), neutral (8.7%), somewhat dissatisfied (2.9%), and very

dissatisfied (1.9%). In summary, the majority of participants selected a friend, romantic partner or family member who they knew for a long time, with whom they talked very frequently, and with whom they had a satisfying relationship.

Descriptive Analyses

Participants reported a large variety of negative and positive experiences. Among the worst events of the day, some common themes included concerns with: academics (the most commonly reported theme), physical health, finances, setbacks in the pursuit of personal goals, and interpersonal conflict. Among the best events of the day, some common themes included enthusiasm about: academics (the most commonly reported theme), interpersonal interactions, pursuing personal goals, physical health and well-being (e.g., eating, sleeping, and exercising), and recreational activities. Even though participants were asked to complete the diaries on a daily basis, 51% of them completed at least one diary two or more days after having completed the previous diary (the majority of these delays were of two days). Nevertheless, delays in diary completion did not affect the analyses, which explored the link between the received support and affect experienced on a given day.

When considering all emotional support interactions reported by participants, the close others that participants identified had not been involved in 86% of the worst daily events and had not been involved in 76.5% of the best daily events. Thus, in order to ensure that the emotional support interactions investigated in this study involved the most common type of scenario (and given the possibility that the close other's involvement in the event may bias their emotionally supportive/invalidating responses), only the interactions in which the close other was *not* involved in the worst/best event of the day were included. Also, when investigating the relative roles of received comfort/enthusiastic response, feeling understood,

and perceived responsiveness to basic psychological needs, only the interactions in which participants had told the close other about the worst/best event of the day were included in the analyses (as telling the close other about the event may represent an invitation for the close other to respond). Restricting analyses to situations in which participants told the close other about the event and situations in which the close other was not involved in the event is consistent with the methodology used by Reis and colleagues (2010, study 5).

Sample size (i.e., number of diary entries), means and standard deviations for within-persons effects (i.e., Level 1; see HLM Analyses section below) for each variable are displayed in Tables 15, 16, 17, and 18. The values displayed on Table 15 are derived from a dataset that included only entries in which the close other was not involved in the worst event of the day. The values displayed in Table 16 are derived from a dataset that included only entries in which the close other was not involved in the best event of the day. The values displayed in Table 17 are derived from a dataset that included only entries in which participants had told the close other about the worst event of the day, and the close other was not involved in this event (data used for analyses investigating the close other's emotionally supportive response to the negative experience). Finally, the values displayed in Table 18 are derived from a dataset that included only entries in which participants had told the close other about the best event of the day, and the close other was not involved in this event (data used for analyses investigating the close other's emotionally supportive response to the positive experience).

Model Used in HLM Analyses

Objectives one to four were addressed using hierarchical linear modeling (HLM 7, Raudenbush, Bryk, & Congdon, 2011). HLM allows accounting for non-independence (as

Table 15

Number of Diary Entries and Means and Standard Deviations of Variables Used to Investigate the Role of Telling a Close Other About the Worst Event of the Day in Daily Affect (N = 97 participants)

Measure	<i>Number of Entries</i>	<i>M</i>	<i>SD</i>
Daily event importance – negative experience	788	3.88	1.93
Daily desire for support – negative experience	789	3.14	1.91
Daily told close other – negative experience	791	0.36	0.48
Daily positive affect	770	24.69	8.34
Daily negative affect	778	17.49	7.52

Table 16

Number of Diary Entries and Means and Standard Deviations of Variables Used to Investigate the Role of Telling a Close Other about the Best Event of the Day in Daily Affect (N = 97 participants)

Measure	<i>Number of Entries</i>	<i>M</i>	<i>SD</i>
Daily event importance – positive experience	701	4.22	1.90
Daily desire for support – positive experience	702	3.86	1.99
Daily told close other – positive experience	705	0.39	0.49
Daily positive affect	684	24.41	8.40
Daily negative affect	693	18.14	7.91

Table 17

Number of Diary Entries and Means and Standard Deviations of Variables Used to Investigate the Role of Received Comfort, Perceived Responsiveness to Basic Psychological Needs, and Feeling Understood in Daily Affect, After Telling a Close Other About the Worst Event of the Day (N = 86 participants)

Measure	Number of Entries	M	SD
Daily event importance – negative experience	279	4.44	1.92
Daily desire for support – negative experience	279	3.81	2.01
Daily received comfort – negative experience	276	5.18	1.66
Daily perceived responsiveness to basic psychological needs – negative experience	248	15.75	4.62
Daily felt understood – negative experience	277	5.56	1.47
Daily positive affect	271	25.79	8.56
Daily negative affect	273	18.14	7.62

Table 18

Number of Diary Entries and Means and Standard Deviations of Variables Used to Investigate the Role of Received Enthusiastic Response, Perceived Responsiveness to Basic Psychological Needs, and Feeling Understood in Daily Affect, After Telling a Close Other About the Best Event of the Day (N = 83 participants)

Measure	Number of Entries	M	SD
Daily event importance – positive experience	263	5.00	1.82
Daily desire for support – positive experience	263	4.87	1.77
Daily received enthusiastic response – positive experience	260	5.48	1.43
Daily perceived responsiveness to basic psychological needs – positive experience	250	16.60	4.14
Daily felt understood – positive experience	255	5.77	1.34
Daily positive affect	257	26.38	8.55
Daily negative affect	262	18.33	7.67

each participant provided data for 10 days) and for both within and between person effects. In this study, the within-person effects (Level 1) refer to the way each participant's daily experiences with emotional support and daily affect fluctuated throughout the study period, relative to his/her own mean level on each of these variables; therefore, this data were analyzed as nested within persons. The between-person effects (Level 2) refer to each person's average experiences with emotional support and daily affect, relative to other participants in the study. Given that this study was designed to investigate the dynamic nature of the link between daily received emotional support and affect, the primary interest was within-person effects (Level 1 data; i.e., how daily levels of received emotional support may be associated with daily levels of affect) This primary interest is reflected in the nature of objectives one to four, as described previously.⁹ For example, to test objective one, I examined if within-person variation with regard to desire for comfort/shared enthusiasm relates to within-person variation in daily affect. Past research on received emotional support has also focused on within-person effects (e.g., Bolger et al., 2000; Reis et al., 2010).

All models were estimated using full maximum likelihood (FML) procedures. This approach allows for testing the difference of fit between models that differ in fixed as well as random effects (West et al., 2007). Variables in HLM can be centered either around person-means (i.e., group means) or grand-means. Centering a variable around person-means allows the focus to be on the contrast between each diary entry and the average diary entry for that person (i.e., how far above or below that person's average a given variable is on each diary entry, and how that affects the prediction of an outcome variable). In contrast, centering a variable around grand-means allows the focus to be on the contrast between each diary entry and the average diary entry for all participants (i.e., how far above or below the sample's average a given variable is on each entry, and how that affects the prediction of an outcome

variable). Level 1 variables were centered around person-means, as the focus of this Study was on how daily variations of received emotional support for a given participant accounted for that participant's variations in daily affect across the duration of the study. The only exception was the dichotomous variable “told other” (i.e., whether participants told the close other about the event), which was a dichotomous variable and was left uncentered. Outcome variables were uncentered.

A series of steps to build models were used, and each step was tested to determine if it represented a significant change from the previous one. If not, the estimation from the previous step was retained. First, I run unconditional models (i.e., the intercept of the outcome variable was entered as the only predictor) to examine the distribution of within- and between-person variance for each outcome variable. In the second step, I added Level 1 variables as predictors of the outcome variable. These were initially entered as random and then as a third step, non-significant random errors were removed (e.g., Nezlek, 2007). The analyses were conducted separately for negative and positive experiences, and for positive and negative affect as outcome measures. Moreover, separate analyses were used for telling the close other about the events and for receiving emotional support, because emotional support ratings were only included in the analyses when the close other had been told about the event. The analyses reported below represent those obtained from models including just Level 1 (i.e., within-person) variables as predictors (consistent with the level of analysis used in past studies of daily received emotional support; e.g., Gable et al., 2004).¹⁰

As an example, the model to examine the role of telling the close other about the best event of the day in daily positive affect was:

$$\text{Positive affect}_{ij} = b_{0j} + b_{1j} (\text{importance_event}) + b_{2j} (\text{desirability_support}) + \\ b_{3j} (\text{told}) + r_{ij}$$

Where b_{0j} refers to the intercept (i.e., person j 's average positive affect during the 10 days). Whereas b_{1j} , b_{2j} , and b_{3j} , respectively, refer to slopes between the positive affect ratings and importance of the positive experience, desire for shared enthusiasm, and telling the close other about the event. Error is represented by r_{ij} . Ratings of importance of event and desire for shared enthusiasm, were centered on each participant's mean.

Analyses for the prediction of negative affect were identical, except that the outcome variable was daily negative affect. An equivalent pair of analyses was conducted for the telling of the worst event of the day.

As another example, the model examining the role of received emotional support for the best event of the day (i.e., enthusiastic response, feeling understood, and perceived responsiveness to basic psychological needs) in daily positive affect was:

$$\text{Positive affect}_{ij} = b_{0j} + b_{1j} (\text{importance_event}) + b_{2j} (\text{desire_shared_enthusiasm}) + \\ b_{3j} (\text{enthusiastic response}) + b_{4j} (\text{felt_understanding}) + \\ b_{5j} (\text{responsiveness_basic_needs}) + r_{ij}$$

Where b_{0j} refers to the intercept (i.e., person j 's average positive affect during the 10 days). Whereas b_{1j} , b_{2j} , b_{3j} , b_{4j} , and b_{5j} , respectively, refer to slopes between the positive affect ratings and importance of the positive experience, desire for shared enthusiasm, enthusiastic response, feeling understood, and perceived responsiveness to belongingness, autonomy, and competence needs. Error is represented by r_{ij} . Ratings of importance of event, desire for shared enthusiasm, enthusiastic response, feeling understood, and perceived responsiveness

to belongingness, autonomy, and competence needs were centered on each participant's mean.

Analyses for the prediction of negative affect were identical, except that the outcome variable was daily negative affect. An equivalent pair of analyses was conducted for receiving emotional support for the worst event of the day.

Results From HLM Analyses

Telling a close other about the best event of the day. Higher levels of importance of the best event of the day ($B = 0.31, SE = 0.15, t[573] = 2.02, p = .044$); and desire to share the enthusiasm with someone ($B = 0.78, SE = 0.17, t[573] = 4.61, p < .001$) were associated with higher positive affect. As predicted, telling a close other about this event was also associated with higher positive affect ($B = 1.21, SE = 0.55, t[573] = 2.21, p = .028$). This last result is consistent with past research on capitalization (Gable et al., 2004; Reis et al., 2010), suggesting that recounting positive experiences to close others is associated with higher positive affect.

No significant results were found with regard to negative affect for any of the constructs investigated. In particular, importance of the best event of the day ($B = 0.03, SE = 0.16, t[485] = 0.16, p = .875$), desire to share the enthusiasm with someone ($B = 0.30, SE = 0.18, t[485] = 1.67, p = .096$), and telling a close other about this event ($B = -0.61, SE = 0.57, t[96] = -1.07, p = .286$) were not related to negative affect. Overall, these findings suggest that desiring support for the best event of the day (i.e., desiring an enthusiastic response) and telling a close other about this event are associated with higher positive affect, but not negative affect, that day.

Received emotional support for a positive experience. As found in the previous analyses, higher levels of importance of the best event of the day were associated with higher positive affect ($B = 0.61, SE = 0.25, t[178] = 2.40, p = .017$). However, desire to share the enthusiasm with someone was not significantly associated with positive affect ($B = 0.59, SE = 0.35, t[178] = 1.69, p = .093$) in this regression analysis (where the data used included only the support interactions in which the respondent had told the close other about the event, and where other variables associated with received emotional support were included in the regression analysis). Also, receiving an enthusiastic response ($B = -0.04, SE = 0.34, t[178] = 0.12, p = .905$) and perceiving this response as responsive to basic psychological needs ($B = 0.20, SE = 0.14, t[178] = 1.43, p = .156$) were not associated with positive affect. However, consistent with expectations, feeling understood by the close other was associated with higher positive affect ($B = 1.21, SE = 0.50, t[178] = 2.40, p = .018$). Overall, these results suggest that when various aspects of a received emotional support interaction associated with a positive experience are considered, feeling understood emerged as a unique factor in the prediction of daily positive affect.

With regard to negative affect, the only aspect of the support interaction that emerged as a significant predictor was desire to share the enthusiasm with someone ($B = 0.57, SE = 0.29, t[178] = 1.98, p = .049$). This predictor was not significant in the previously reported analyses where the data used included all recorded interactions and where other variables associated with received emotional support were not included. Therefore, the result from this analysis should be considered with caution. None of the other aspects of the emotional support interactions emerged as significant predictors of negative affect; including importance of the event ($B = -0.20, SE = 0.27, t[178] = -0.75, p = .457$), receiving an enthusiastic response ($B = -0.29, SE = 0.38, t[178] = -0.76, p = .447$), perceived

responsiveness to basic psychological needs ($B = 0.21$, $SE = 0.17$, $t[178] = 1.25$, $p = .215$), or feeling understood ($B = -0.22$, $SE = 0.57$, $t[178] = -0.40$, $p = .692$).

Overall, the analyses looking at the role of received support for positive experiences in daily affect showed that recounting positive experiences on a given day to a close other and feeling understood by this close other after telling him/her about the event are both associated with higher positive affect that day.

Telling a close other about a negative experience. Higher levels of importance of the worst event of the day ($B = 0.48$, $SE = 0.11$), $t[572] = 4.14$, $p < .001$) and desire to receive emotional comfort ($B = 0.72$, $SE = 0.15$, $t[96] = 4.87$, $p < .001$) were associated with higher negative affect. This last finding is consistent with the proposition that desire for comfort could be a marker of poor emotional well-being. Contrary to what would be expected based on the emotion reactivation hypothesis (Nils & Rimé, 2012), telling a close other about a negative experience was not associated with higher negative affect (although the results closely approached significance; $B = 0.77$, $SE = 0.41$, $t[572] = 1.87$, $p = .062$).¹¹

With regard to positive affect, importance of the event was not a significant predictor ($B = -0.10$, $SE = 0.16$), $t[96] = -0.64$, $p = .526$), but higher desire for comfort was associated with lower positive affect ($B = -0.36$, $SE = 0.15$, $t[96] = -2.39$, $p = .019$) while telling a close other about the negative experience was associated with higher positive affect ($B = 1.60$, $SE = 0.50$), $t[468] = 3.16$, $p = .002$). These results are consistent with the proposition that even though desire for support may represent a marker of poor emotional well-being, telling a close other about important personal events may be associated with higher positive affect on a given day. This is consistent with and helps explain past research showing people's general willingness to share emotional experiences with close others (Rimé, Mesquita, Philippot, &

Boca, 1991), and with the general perception that talking about an emotional experience is relieving (Zech & Rimé, 2005).

How is sharing a negative experience with a close other associated with higher positive affect? Past research has suggested that the social sharing of emotions enhances interpersonal relationships and social integration, as disclosure causes people to like their listeners (Collins & Miller, 1994; Nils & Rimé, 2012). Therefore, it is possible that recounting negative experiences with close others led to enhanced bonding and this made participants feel more positively. Future research could investigate this possibility.

Received emotional support for a negative experience. None of the aspects of a received emotional support interaction regarding a negative experience were predictive of daily negative affect, including importance of the event ($B = 0.43$, $SE = 0.26$, $t[195] = 1.63$, $p = .103$), desire to receive comfort ($B = 0.38$, $SE = 0.30$, $t[195] = 1.27$, $p = .207$), received emotional comfort ($B = 0.49$, $SE = 0.51$, $t[195] = 0.96$, $p = .338$), perceived responsiveness to basic psychological needs ($B = -0.04$, $SE = 0.22$, $t[195] = -0.19$, $p = .850$), or feeling understood ($B = 0.07$, $SE = 0.36$, $t[195] = 0.18$, $p = .856$). Therefore, the link between desire for comfort and negative affect found in the previous analysis was not found in this analysis where the data used included only the support interactions in which the respondent had told the close other about the event, and where other variables associated with received emotional support were included in the regression analysis.

The lack of a significant link between received emotional support and negative affect is inconsistent with many past findings suggesting a negative association (e.g., Bolger et al., 2000; Shrout et al., 2006) but is consistent with findings from a recent daily study which found that received emotional support was not reliably related to reported health complaints

or negative affect on the same day (Wolff et al., 2013). This past study shares in common with Study 3 that daily received support was investigated with regard to a variety of close relationships, rather than being limited to romantic relationships (as in the majority of past studies that found a negative link between received support and emotional well-being). Also, the present study included other aspects of emotional support interactions in the analyses that have not been included in past studies of received support (e.g., desire for support). Therefore, the negative link between received emotional support and well-being may not be as strong as suggested in past studies. As recommended by Wolff and colleagues (2013), future research should investigate whether different kinds and sources of support are differentially related to personal well-being, including daily affect.

With regard to positive affect, there were two aspects of the emotional support interaction that emerged as significant predictors: desire to receive emotional comfort ($B = -1.11, SE = 0.31, t[194] = -3.51, p = .001$), and feeling understood ($B = 1.20, SE = 0.34, t[194] = 3.49, p = .001$). In particular, these results showed that the more respondents desired emotional comfort after a negative experience, the less they experienced positive affect that day. This finding is consistent with the results from the previous regression analysis looking at the roles that importance of the event, desire for support, and telling the close other about the event play in daily affect. Therefore, these results provide consistent evidence that desire for emotional comfort may represent a marker of poor emotional well-being, in this case lower positive affect.

Consistent with expectations, feeling understood by a close other after having told him/her about a negative experience appears to be associated with higher positive affect on a given day. However, none of the other aspects of the received emotional support interaction

were significant predictors of positive affect, including importance of the event ($B = 0.10$, $SE = 0.32$), $t[194] = 0.32$, $p = .749$), received emotional comfort ($B = -0.52$, $SE = 0.59$, $t[194] = -0.89$, $p = .376$), or perceived responsiveness to basic psychological needs ($B = -0.09$, $SE = 0.22$, $t[194] = -0.41$, $p = .683$). Again, the lack of association between received emotional comfort for a negative experience and daily positive affect runs contrary to past findings that suggested that receiving support poses a threat to emotional well-being. Instead, the current findings suggest that when received emotional comfort is investigated with regard to a variety of close relationships (i.e., not limited to romantic partners) and when other aspects of the emotional support interaction are taken into account (e.g., desire for comfort, quality of emotional support), its role in daily emotional well-being may not be as salient as previously indicated.

Overall, when looking at the role that received emotional support for negative experiences plays in daily affect, the results from these analyses showed that even though desiring emotional comfort on a given day is associated with lower positive affect, telling a close other about the event and feeling understood by the close other after having told him/her about the event are associated with higher positive affect that day.

Addressing Objective Four: Testing the Link between Received and Perceived Emotional Support

Finally, this study also tested the prediction that average ratings of received emotional support would predict participants' responses to measures of perceived emotional support (i.e., PESEI and PRCA) completed on the 10th day (which assessed perceptions of typical levels of emotional support available from that close other based on participants' experiences over the previous 10 days with that person). Testing the link between received emotional

support and perceived emotional support examined the assumption guiding Studies 1 and 2 (and that of most studies of perceived support), being that global appraisals of typically available emotional support (i.e., perceived emotional support) are influenced by actual experiences of received emotional support, and are not just a reflection of personality or biases.

These analyses were conducted utilizing bivariate Pearson correlations and the complete dataset from all 98 participants (in order to simplify the analyses). Results showed that the average level of received comfort for negative experiences reported over the 10 days ($M = 4.99$, $SD = 1.30$) was positively correlated with participants' perceived emotional support for negative experiences ($M = 5.55$, $SD = 1.14$; $r = .63$, $p < .001$). Also, the average level of feeling understood by the close other ($M = 5.44$, $SD = 1.27$) and perceiving the close other as responsive to basic psychological needs ($M = 15.24$, $SD = 3.97$) over the 10 study days were strongly and positively correlated with levels of perceived emotional support for negative experiences on the tenth day ($r = .61$, $p < .001$ and $r = .70$, $p < .001$, respectively). Not surprisingly, constructs less related to the emotional support process such as desiring comfort ($M = 3.28$, $SD = 1.15$) and recounting the negative experiences to a close other were ($M = 0.42$, $SD = 0.25$) were not significantly related to perceived emotional support for negative experiences ($r = .13$, $p = .256$ and $r = .14$, $p = .210$, respectively).

The various aspects of an emotionally supportive interaction in the context of a positive experience investigated in Study 3 were correlated with the subscale of the PRCA measuring active and constructive responses to capitalization attempts, rather than with the composite score of the PRCA used in Studies 1 and 2, as this composite measure includes invalidating responses which were not captured in the measures used in Study 3. The results

showed that average daily ratings of received enthusiastic responses ($M = 5.31, SD = 1.10$), perceived responsiveness to basic psychological needs ($M = 16.28, SD = 3.54$), and feeling understood ($M = 5.62, SD = 1.25$), were positively correlated with the subscale of the PRCA measuring active and constructive responses to capitalization attempts ($M = 5.44, SD = 1.18$; $r = .63, p = .001, r = .37, p = .001$, and $r = .35, p = .002$, respectively). Interestingly, average daily ratings of wanting to share the enthusiasm with the close other ($M = 4.09, SD = 1.23$) and telling the close other about positive experiences ($M = 0.48, SD = 0.26$) were also significantly related to perceived emotional support for positive experiences ($r = .39, p < .001$, and $r = .28, p = .009$, respectively). Therefore, these results indicate that perceived emotional support (when measured in a way that encourages respondents to base their responses on past support experiences) is moderately to strongly associated to average levels of daily received emotional support, and this pattern of results is observed with regard to both emotional support for negative and positive experiences. Overall, these findings suggest that actual emotional support interactions play a significant role in the way individuals respond to perceived emotional support questionnaires, adding credibility to past research findings on emotional support that used perceived emotional support measures, including Studies 1 and 2 of this dissertation (especially Study 2 as it used the same two measures of perceived emotional support). Nonetheless, as previously discussed, there are different ways in which perceived emotional support has been studied in the past, and the conclusions reached from the current findings may not extend to other ways of assessing perceived emotional support (e.g., perceived future availability of emotional support).

Discussion of Findings

The current study included desire for emotional support as an aspect of the received

emotional support interaction. Desire for emotional support had been previously investigated in one study of emotional support (Wolff et al., 2013), which similarly found a significant association between need for emotional support and negative affect utilizing a daily diary method. The findings from the current study suggest that desire for emotional support is associated with lower emotional well-being. In particular, desiring emotional comfort after experiencing a negative event was associated with lower positive affect that day. This link was found in the two regression analyses conducted (one including all collected data that allowed studying the role of telling the close other about the event, and one in which only interactions where the respondent had told the close other about the event were included in the analysis, in order to study the roles of various aspects of the close other's supportive response). Other findings suggesting a role of desire for support in daily affect were apparent in only one of the two regression analyses. For example, desiring emotional comfort after experiencing a negative event was associated with higher negative affect only in the analysis that included all collected data. Also, desiring to share one's enthusiasm with others after a positive event was associated with higher negative affect in the analysis that included only support interactions where the respondent had told the close other about the event. However, desiring to share one's enthusiasm with others was associated with higher positive affect in the analyses that included all collected data. Given the significant link between desire for support and lowered emotional well-being (especially the link between desire for emotional comfort and lower positive affect), even after accounting for other aspects of an emotional support interaction, desire for emotional support may represent an important construct to consider in future studies on the effects of received emotional support on well-being.

The results from this study were consistent with past research showing the beneficial effects of telling close others about positive experiences (i.e., capitalization). In particular,

telling a close other about a positive experience was associated with higher positive affect. Interestingly, the results showed that telling a close other about a negative experience also led to higher positive affect. This phenomenon is consistent with findings by Reis, Sheldon, Gable, Roscoe, and Ryan (2000). These researchers examined types of social interactions leading to higher satisfaction of relatedness needs and found that talking about meaningful matters and feeling understood and appreciated strongly predicted daily levels of relatedness satisfaction. Also, that study found that higher levels of daily relatedness satisfaction were significantly associated with higher levels of daily positive affect. Similarly, sharing important events with others has been found to enhance the relationship with the other person (Collins et al., 1994). Therefore, it is possible that in the current study telling a close other about a negative experience was associated with higher positive affect due to its beneficial effect on the interpersonal relationship. Future research would do well to investigate this possibility.

This study failed to find evidence consistent with findings from past studies showing that received emotional comfort is associated with worse daily affect, suggesting that this link may not be as strong as previously suggested by studies on invisible support (e.g., Bolger et al., 2000; Shrout et al., 2006). This lack of significant relationship may be explained by the inclusion of other aspects of a received emotional support interaction included in the current study, such as desire for support. For example, it is possible that accounting for desire for comfort reduced the link between received comfort and emotional well-being.¹² Future research would benefit from investigating this possibility further. Also, it is important to consider that including quality aspects of emotional support (i.e., perceived responsiveness to basic psychological needs and feeling understood) in the regression equation used to study the role of received comfort in daily affect meant that the construct of received comfort

investigated in this study was stripped off its qualitative aspects.

Surprisingly, the current study failed to find evidence consistent with past findings showing that received enthusiastic responses after sharing a positive experience lead to higher positive affect.¹³ It is possible that this construct did not reach significance as it was entered in the regression analyses along with measures of quality of received support (i.e., responsiveness to basic psychological needs and feeling understood). As enthusiastic responses are likely to be of high quality (Gable et al., 2004), the covariance between enthusiastic responses and these other constructs may have resulted in a reduced partial link between enthusiastic responses and positive affect.

With regard to quality of received support and contrary to expectations, this study did not find a significant role of perceived responsiveness to basic psychological needs (relatedness, competence, and autonomy) in the prediction of daily affect. This contrasts findings by Maisel and Gable (2009), showing that when receiving emotional support, higher levels of perceived responsiveness (a construct that includes responsiveness to relatedness, competence, and autonomy needs) were associated with less sadness. It is likely that in the present Study perceived responsiveness to basic psychological needs shared variance with other constructs of quality of emotional support included in the regression analyses (e.g., feeling understood) and this led to a reduced regression coefficient for responsiveness to basic psychological needs.

Consistent with expectations, the results showed that after recounting meaningful experiences, feeling understood by a close other was associated with higher positive affect. This phenomenon was found for both positive and negative experiences. These findings are consistent with previous findings by Reis and colleagues (2010) showing that talking about

meaningful matters and feeling understood strongly predicted relatedness satisfaction, which in turn was significantly associated with higher positive affect. The current results are also consistent with past experiment findings showing that people experience greater positive affect when their personal and collective selves are accurately perceived by interaction partners (Oishi, Koo, & Akimoto, 2008). Similarly, Lun, Kesebir, and Oishi (2008) found that individuals experience higher levels of life satisfaction and fewer physical symptoms when they feel more understood in daily social interactions, particularly those with greater interdependent self-construal (Lun et al., 2008). Also, Pasupathi (2003) found that higher levels of listener agreement during social remembering (i.e., recounting personal events in social settings) were associated with greater emotional benefits (i.e., lower negative affect and higher positive affect).

Feeling understood is part of the Perceived Partner Responsiveness, which involves the belief that a close other understands, values, and cares for one's needs, and has been suggested to account for the beneficial effects of social support (Gable, Gosnell, Maisel, & Strachman, 2012; Maisel & Gable, 2009) and interpersonal relationships in general (Reis et al., 2004). Therefore, the current findings are consistent with this model. Moreover, feeling understood is an element of person-centered comforting messages. There is substantial research showing that highly person-centered comforting messages (i.e., when the support message acknowledges and legitimizes the feelings and perspectives of the recipient while encouraging him or her to explore and make sense of those feelings) are evaluated more positively and have more positive outcomes on the emotional well-being of the recipient than low person-centered comforting messages (Bodie & Jones, 2012; Burleson, 2003, 2009; Jones, 2004; Jones & Wirtz, 2006). The effects of high person-centered comforting messages on emotional well-being appear to be both direct and indirect (i.e., they encourage people to

verbalize their thoughts and emotions, which facilitates cognitive reappraisals and this, in turn, improves emotional well-being, Jones & Wirtz, 2006).

Overall, the importance of feeling understood while receiving emotional support is consistent with a number of theoretical models and research studies linking interpersonal relationships with personal well-being, and suggests that feeling understood could be considered a marker of effective emotional support provision. Therefore, the role of feeling understood deserves to be further investigated in future research studies. Moreover, results from the present Study showed that while receiving comfort/an enthusiastic response was not significantly associated with daily affect, feeling understood was a significant predictor of daily positive affect. These findings suggest that future research on received emotional support would do well to investigate feeling understood separately from other aspects of emotionally supportive interactions, including receiving comfort/an enthusiastic response. As suggested by Oishi, Krochik, and Akimoto (2010), the construct of feeling understood has the potential to unite the relatively separate research literatures on close relationships and well-being. Future research could also investigate the construct of feeling understood more precisely by assessing perceived understanding of both personal and collective aspects of the self. Past research has shown that both European Americans and Asian Americans value feeling understood, but that when the distinction between personal and collective aspects of the self is made, there are some differences in the antecedents and consequences of feeling understood. In particular, for Asian Americans feeling understood appears to have a stronger effect on well-being when it regards collective aspects of the self; whereas for European Americans it appears to have a stronger effect on well-being when it regards personal aspects of the self (see review by Oishi et al., 2010).

Finally, this study investigated the link between received and perceived emotional support constructs by looking at the correlation of average daily ratings of received emotional support with reported levels of perceived emotional support at the end of the study. The findings showed that perceived emotional support for both positive and negative experiences (when measured as perceived typical levels of emotional support) are moderately to strongly predicted by average levels of daily received emotional support. These findings are noteworthy in light of the unclear link between the received and perceived support constructs in the literature (e.g., Kaul & Lakey, 2003). Also, these findings suggest that assessing perceptions of typical levels of emotional support (i.e., by encouraging respondents to consider past experiences with the support provider when responding to the questionnaire items) may represent a suitable way to assess the construct of perceived emotional support in a way that is closely related to actual past experiences with support transactions. In addition to providing evidence for the link between received and perceived emotional support, these findings also provided evidence for the construct validity of the measure of perceived emotional support used in Study 2 (i.e., the PESEI). In particular, the PESEI was designed to assess perceptions of typical levels of available emotional support from a close other. By finding that levels of emotional support on the PESEI were significantly and positively correlated with average levels of daily received emotional support, this study provided evidence for the construct validity of the PESEI.

With regard to limitations, it is relevant to note that having centered the variables around each participant's mean may have resulted in limited statistical variance used in the analyses (i.e., participants' values for each variable may not have varied as much across the study period). Therefore, it is important that this study is replicated in the future, ideally using a longer time span. Also, the literature would benefit from experimental and/or longitudinal

studies in order to be able to make conclusions about causality. Moreover, this study investigated received emotional support with regard to only one close other. However, people share emotional events multiple times and with several recipients (Rimé, 2007). Therefore, future research studies on received emotional support aiming to increase the external validity of their findings would do well to assess multiple disclosures, and the associated multiple emotionally supportive responses to these disclosures. Also, as in Studies 1 and 2, the use of self-report measures in this study suffers from the limitations associated with this type of information-gathering method (described in the discussion section of Study 1). Moreover, the outcome measures included in this study (i.e., positive and negative affect) were limited.

Future research should expand the outcome measures by including not only the recipient's affect, but also the recipient's cognitions (e.g., beliefs, attributions, and appraisals related to well-being) and behaviours (e.g., coping strategies, health behaviors). This would allow a more in-depth analysis of the role of received emotional support in recipients' well-being. Moreover, this study did not compare the role of received emotional support in daily affect across different types of close relationships. Future research would contribute significantly to the literature on emotional support by investigating any potential differences in the link between emotional support and well-being among different types of interpersonal relationships (e.g., friendships, romantic relationships, parent-child relationships, etc.).

In general, the present Study investigated only one of the many aspects of the dyadic process involved in emotional support interactions (i.e., it only investigated the recipient's perception of received emotional support after the support process had taken place, and did not include an assessment of seeking support, perceptions of the provider of support, or ways in which each of the members of the emotional support process responded to actions from the

other member). Such detailed assessment of emotional support processes could be investigated in the future with observational studies. Future longitudinal studies could also investigate the role that responses from the provider of support play in future attempts to seek emotional support from the recipient, the role that responses from the recipient of support play in future attempts to provide emotional support by the provider, as well test the phenomenon of “invisible” support (i.e., the finding that received emotional support for negative experiences is more helpful when the recipient does not report receiving support, but the provider reports providing it).

Chapter 6: General Discussion

The focus of this dissertation was on emotional support, one of the various functions of social support. Emotional support was conceptualized in this dissertation as responsiveness to the emotional needs associated with negative and positive emotional experiences, and was investigated from the perspective of the recipient of support. The general outcome of interest in this dissertation was emotional well-being (investigated with three different constructs: positive affect, negative affect, and depressive symptoms). Other aspects of emotional well-being (e.g., quality of life), were not investigated in this dissertation but remain interesting avenues for future research. This dissertation focused on emotional support processes in close relationships, although the type of close relationship was not restricted (i.e., participants could choose a family member, friend, or romantic partner). Studies 1 and 2 focused on the role of perceived typical levels of emotional support, whereas Study 3 focused on daily received emotional support. All three studies investigated emotional support for negative and positive experiences (this last form of support has been investigated in prior work as perceived responses to capitalization attempts). Studies 1 and 2 also examined the role of perceived emotional invalidation (i.e., a form of social negativity specific to the context of emotional disclosure) in emotional well-being. In addition, Studies 1 and 2 also investigated mechanisms of action linking perceived emotional support to emotional well-being. In particular, these studies tested the enabling hypothesis (i.e., emotional support is beneficial to emotional well-being through the enabling of self-efficacy) and interpersonal emotion regulation models (i.e., models proposing that relationship partners influence individuals' emotion regulation) by investigating the role of perceived emotion regulation ability in the link between perceived emotional support/invalidation and emotional well-being.

Study 1 was a cross-sectional study and Study 2 was a cross-lagged panel design, which allowed investigating the directionality of the links between perceived emotional support and emotional well-being. Study 3 was a daily diary study that allowed investigating the links between various aspects of daily received emotional support interactions and daily affect.

Findings for Each Perceived Emotional Support/Invalidation Construct in Studies 1 and 2

Perceived emotional support for negative experiences. Results from Study 1 showed that higher levels of perceived emotional support for negative experiences were significantly associated with lower levels of depressive symptoms and higher levels of positive affect. These links were replicated in Study 2 (which used an improved measure of perceived emotional support for negative experiences) in most of the concurrent correlation analyses and in all the prospective correlation analyses. The link between perceived emotional support for negative experiences and negative affect was not found in Study 1, but was later found in all the concurrent and most of the prospective correlation analyses of Study 2. Prospective regression analyses in Study 2, which controlled for initial levels of the outcome variables, showed that higher levels of perceived emotional support for negative experiences were associated with lower levels of negative affect and depressive symptoms four weeks later (but were not associated with positive affect four weeks later). Consistent with the interpersonal stress generation model (Hammen, 2006), prospective regression analyses in Study 2 also showed that higher initial levels of depressive symptoms predicted lower levels of perceived emotional support for negative experiences four weeks later, after accounting for initial levels of perceived emotional support, suggesting that the relationship between these two constructs is bidirectional.

Multiple mediation analyses in Study 1 showed that the concurrent association of perceived emotional support for negative experiences with positive affect was mediated by perceived savoring ability; while the concurrent association with depressive symptoms was mediated by both perceived difficulty regulating negative emotions and by perceived savoring ability. The multiple mediation analyses in Study 2 (which controlled for initial levels of the outcome variables) showed that lower levels of perceived difficulty regulating negative emotions mediated the links of higher levels of perceived emotional support for negative experiences with lower levels of depressive symptoms and negative affect four weeks later.

Perceived emotional invalidation of negative experiences. Study 1 found that perceived emotional invalidation of negative experiences was only significantly associated with higher negative affect, but it was not associated with positive affect or depressive symptoms. However, results from Study 2 (which used an improved measure of perceived emotional invalidation) showed significant concurrent and prospective links of perceived emotional invalidation with both negative affect and depressive symptoms. Moreover, prospective regression analyses, controlling for initial levels of the outcome variables, showed that higher levels of perceived emotional invalidation were associated with higher levels of negative affect and depressive symptoms four weeks later. However, depressive symptoms did not predict subsequent levels of perceived emotional invalidation (after accounting for initial levels of perceived emotional invalidation), suggesting that changes in perceived emotional invalidation precede changes in depressive symptoms, and not vice versa. Future research should test this proposition by using an experimental research design.

Multiple mediation analyses in Study 1 showed that the concurrent association between

perceived emotional invalidation of negative experiences and negative affect was not significantly associated by either perceived savoring ability or perceived difficulty regulating negative emotions. In contrast, the multiple mediation analyses in Study 2 (which controlled for initial levels of the outcome variables) showed that higher levels of perceived difficulty regulating negative emotions mediated the link between higher perceived emotional invalidation and higher negative affect four weeks later. However, neither perceived savoring ability or perceived difficulty regulating negative emotions mediated the link between perceived emotional invalidation and depressive symptoms four weeks later.

Perceived emotional support for positive experiences. Study 1 found that higher levels of perceived emotional support for positive experiences were significantly associated with lower levels of negative affect and depressive symptoms and higher levels of positive affect. The links with negative affect and depressive symptoms were replicated in most of the concurrent and prospective correlation analyses conducted in Study 2 (which used the same measure of perceived emotional support for positive experiences). However, prospective regression analyses in Study 2 (which accounted for initial levels of the outcome variables) showed that higher levels of perceived emotional support for positive experiences predicted lower levels of negative affect four weeks later, but did not predict depressive symptoms or positive affect four weeks later. Multiple mediation analyses in Study 1 showed that the concurrent links of perceived emotional support for positive experiences with positive affect and depressive symptoms were mediated by both perceived difficulty regulating negative emotions and perceived savoring ability. In contrast, multiple mediation analyses in Study 1 and Study 2 showed that higher levels of perceived emotional support for positive experiences were (partially) associated with lower levels of negative affect through lower levels of perceived difficulty regulating negative emotions, but not through perceived

savoring ability.

Results from Mediation Analyses

Results from all the multiple mediation analyses conducted in Studies 1 and 2 provided evidence consistent with the enabling hypothesis (Schwarzer & Knoll, 2007), a generally under-investigated hypothesis linking support processes with personal well-being through an effect on self-efficacy. In particular, perceived difficulty regulating negative emotions emerged as a significant mediator of all but one of the multiple mediation analyses conducted in Study 2, which used a prospective design and controlled for the effects of initial levels of the outcome variables. To the extent that participants' ratings of perceived ability regulating emotions reflects their actual abilities in doing so, these findings are also consistent with interpersonal emotion regulation models such as the one presented by Marroquin (2011), which proposes that relationship partners influence individuals' regulation of emotions, which then influences psychological well-being. Given the great need in the field to test models offering an alternative to the stress-buffering hypothesis and the main effect model, the current findings suggest that it is worthwhile for future research to continue to investigate the mediating effects of emotion regulation self-efficacy. Also, future research could investigate what specific emotion regulation strategies are potentially affected by emotional support/invalidation (e.g., perceived cognitive reappraisal ability, relaxation ability, etc.), as well as whether changes in emotion regulation self-efficacy reflect actual changes in the use of emotion regulation strategies.

Implications of Findings from Studies 1 and 2

If future experimental research confirms the causal links of perceived emotional support/invalidation with emotion regulation self-efficacy and with and emotional well-

being, these findings could have important implications in interventions aimed at improving young adults' emotional well-being, including couples and family therapy. For example, therapists could help individuals increase their perceived ability to regulate emotions, and thus decrease their levels of negative affect depressive symptoms, by improving the emotional support and decreasing the emotional invalidation they receive from close others. Given that perceived emotional support/invalidation may be influenced not only by actual receipt of support/invalidation, but also by personal biases, therapists could also address any misperceptions in the client's interpretations of support attempts by close others. These two approaches are likely to improve levels of perceived emotional support, which may then reduce difficulties associated with emotion dysregulation (e.g., self-harm) and overall levels of negative affect and depressive symptoms.

Findings from Study 3

Study 3, utilizing a daily diary approach, allowed the identification of how various components of an emotionally supportive interaction are associated with daily affect. Some past findings have suggested that receiving emotional support for negative experiences is associated with worse daily affect, which is surprising, given that people often desire emotional support for negative experiences and find it relieving (e.g., Jones & Wirtz, 2006; Pasupathi, 2003; Rimé et al., 1991). Study 3 allowed an exploration of how different components of received emotional support for positive experiences are associated with daily affect. Interestingly, results showed that desiring comfort after a negative experience was associated with lower daily positive affect; suggesting that desire for comfort reflects poor emotional well-being. This aspect of an emotional support interaction has received little consideration in previous studies, and deserves further examination, as it may be related to

findings reported in past studies suggesting a negative link between receiving support and emotional well-being.

Consistent with past research on capitalization (e.g., Gable et al., 2004), Study 3 found that telling a close other about the best event of the day was associated with higher positive affect that day. Interestingly, telling a close other about the worst event of the day was also associated with higher positive affect. These findings are consistent with people's general willingness to share emotional experiences with others, and suggest that an increase in daily positive affect may be part of the reason why people are willing to do so. Study 3 also found that one aspect of receiving an emotionally supportive response from a close other that played a unique role in daily affect (i.e., played a significant role above and beyond the role played by the various other aspects investigated) was feeling understood. In particular, feeling understood by a close other while receiving emotional support for both positive and negative experiences was found to significantly predict higher daily positive affect. Overall, these findings suggest that the two aspects of receiving emotional support most associated with higher daily positive affect are telling a close other about an important event (either negative or positive) and feeling understood by the close other.

Interestingly, while Studies 1 and 2 found that perceived emotional support played a stronger role in negative affect, Study 3 found that daily received emotional support played a stronger role in positive affect. One possible explanation for these findings is that the role of daily received emotional support in daily affect may be best observed with regard to changes in positive affect, whereas the role of perceived emotional support in well-being may be best observed with regard to changes in negative affect and psychopathology. Nevertheless, this possibility needs to be studied further in future studies, as these differences in findings across

Studies could also have been due to the many other methodological differences distinguishing Studies 1 and 2 from Study 3.

Finally, Study 3 allowed an investigation of the extent to which ratings of daily received emotional support predict ratings of perceived emotional support. In the past it has been argued that measures of received emotional support may more accurately assess emotional support interactions, as measures of perceived emotional support can be more affected by personal biases (e.g., Barrera, 1986). The results from Study 3 showed that, with regard to negative experiences, higher average ratings of received comfort, as well as higher levels of feeling understood and perceiving the close other as responsive to basic psychological needs predicted higher levels of perceived emotional support for negative experiences at the end of the 10-day study period. Similarly, with regard to positive experiences, higher average ratings of received enthusiastic responses, as well as higher levels of feeling understood and perceiving the close other as responsive to basic psychological needs predicted higher levels of perceived emotional support for positive experiences at the end of the 10-day study period. Therefore, these analyses in Study 3 provided convergent validity for the measures of perceived emotional support used in Study 2 and, more generally, provided evidence for the role that actual interpersonal interactions play in ratings of perceived emotional support. These findings are consistent with ideas proposed by Hobfoll (2009), highlighting that perceptions of emotional support are based on real life experiences.

Overall Summary of Findings

Overall, the three studies included in this dissertation provided evidence consistent with the understanding that close relationship partners play an important role in individuals' emotional well-being. In particular, even though the various sub-constructs of emotional

support/invalidation included in this dissertation had some unique associations with emotional well-being, the overall pattern of results from Studies 1, 2, and 3 suggests that emotional support is significantly associated with emotional well-being. More specifically, the results from these studies contribute by suggesting that 1) higher levels of perceived emotional support and lower levels of perceived emotional invalidation are associated with enhanced emotional well-being; 2) the link between perceived emotional support for negative experiences and depressive symptoms is bidirectional; 3) perceived ability to regulate emotions, especially perceived difficulty regulating negative emotions, mediates the link between perceived emotional support/invalidation and emotional well-being; providing evidence consistent with the enabling hypothesis and interpersonal emotion regulation models; 4) desiring emotional support may represent a marker of poor emotional well-being, but telling a close other about positive and negative events is associated with higher positive affect, 5) considering its role in positive affect, the most important aspect of an emotional supportive interaction, both with regard to negative and positive events, is feeling understood; and 6) received emotional support predicts perceived emotional support, providing evidence for the relation between these two constructs.

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Footnotes

¹ The use of the constructive scales separate from the destructive scales was initially considered as a way to separately assess emotional support and invalidation of positive experiences. This was thought to approximate more closely the way emotional support and invalidation of negative experiences was assessed. The active- and passive-constructive subscales were initially thought to represent emotional support, and the active- and passive-destructive subscales were initially thought to represent emotional invalidation. However, correlation analyses linking each of these four subscales with well-being scales showed that the active-constructive subscale was positively associated with positive affect and negatively associated with negative affect and depressive symptoms, whereas the other three subscales had the opposite associations. This pattern of results is consistent with findings by Gable and colleagues (2004), showing that the active constructive scale was positively associated with relationship well-being, whereas the other three scales were negatively associated with relationship well-being. These results suggest that only the active-constructive subscale can be considered to assess supportive responses. However, the active-constructive subscale only has three items, and thus may not be robust enough to be considered on its own. Therefore, consistent with past studies, the present study, as well as Study 2, used the composite PRCA score, with the understanding that it measures higher levels of emotional support and lower levels of emotional invalidation.

² The questionnaires completed by participants contained other measures not included in Study 1, including measures of relationship quality, perceived social support, emotion regulation, humor, and psychological well-being.

³ Similar results were found when gender was entered as a covariate in auxiliary multiple

mediation analyses, and gender was not a significant predictor of any of the outcome variables.

⁴ When the demographic information of the participants excluded from Study 2 was investigated, it was found that the excluded participants had a similar age to that of the participants whose data was included in the analyses ($M = 18.78$, $SD = 1.16$). Similarly, ethnicities were equally represented among this subset of participants (e.g., 65% were Caucasian, 13% were Asian, and the remainder reported other ethnicities). However, among the excluded participants, the percentage of males (43%) was larger than among the participants included in the study (32%).

⁵ The questionnaires completed online by participants contained other measures not included in Study 2, including measures of relationship quality, perceived social support, and well-being.

⁶ In order to investigate further the link between perceived emotional support for positive experiences and depressive symptoms, the regression analysis was re-run separately for the active-constructive subscale of the PRCA (as a more pure measure of perceived emotional support for positive experiences) and then for a composite average score of the active- and passive-destructive subscales of the PRCA (as a measure of perceived emotional invalidation of positive experiences). Results showed that the more pure measure of perceived emotional support for positive experiences did not significantly predict subsequent levels of depressive symptoms, after accounting for initial levels of depressive symptoms. However, higher levels of perceived emotional invalidation of positive experiences predicted higher levels of depressive symptoms four weeks later, after accounting for initial levels of depressive symptoms. These results suggest that perceiving higher emotional invalidation of positive

experiences in associated with higher levels of depressive symptoms four weeks later. Therefore, future research focused on the link between emotional support for positive experiences and depressive symptoms might do well to investigate the role of emotional invalidation, as measured by the destructive subscales of the PRCA.

⁷ Auxiliary regression and multiple mediation analyses were also conducted controlling for gender. The regression analyses showed very similar results to those found not controlling for gender. Also, the multiple mediation analyses showed very similar results to those found without including gender as a covariate. Only in one multiple mediation analysis did gender have a significant partial effect on negative affect, such that being female was associated with increased negative affect.

⁸ For the first and last diaries participants also completed other measures of well-being.

⁹ HLM also allows for examination of between-person effects, and cross-level interactions between within-person and between-person effects (e.g., investigating whether the associations between daily instances of received emotional support, within-person effect, vary as a function of the individual's overall mean levels of received emotional support, between-person effect). However, Study 3, as well as past studies on daily received emotional support (e.g., Bolger et al., 2000; Reis et al., 2010) focused on within-person effects, given the important role that these variables (which are specific to each social interaction involving emotional support) are likely to play in the experience of receiving emotional support. Nevertheless, the current study explored the extent to which between-person effects and cross-level interactions (i.e., interactions between Level 1 and Level 2 variables) play a role in determining daily affect as a form of auxiliary analysis. To this end, Level 2 variables were centered around the grand mean. To test between-person effects Level

2 variables were added as predictors of the outcome variable and to test cross-level interactions Level 2 variables were added as predictors of the slopes for the corresponding Level 1 variable. In none of the analyses the interactions between Level 1 and Level 2 predictors were found to add significantly to the models previously reported (i.e., those including just Level 1 variables). Also, in the majority of the analyses, Level 2 predictors were not found to add significantly to the models previously reported. The only exceptions were in some of the analyses including the role of desiring support and telling a close other about important events (but not in any of the analyses investigating aspects of received emotional support). In particular, individuals who tended to desire more comfort after negative experiences more had more negative affect on a given day and those who were more likely to tell a close other about negative experiences experienced less negative affect on a given day. Also, the more individuals tended to desire shared enthusiasm about positive experiences with someone, the more positive affect they experienced on a given day.

¹⁰ In order to control for gender, auxiliary analyses were also run entering this variable (not centered) as a Level 2 predictor of outcome variables and as a moderator of the link between the Level 1 predictors and outcome variables. However, the results showed that gender did not have any significant role in daily affect and did not significantly moderate any of the associations between Level 1 predictors and daily affect. This finding is consistent with that of a recent study on received emotional support and well-being, which also did not find gender differences utilizing a similar methodology to the one used in this Study (Biehle & Michelson, 2012).

¹¹ Past research has found the emotion reactivation effect without controlling for desire for comfort. Therefore, the analysis was re-run this way. The results showed that when desire for

comforted was not controlled for, telling a close other about the negative experience was significantly associated with higher negative affect. Therefore, it is likely that the emotion reactivation effect was not as strong in this study as it has been found in past studies because this study accounted for desire for comfort, which is possibly the motivation driving disclosure of negative experiences.

¹² When the model for received emotional support for the worst event of the day with regard to negative affect was analyzed without controlling for desire for comfort, the results showed that, even though received comfort was still not significantly associated with negative affect, the prediction coefficient was larger and approached significance ($B = 0.66$, $SE = 0.40$, $t[196] = 1.66$, $p = .098$). Also, when the model for received emotional support for the worst event of the day with regard to positive affect was run without controlling for desire for comfort, the results showed that, received comfort was significantly associated with reduced positive affect ($B = -1.15$, $SE = 0.45$, $t[166] = -2.58$, $p = .011$). Therefore, it is possible that part of the reason why past research found a negative association between received comfort and poorer emotional well-being was due to failure to account for the role of desire for comfort.

¹³ One possible reason for this discordance could be that the present study controlled for desirability for support, whereas past studies did not. However, when the analysis was conducted without controlling for desirability for support in order to test this possibility, similar results were found.

Appendix A

Selection of a Close Person

Please take a few minutes to choose one person in your life with whom you share your emotional experiences the most (both positive and negative emotional experiences). Please choose someone with whom you have been sharing positive and negative emotional experiences for at least 2 months.

a) The initials of the person you have chosen are: _____

Please circle your answers to the following questions:

b) What is this person's relationship to you?

Mother (1) Father (2) Sibling (3) Friend (4) Romantic Partner
(5)

Other family member (6) (please specify) _____

Other relationship (7) (please specify) _____

c) How long have you known this person for?

2 – 4 months (1)

5 – 8 months (2)

9 – 12 months (3)

1 – 2 years (4)

Over 3 years (5)

d) Do you currently live with this person?

Yes (1) No (2)

e) Within the past 2 months, how often have you talked with this person, either in person or remotely (i.e., via the phone, computer, etc.)?

Less than once a month (1)

Once a month (2)

2 or 3 times a month (3)

About once a week (4)

Several times a week (5)

Everyday (6)

f) How satisfied are you with this relationship?

Very Dissatisfied (1)

Moderately Dissatisfied	(2)
Somewhat Dissatisfied	(3)
Neutral	(4)
Somewhat Satisfied	(5)
Moderately Satisfied	(6)
Very Satisfied	(7)

Appendix B

PEVI

Please fill in the blank below with the initials of the person you have chosen on page 2.

The person I chose on page 2 is: _____. Please think of this person when you respond to each item.

The following questions address your experiences of how this person responds to your emotions. For each item, please choose the rating from 1 to 5 that most closely reflects your experiences.

1 = Never 2 = Rarely 3 = Some of the time 4 = Most of the time 5 = All of the time

When you are feeling sad:

- | | | | | | |
|---|---|---|---|---|---|
| 1. this person is willing to listen to you talk about this feeling. | 1 | 2 | 3 | 4 | 5 |
| 2. this person ignores your feeling. | 1 | 2 | 3 | 4 | 5 |
| 3. this person understands how you feel. | 1 | 2 | 3 | 4 | 5 |
| 4. this person minimizes your feeling. | 1 | 2 | 3 | 4 | 5 |
| 5. this person comforts you. | 1 | 2 | 3 | 4 | 5 |
| 6. this person criticizes you. | 1 | 2 | 3 | 4 | 5 |

When you are feeling afraid:

- | | | | | | |
|---|---|---|---|---|---|
| 1. this person is willing to listen to you talk about this feeling. | 1 | 2 | 3 | 4 | 5 |
| 2. this person ignores your feeling. | 1 | 2 | 3 | 4 | 5 |
| 3. this person understands how you feel. | 1 | 2 | 3 | 4 | 5 |
| 4. this person minimizes your feeling. | 1 | 2 | 3 | 4 | 5 |
| 5. this person comforts you. | 1 | 2 | 3 | 4 | 5 |
| 6. this person criticizes you. | 1 | 2 | 3 | 4 | 5 |

When you are feeling confused:

- | | | | | | |
|---|---|---|---|---|---|
| 1. this person is willing to listen to you talk about this feeling. | 1 | 2 | 3 | 4 | 5 |
| 2. this person ignores your feeling. | 1 | 2 | 3 | 4 | 5 |
| 3. this person understands how you feel. | 1 | 2 | 3 | 4 | 5 |
| 4. this person minimizes your feeling. | 1 | 2 | 3 | 4 | 5 |
| 5. this person comforts you. | 1 | 2 | 3 | 4 | 5 |
| 6. this person criticizes you. | 1 | 2 | 3 | 4 | 5 |

When you are feeling angry:

- | | | | | | |
|---|---|---|---|---|---|
| 1. this person is willing to listen to you talk about this feeling. | 1 | 2 | 3 | 4 | 5 |
| 2. this person ignores your feeling. | 1 | 2 | 3 | 4 | 5 |


3. this person understands how you feel.	1	2	3	4	5
4. this person minimizes your feeling.	1	2	3	4	5
5. this person comforts you.	1	2	3	4	5
6. this person criticizes you.	1	2	3	4	5

When you are feeling ashamed:

1. this person is willing to listen to you talk about this feeling.	1	2	3	4	5
2. this person ignores your feeling.	1	2	3	4	5
3. this person understands how you feel.	1	2	3	4	5
4. this person minimizes your feeling.	1	2	3	4	5
5. this person comforts you.	1	2	3	4	5
6. this person criticizes you.	1	2	3	4	5

Appendix C

Ethics Approval: Study 1

		Department of Psychology The University of Western Ontario Room 7418 Social Sciences Centre, London, ON, Canada N6A 5C1 Telephone: (519) 661-2067 Fax: (519) 661-3961	
Use of Human Subjects - Ethics Approval Notice			
Review Number	10 11 21	Approval Date	10 11 22
Principal Investigator	Nick Kuiper/M. Sol Ibarra-Rovillard	End Date	11 04 30
Protocol Title	Social and emotional experiences		
Sponsor	n/a		

This is to notify you that The University of Western Ontario Department of Psychology Research Ethics Board (PREB) has granted expedited ethics approval to the above named research study on the date noted above.

The PREB is a sub-REB of The University of Western Ontario's Research Ethics Board for Non-Medical Research Involving Human Subjects (NMREB) which is organized and operates according to the Tri-Council Policy Statement and the applicable laws and regulations of Ontario. (See Office of Research Ethics web site: <http://www.uwo.ca/research/ethics/>)

This approval shall remain valid until end date noted above assuming timely and acceptable responses to the University's periodic requests for surveillance and monitoring information.


During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the PREB except when necessary to eliminate immediate hazards to the subject or when the change(s) involve only logistical or administrative aspects of the study (e.g. change of research assistant, telephone number etc). Subjects must receive a copy of the information/consent documentation.

Investigators must promptly also report to the PREB:

- changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- all adverse and unexpected experiences or events that are both serious and unexpected;
- new information that may adversely affect the safety of the subjects or the conduct of the study.

If these changes/adverse events require a change to the information/consent documentation, and/or recruitment advertisement, the newly revised information/consent documentation, and/or advertisement, must be submitted to the PREB for approval.

Members of the PREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the PREB.



Clive Seligman Ph.D.
 Chair, Psychology Expedited Research Ethics Board (PREB)

The other members of the 2010-2011 PREB are: Mike Atkinson (Introductory Psychology Coordinator), David Dozois, Vicki Esses, Riley Hinson Albert Katz (Department Chair), and Tom O'Neill (Graduate Student Representative)

CC: UWO Office of Research Ethics
 This is an official document. Please retain the original in your files

Appendix D

Letter of Information

SOCIAL AND EMOTIONAL EXPERIENCES

In this study, we are interested in examining how social experiences relate to emotions and well-being. You will be asked to complete a booklet of questionnaires. Completion of this study will take less than 60 minutes. You will receive one research credit for your participation in this study.

This study will take less than 60 minutes to complete, and you will receive one research credit for your participation. There are no known physical or psychological risks associated with this study. Your responses will be used for research purposes only and will be kept entirely confidential. You may withdraw from this study at any point in time, for any reason, without loss of credit. Furthermore, you have the right to omit any specific question without penalty. Upon completion of the booklet, you will be provided with a debriefing form offering further information pertaining to the study. Please feel free to contact the researchers with any questions or concerns that you may have in regards to this study.

M. Sol Ibarra-Rovillard, MSc.
PhD candidate
Department of Psychology, UWO

Ann Chirico
Hon.B.Sc. candidate

Dr. Nick Kuiper, Ph.D.
Thesis supervisor
Department of Psychology, UWO

Informed Consent

SOCIAL AND EMOTIONAL EXPERIENCES

I, _____, have read and understood the Letter of Information, have had the nature of the study explained to me, and hereby agree to participate in the study described above. All questions have been answered to my satisfaction.

Signature _____

Date _____

Experimenter's signature

Appendix E

Demographic Questions

Please tell us a little about yourself and background by answering the following questions. Please remember that this data is analyzed only for group patterns.

1) Age: _____

2) I am: Female ____ Male _____

3) People sometimes identify themselves by ethnicity or race. Check the box that shows how you identify yourself.

White / Caucasian Asian (e.g. Chinese, Vietnamese, Korean, etc.)

Native / Aboriginal South-Asian (e.g. East Indian, Pakistani, etc.)

Black / African-descent Latin American / Hispanic

Other (please specify) _____

Appendix F

Debriefing Form

SOCIAL AND EMOTIONAL EXPERIENCES

The purpose of this study was to investigate of how social support and emotion invalidation from family, friends, and romantic partners pertain to the emotion regulation ability and emotional states of young adults.

One way in which family, friends, and romantic partners may affect the emotional experiences of individuals is through their influence on emotion regulation. Emotion regulation refers to the ability to properly regulate one's emotions. Developmental psychology research has demonstrated that parents play a significant role in the socialization of young children's emotion regulation strategies. Parental validation of emotions (i.e., acknowledging, accepting, and nurturing the child's emotions) has been empirically linked with positive emotional and social outcomes for children. In contrast, parental invalidation of emotions (i.e., rejecting, punishing, and/or dismissing the child's emotions) has been associated with social and emotional problems in childhood. Although there is evidence for the role of social influences in emotion regulation during childhood, little is known about the effects during early adulthood.

Relationship partners can also facilitate the up-regulation of positive emotions by responding with enthusiasm to recounts of positive experiences, rather than responding with disinterest or disparagement. Thus, this study aimed to investigate how perceived social support, emotional invalidation, and support for positive emotions pertain to the emotion regulation ability and psychological well-being of young adults.

To that end, you were given questionnaires measuring various components of perceived social support, emotional invalidation, emotion regulation and psychological well-being. We would like to thank you very much for your participation in this study. The information you provided will contribute to our understanding of the relationship between social support, emotion regulation, and psychological well-being. If you are interested in this topic, you are encouraged to take a look at the references that are listed below. Also, please feel free to ask us any further questions that you have pertaining to this research. If you have any questions about your rights as a research participant, you should contact the Director of the Office of Research Ethics. If you are feeling distressed and feel that you would like to talk with someone, please go to the Student Development Center's Psychological Counseling Services, 4th floor of Western's Student Services Building.

REFERENCES

- Thompson, R. A., & Meyer, S. (2007). Socialization of emotion regulation in the family. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 249-268). New York: The Guilford Press.
- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85(2), 348-362.

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Appendix G

Selection of a Close Person

Please think of the people you interact with most frequently, and identify the one that you feel closest to. This person could be a family member, a friend, or a romantic partner.

The initials of the person you identified are: _____

For this person, please select a response for each of the following questions:

a) Is this person:

Mother (1) Father (2) Sibling (3) Other family member (4) (please specify)

Friend (5) Romantic Partner (6)

b) What is the gender of this person male (1) female (2)

c) How long have you known this person for?

Less than a year (1) 1 - 2 years (2) over 3 years (3)

d) How often do you generally talk with this person, either in person or remotely (i.e., via the phone, computer, etc.)?

less than once a week (1) about once a week (2) several times a week (3)

once a day (4) several times a day (5)

e) “Do you generally try to make this person feel better when he/she tells you about something bad that happened to him/her? [Likert scale: 1 (not at all) to 7 (very much so)]

f) Do you generally react in an enthusiastic way when this person tells you about something good that happened to him/her? [Likert scale: 1 (not at all) to 7 (very much so)]

Appendix H

PESEI

Based on your experiences with this person (*initials of this person here*) over the past two weeks, consider how this person responds when you tell him or her about something negative that happened to you that made you feel bad (e.g., having an argument with a friend or family member, doing poorly on an exam or assignment at school, or getting in trouble at work, etc.). Please consider to what extent this person does the following things in response to your negative experiences. Please respond to each statement by indicating how true it is for you. Use the following scale.

1	2	3	4	5	6	7
not at all true			somewhat true			very true

When I tell this person about something negative that happened to me that made me feel bad, this person...

1) Calms me down	1	2	3	4	5	6	7
2) Says I just want attention	1	2	3	4	5	6	7
3) Makes me feel guilty	1	2	3	4	5	6	7
4) Is sympathetic towards me	1	2	3	4	5	6	7
5) Doesn't help	1	2	3	4	5	6	7
6) Puts me down	1	2	3	4	5	6	7
7) Makes me feel valuable as a person	1	2	3	4	5	6	7
8) Doesn't know how to handle my feelings	1	2	3	4	5	6	7
9) Gets angry with me	1	2	3	4	5	6	7
10) Tries to make me feel better	1	2	3	4	5	6	7
11) Hears me out	1	2	3	4	5	6	7
12) Makes me feel relaxed	1	2	3	4	5	6	7
13) Accuses me of exaggerating	1	2	3	4	5	6	7
14) Will take it easy with me	1	2	3	4	5	6	7
15) Is considerate	1	2	3	4	5	6	7
16) Supports me	1	2	3	4	5	6	7
17) Is willing to gain more information to understand my condition	1	2	3	4	5	6	7

18) Is understanding	1	2	3	4	5	6	7
19) Makes matters worse	1	2	3	4	5	6	7
20) Often accuses me of making things up	1	2	3	4	5	6	7
21) Gets irritated	1	2	3	4	5	6	7
22) Tries to reassure me	1	2	3	4	5	6	7

Emotional support subscale: items 1, 4, 7, 10, 11, 12, 14, 15, 16, 17, 18, and 22

Emotion invalidation subscale: items 2, 3, 5, 6, 8, 9, 13, 19, 20, and 21

Appendix I

Auxiliary Study: Validation of PESEI

In order to explore the reliability and validity of the measure of perceived emotional support and perceived emotion invalidation used in study 2 (i.e., the PESEI), a separate auxiliary study was conducted before study 2. The purpose of this study was to investigate the internal reliability of the PESEI, as well as convergent, divergent, and concurrent validity by examining relationships with other well established measures of interpersonal relationships assessing constructs related to emotional support and emotional invalidation.

Methods

Participants

One hundred and twenty-seven participants were recruited to participate in this online study utilizing the crowdsourcing software Mechanical Turk, via the online software Crowdfunder, which provides an interface that allows the access to Mechanical Turk from Canada. All participants received \$0.25 US in appreciation of participation. This compensation is standard for a task posted on this website lasting less than 15 minutes. Five participants only completed small portions of the online questionnaires; therefore, their data was not included in the analyses. All participants resided in the United States and were between the ages of 18 to 67. More than half of the participants were women (52.5%), and the majority was of Caucasian ethnicity (74.6%), followed by African-American (9.8%). The rest of the participants specified other ethnicities.

Measures

Identification of a Close Person. Participants were first asked to think of the people they interacted with most frequently, and identify the one that they felt closest to. They were

told this person could be a family member, a friend, or a romantic partner. Participants were asked to write down the initials of the selected person and to complete the questionnaires based on their experiences with this person over the past two weeks.

Measures of Social Support. Participants completed a number of measures of social support including the Quality of Relationships Inventory (QRI; Pierce, Sarason, & Sarason, 1991), the Social Provisions Scale (SPS; modified version cited in Rholes, Simpson, Campbell, and Grich, 2001, based on the original version developed by Cutrona, 1984), and the Perceived Emotional Support and Emotion Invalidation scale (PESEI; developed for this thesis).

The QRI is a 25-item instrument, with seven items measuring social support (e.g., “to what extent could you count on this person for help with a problem”), 12 items measuring conflict (e.g., “how often do you need to work hard to avoid conflict with this person”), and six items measuring the depth (closeness) for the relationship (e.g., “how significant is this relationship in your life”). Participants rated each item on a 4-point scale ranging from 1 (*not at all*) to 4 (*very much*) to indicate their experiences with the identified close other over the previous two weeks. The internal reliability of QRI subscales was good in the current study (i.e., Cronbach Alpha was .86 for the support scale, .89 for the conflict scale, and .86 for the depth scale).

The adapted version of the SPS used in this study consisted of 12 items measuring supportiveness in the relationship with the identified close other. Participants selected among three response options (*no*, *sometimes*, and *yes*) to indicate their experiences with the identified close other over the previous two weeks. For example, the first item read “Can you depend on this person to help you if you really need it?”. The internal reliability of this

modified version of the SPS was good in the current study (i.e., Cronbach Alpha was .89).

The PESEI was developed for the current study as a measure of perceived emotional support and emotion invalidation within a close relationship based on items from the Level of Expressed Emotion scale – short version (Nelis, Rae, Liddell, 2011). All items were preceded with the sentence “When I tell this person about something negative that happened to me that made me feel bad, this person...” The perceived emotional support subscale consisted of 12 items (selected from among the 15 items comprising the lack of emotional support subscale from the LEE questionnaire – short version). Examples of items from the emotional support subscale include “calms me down” and “is sympathetic towards me”. The perceived emotion invalidation subscale consisted of 10 items (selected from the 12 items comprising the irritability subscale of the LEE questionnaire – short version). Examples of items from the emotion invalidation subscale include “says I just want attention” and “makes me feel guilty” (see this questionnaire in Appendix H). Nelis et al. (2011) reported good predictive validity and internal reliability of the shortened version of the LEE scale (from where the items of the PESEI were taken).

Measures of Emotional Well-being. Emotional well-being was assessed with regards to both positive and negative affect as well as psychopathology symptoms. Positive and negative affect were measured with the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS has 10 items measuring positive affect and 10 items measuring negative affect. Participants rated each item on a 5-point scale ranging from 1 (*very slightly or not at all*) to 5 (*extremely*) to indicate the extent to which they had felt this way in the past week. For example, items from the positive affect scale include “interested” and “excited”, and items from the negative affect scale include “distressed” and

“upset”. As described by Watson, Clark, and Tellegen (1988), a total score for each subscale was computed by adding the scores of all items composing each scale. Past research has shown evidence for the validity of this scale (Watson et al., 1988). In the present study, the internal reliability of both the positive affect subscale (Cronbach alpha = .88) and the negative affect subscale (Cronbach alpha = .90) were good.

Psychopathology symptoms were assessed with the Depression, Anxiety, and Stress Scale – short version (DASS-21; Lovibond & Lovibond, 1995). This is a 21-item self-report scale assessing levels of depression, anxiety and stress over the past week. Each of these subscales contains 7 items that utilize a four-point Likert response scale ranging from 0 (*did not apply to me at all*) to 3 (*applied to me very much, or most of the time*). As examples, one item from the depression subscale states “I found it difficult to work up the initiative to do things”; one item from the Anxiety subscale states “I experienced trembling (e.g., in the hands)”; and one item from the Stress subscale states “I found myself getting agitated”. Past research has shown the DASS-21 is a valid measure of depression, anxiety, and stress symptoms (Lovibond & Lovibond, 1995). Total scores for each subscale were computed by adding the scores from all subscale items and multiplying these total scores by two, in order to convert them to full scale (i.e., DASS-42) scores (see Lovibond & Lovibond, 1995). The internal reliability of the depression subscale (Cronbach alpha = .92), anxiety subscale (Cronbach alpha = .86), and stress subscale (Cronbach alpha = .87) were good.

Procedure

After receiving ethics approval from the Psychology Department at the University of Western Ontario (see below), participants were recruited through the online software Crowdfunder. Participants completed the study online. Upon registration in the study,

participants were shown a letter of information and signed an informed consent form to participate in the study (letter of information, and consent form are shown below). They were then directed to a webpage where they were asked to provide demographic information (same questions used in all Studies of this dissertation, see Appendix E), select a close person in their lives (same procedure used in Studies 2 and 3), see Appendix G, and complete a number of questionnaires, including the PESEI, ERQ, QRI, SPS, PANAS, and DASS-21. Upon completing these questionnaires, participants were shown a debriefing letter that explained the purpose of the study (see below).

Results

The majority of participants identified a close person who was a romantic partner (46%), while 33% identified a family member, and the rest (21%) identified a friend. The vast majority of participants had known the close other for over three years (83%), whereas 13% of participants selected a close other they had known for 1-3 years. Only 4% had known the identified person for less than a year. The majority of the participants reported talking with the identified close other several times a day (70%) and 20% reported talking with the identified close other several times a week or once a day, while the remainder of participants reported talking with the identified close other once a week or less.

The internal reliability of the perceived emotional support subscale (Chronbach alpha = .96) and the perceived emotion invalidation subscale (Chronbach alpha = .92) of the PESEI were found to be good. The convergent validity of the perceived emotional support scale was adequate when calculating its relationship with scores from the support scale of the Quality of Relationships Inventory (QRI; Pierce, Sarason, & Sarason, 1991; $r = .80$), and with scores from a modified version of the Social Provisions Scale (modified version cited in Rholes,

Simpson, Campbell, and Grich, 2001; $r = .73$). The convergent validity of the perceived emotion invalidation scale was adequate when calculating its relationship with scores from the conflict scale of the QRI ($r = .78$) and with scores from the modified version of the Social Provisions Scale ($r = -.73$). The divergent validity of the two PESEI scales was also adequate when calculating the bivariate correlations between the two PESEI scales and the intimacy scale of the QRI ($r = .61$ for the perceived emotional support scale, and $r = -.41$ for the perceived emotion invalidation scale). Finally, the concurrent validity of the PESEI scales was also adequate when calculating the bivariate correlations between the PESEI scales and measures of well-being. The perceived emotional support scale was positively and significantly related with the Positive Affect scale of the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988; $r = .41$); and negatively and significantly related to the depression and stress scales of the Depression, Anxiety, and Stress scales- short version (DASS-21; Lovibond & Lovibond, 1995; $r = -.33$ and $r = -.26$, respectively). The perceived emotion invalidation scale was positively and significantly related to depression, anxiety, stress, and negative affect ($r = .49$, $r = .33$, $r = .52$, $r = .35$, respectively), and negatively and significantly related to positive affect ($r = -.38$).

Conclusion

The objective of this pilot study was to evaluate the psychometric properties of the Perceived Emotional Support and Emotion Invalidation (PESEI) scale, which was developed for the purpose of assessing perceived emotional support and perceived emotion invalidation in Study 2 of this dissertation. The items included in the PESEI represent a selection of items from two subscales of the Level of Expressed Emotion scale (LEE): the lack of emotional support subscale and irritability subscale. Results from this pilot study demonstrated that the

PESEI has good internal reliability as well as convergent and concurrent validity. Therefore, the PESEI was used in Study 2 of this dissertation as a measure of perceived emotional support and perceived emotion invalidation.

Materials Specific to the Auxiliary Study

Letter of Information

Project Title: Relationships and Well-being

Experimenter(s): M. Sol Ibarra-Rovillard & Nicholas Kuiper

Job Title: Relationships and Well-being

Job Description: This is a psychology research study investigating individuals' perceptions of their relationship with close others and their well-being.

This study is being conducted by M. Sol Ibarra-Rovillard, M.Sc., and Nicholas Kuiper, Ph.D., of the University of Western Ontario. In this research, we are investigating individuals' perceptions of their relationship with close others and their well-being. Participants will be asked to complete a number of questionnaires regarding themselves and their relationship with a close other. This study should take 10-15 minutes to complete, and you will receive \$0.25 compensation for its full completion. Participation in this research is voluntary, and you may stop at any time by exiting out of the survey browser. There are no known physical or psychological risks involved in this study.

The research data from this experiment will be stored in a secure office and your anonymity will be assured, as it is not possible to link your IP address back to your data. The data obtained will be used for research purposes only.

You will receive feedback at the conclusion of the study. If you have any questions about this research, please contact M. Sol Ibarra-Rovillard. If you have any questions regarding the conduct of this study or your rights as a research participant, you may contact the Office of Research Ethics, University of Western Ontario.

****Please enter the code provided at the end of the survey before submitting this.****

Consent Statement

Project Title: Close Relationships and Well-being

Investigators (s): M. Sol Ibarra-Rovillard; Nicholas Kuiper

(Click Here) I have read the letter of information and I agree to participate in this study.

M. Sol Ibarra-Rovillard, MSc.
PhD Candidate
Department of Psychology, UWO

Dr. Nick Kuiper, Ph.D.
Thesis Supervisor
Department of Psychology, UWO

Debriefing Form

Project Title: Relationships and Well-being

Thank you for participating in our research study! In our research, we are interested in the link between perceived emotional support in close relationships and individuals' well-being. In this particular study, we were interested in testing the reliability and validity of a new measure of perceived emotional support and perceived emotion invalidation (i.e., the PSEI). To that end, you were asked to identify a close person in your life and complete two versions of the PSEI, along with measures of perceived social support, perceived conflict, emotional reliance, and personal well-being. The purpose of this study was to identify which version of the PSEI has better internal reliability; and which version correlates strongly with the two measures of perceived social support, the measure of emotional reliance, and the two measures of personal well-being; and weakly with a measure of perceived conflict.

If you have any questions, feel free to contact M. Sol Ibarra-Rovillard.

CODE TO ENTER TO SUBMIT: 98 78 88 (*randomly generated number*)

Helgeson, V. S. (2003). Social support and quality of life. *Quality of Life Research*, 12, 25-31. doi:10.1023/A:1023509117524

Sarason, I. G., Sarason, B. R., & Pierce, G. R. (1994). Social support - global and relationship-based levels of analysis. *Journal of Social and Personal Relationships*, *11*(2), 295-312. doi:10.1177/0265407594112008

Schwarzer, R., & Knoll, N. (2007). Functional roles of social support within the stress and coping process: A theoretical and empirical overview. *International Journal of Psychology*, *42*(4), 243-252. doi:10.1080/00207590701396641



Department of Psychology The University of Western Ontario
 Room 7418 Social Sciences Centre,
 London, ON, Canada N6A 5C1
 Telephone: (519) 661-2067 Fax: (519) 661-3961

Use of Human Subjects - Ethics Approval Notice

Review Number	12 01 09	Approval Date	12 01 12
Principal Investigator	Nick Kuiper/M. Sol Ibarra-Rovillard	End Date	12 03 31
Protocol Title	Relationship and well-being		
Sponsor	n/a		

This is to notify you that The University of Western Ontario Department of Psychology Research Ethics Board (PREB) has granted expedited ethics approval to the above named research study on the date noted above.

The PREB is a sub-REB of The University of Western Ontario's Research Ethics Board for Non-Medical Research Involving Human Subjects (NMREB) which is organized and operates according to the Tri-Council Policy Statement and the applicable laws and regulations of Ontario. (See Office of Research Ethics web site: <http://www.uwo.ca/research/ethics/>)

This approval shall remain valid until end date noted above assuming timely and acceptable responses to the University's periodic requests for surveillance and monitoring information.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the PREB except when necessary to eliminate immediate hazards to the subject or when the change(s) involve only logistical or administrative aspects of the study (e.g. change of research assistant, telephone number etc). Subjects must receive a copy of the information/consent documentation.

Investigators must promptly also report to the PREB:

- changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- all adverse and unexpected experiences or events that are both serious and unexpected;
- new information that may adversely affect the safety of the subjects or the conduct of the study.

If these changes/adverse events require a change to the information/consent documentation, and/or recruitment advertisement, the newly revised information/consent documentation, and/or advertisement, must be submitted to the PREB for approval.

Members of the PREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the PREB.


 Clive Seligman Ph.D.

Chair, Psychology Expedited Research Ethics Board (PREB)


The other members of the 2011-2012 PREB are: Mike Atkinson (Introductory Psychology Coordinator), Rick Goffin, Riley Hinson Albert Katz (Department Chair), Steve Lupker, and Karen Dickson (Graduate Student Representative)

CC: UWO Office of Research Ethics

This is an official document. Please retain the original in your files

Appendix J

Ethics Approval: Study 2

	<p>Department of Psychology The University of Western Ontario Room 7418 Social Sciences Centre, London, ON, Canada N6A 5C1 Telephone: (519) 661-2067 Fax: (519) 661-3961</p>		
<p>Use of Human Subjects - Ethics Approval Notice</p>			
Review Number	12 01 24	Approval Date	12 01 27
Principal Investigator	Nick Kuiper/M. Sol Ibarra-Rovillard	End Date	12 04 30
Protocol Title	Close relationships and well-being		
Sponsor	n/a		

This is to notify you that The University of Western Ontario Department of Psychology Research Ethics Board (PREB) has granted expedited ethics approval to the above named research study on the date noted above.

The PREB is a sub-REB of The University of Western Ontario's Research Ethics Board for Non-Medical Research Involving Human Subjects (NMREB) which is organized and operates according to the Tri-Council Policy Statement and the applicable laws and regulations of Ontario. (See Office of Research Ethics web site: <http://www.uwo.ca/research/ethics/>)

This approval shall remain valid until end date noted above assuming timely and acceptable responses to the University's periodic requests for surveillance and monitoring information.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the PREB except when necessary to eliminate immediate hazards to the subject or when the change(s) involve only logistical or administrative aspects of the study (e.g. change of research assistant, telephone number etc). Subjects must receive a copy of the information/consent documentation.

Investigators must promptly also report to the PREB:

- a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- b) all adverse and unexpected experiences or events that are both serious and unexpected;
- c) new information that may adversely affect the safety of the subjects or the conduct of the study.

If these changes/adverse events require a change to the information/consent documentation, and/or recruitment advertisement, the newly revised information/consent documentation, and/or advertisement, must be submitted to the PREB for approval.

Members of the PREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the PREB.

Clive Seligman Ph.D.
 Chair, Psychology Expedited Research Ethics Board (PREB)

The other members of the 2011-2012 PREB are: Mike Atkinson (Introductory Psychology Coordinator), Rick Goffin, Riley Hinson Albert Katz (Department Chair), Steve Lupker, and Karen Dickson (Graduate Student Representative)

CC: UWO Office of Research Ethics
This is an official document. Please retain the original in your files

Appendix K

Letter of Information

Project Title: Close relationships and Well-being

Experimenter(s): M. Sol Ibarra-Rovillard & Nicholas Kuiper

This study is being conducted by M. Sol Ibarra-Rovillard, M.Sc., and Nicholas Kuiper, Ph.D., of the University of Western Ontario. In this research, we are interested in examining how perceptions of support from close others relate to emotional experiences and general well-being over a period of 1 month. To this end, you will be asked to complete questionnaires measuring perceptions of support, quality of relationships, emotional experiences, and well-being. **Because this study is particularly interested in the relationship between these constructs over time, you will be required to complete this set of questionnaires at 3 points in time: (1) Today, (2) two weeks from today, and, (3) four weeks from today. Each of these 3 questionnaire completions will take less than 40 minutes, and you will receive two research credits for your participation.**

In order to remind you to complete the online questionnaires, we will send you a reminder email the day before you are scheduled to complete the second and third sets of questionnaires. If you do not complete the questionnaires on the scheduled days, you will receive up to 3 further emails reminding you to complete the questionnaires. **In order to be able to send you these reminder emails, you will be asked to provide a primary email address (the one you check most regularly), as well as a back-up email address (in case we are unable to contact you using the primary email address), before completing your first online questionnaire.**

There are no known physical or psychological risks associated with this study. Your responses will be used for research purposes only and will be kept entirely confidential. You may withdraw from this study at any point in time, for any reason, without loss of credit. Furthermore, you have the right to omit any specific question without penalty. Upon completion of the three sets of questionnaires, you will be emailed a debriefing form offering further information pertaining to the study. Please feel free to contact the researchers with any questions or concerns that you may have in regards to this study.

Informed Consent

Project Title: Close Relationships and Well-being

Investigators (s): M. Sol Ibarra-Rovillard; Nicholas Kuiper

(Click Here) I have read the letter of information and I agree to participate in this study.

M. Sol Ibarra-Rovillard, MSc.PhD Candidate,
Department of Psychology, UWO

Nick Kuiper, Ph.D.
Thesis Supervisor
Department of Psychology, UWO

Appendix L
All Emails: Study 2

First Email

Dear *first name last name*,

Thank you very much for your participation in the study on Close Relationships and Well-being. It is very important that you complete the 3 online surveys entries.

You will be sent an email the morning after your registration in the study with a link to complete survey 1. You will receive another email 2 weeks after completion of the first survey with a link to complete survey 2. Finally, you will receive another email 2 weeks after completion of the second survey, with a link to complete survey 3.

Emails will be sent in the morning. If you don't complete the surveys on the day the emails are sent, you will receive up to 3 reminder emails prompting you to complete the corresponding survey.

This is the # of the 3 surveys. After you complete the 3rd online survey, you will receive two research credits.

These online surveys ask about personal and interpersonal experiences in the past 2 weeks. Each survey will take less than 40 minutes. Please read the instructions carefully, answer the questions by yourself, and respond as honestly as possible.

Please go to the questionnaire by clicking on the website address below (or copy the complete URL address onto your web browser):

Link to online questionnaires

Thank you very much for your help with this study! If you have any questions, please feel free to contact me by email.

Sincerely,

Sol Ibarra-Rovillard, Msc.

Ph.D. Candidate

Department of Psychology

University of Western Ontario

Reminder Email

Dear *first name last name*,

Sorry to bother you, but just in case you missed the previous email, I want to remind you to complete the online survey by the end of today. Thank you very much for your continued participation in the study on Close Relationships and Well-being.

Please complete the # of the 3 online surveys today. After you complete the 3rd survey, you will receive two research credits.

These online surveys ask about your personal and interpersonal experiences over the past 2 weeks. Each online survey will take less than 40 minutes. Please read the instructions carefully, answer the questions by yourself, and respond as honestly as possible.

Please go to the online survey by clicking on the website address below (or copy the address onto your web browser):

Link to online questionnaires

Again, thank you very much for your help with this study! If you have any questions, please feel free to contact me by email.

Sincerely,

Sol Ibarra-Rovillard, MsC.

Ph.D. Candidate

Department of Psychology

University of Western Ontario

Debriefing Email

Dear *first name last name*,

Thank you for completing the 3 online surveys in the study on Close Relationships and Well-being! You will now receive your two research credits.

In our research, we are interested in the link between perceived emotional support in close relationships and individuals' well-being. In this particular study, we were interested in investigating the effects of perceived social support, emotional support, and responses to capitalization on individuals' subjective well-being and depressive symptoms over the period of one month. This is a prospective longitudinal study that investigates whether perceived social support from family and friends, and perceived emotional support and responses to capitalization from a close person lead, over time, to an increase in subjective well-being and a decrease in depressive symptoms; and whether these relationships are mediated by an increase in individuals' perceived ability to regulate their emotions (i.e., the perceived ability to down-regulate negative emotions and up-regulate positive emotions). Past research has

suggested that social support may protect against depression, by enhancing individuals' self-esteem, self-confidence, and self-efficacy (Nezlek, Kowalski, Leary, Blevins, & Holgate, 1997).

Consistent with this proposal, the enabling hypothesis predicts that support providers facilitate an individual's self-regulation by enabling the individual's own adaptive abilities to deal with challenges and to overcome adversity (Schwarzer & Knoll, 2007). This study investigates one aspect of self-efficacy (i.e., the perceived ability to regulate emotions) as a potential mediator of the relationship between perceived support and well-being. This study predicted that higher levels of perceived social support from family and friends, and higher levels of perceived emotional support and positive responses to capitalization from a close other, will predict higher levels of subjective well-being and lower-levels of depressive symptoms at Time 3, controlling for the levels of subjective well-being and depressive symptoms at Time 1. Finally, this study also predicted that perceived ability to regulate negative emotions would mediate the effects of perceived emotional support on well-being, and that perceived ability to regulate positive emotions would mediate the effects of perceived positive responses to capitalization on well-being.

If you have any questions, feel free to contact M. Sol Ibarra-Rovillard.

If you have questions about your rights as a research participant, you should contact the Director of the Office of Research Ethics.

References

- Schwarzer, R., & Knoll, N. (2007). Functional roles of social support within the stress and coping process: A theoretical and empirical overview. *International Journal of Psychology, 42*(4), 243-252.
- Gable, S. L., Reis, H. T., Impett, E. A., & Asher, E. R. (2004). What do you do when things go right? the intrapersonal and interpersonal benefits of sharing positive events. *Journal of Personality and Social Psychology, 87*(2), 228-245.
- Maisel, N. C., & Gable, S. L. (2009). The paradox of received social support: The importance of responsiveness. *Psychological Science, 20*(8), 928-932.

Appendix M

Daily Diary Questionnaire

Please answer the following questions keeping in mind your experiences over the last 24 hours (*completed in all diary entries*)

Please provide a brief (one or two sentence description) of the *worst* thing that happened to you today” (open response)

- 1) How *negative* was this event? [Likert scale: 1 (*minimally negative*) to 7 (*extremely negative*)]
- 2) How important was this event? [Likert scale: 1 (*not important at all*) to 7 (*very important*)]
- 3) Did you want someone to help you feel better? [Likert scale: 1 (*not at all*) to 7 (*very much so*)]
- 4) Did you tell the person you previously identified (initials here) about this event today? (yes/no)
- 5) Was this person involved in the negative event? (*yes/no*)

Please answer the following questions about the way the person you previously identified responded when you told him/her about the negative event. If this person did not know about the event, and thus he/she did not respond in any way to it, please select N/A.

- 6) This person tried to help me feel better [Likert scale: 1 (*not at all*) to 7 (*very much so*)]
- 7) This person made me feel cared for [Likert scale: 1 (*not at all*) to 7 (*very much so*)]
- 8) This person made me feel like he/she valued my abilities [Likert scale: 1 (*not at all*) to 7 (*very much so*)]
- 9) This person made me feel like he/she valued my opinions [Likert scale: 1 (*not at all*) to 7 (*very much so*)]
- 10) This person understood me [Likert scale: 1 (*not at all*) to 7 (*very much so*)]

Please provide a brief (one or two sentence description) of the *best* thing that happened to you today” (open response)


- 1) How *positive* was this event? [Likert scale: 1 (*minimally positive*) to 7 (*extremely positive*)]
- 2) How important was this event? [Likert scale: 1 (*not important at all*) to 7 (*very important*)]
- 3) Did you want to share your enthusiasm about this event with someone? [Likert scale: 1 (*not at all*) to 7 (*very much so*)]
- 4) Did you tell the person you previously identified (initials here) about this event today? (*yes/no*)
- 5) Was this person involved in the positive event? (*yes/no*)

Please answer the following questions about the way the person you previously identified responded when you told him/her about the positive event. If this person did not know about the event, and thus he/she did not respond in any way to it, please select N/A.

- 6) This person reacted in an enthusiastic way [Likert scale: 1 (*not at all*) to 7 (*very much so*)]
- 7) This person made me feel cared for [Likert scale: 1 (*not at all*) to 7 (*very much so*)]
- 8) This person made me feel like he/she valued my abilities [Likert scale: 1 (*not at all*) to 7 (*very much so*)]
- 9) This person made me feel like he/she valued my opinions [Likert scale: 1 (*not at all*) to 7 (*very much so*)]
- 10) This person understood me [Likert scale: 1 (*not at all*) to 7 (*very much so*)]

Appendix N

Ethics Approval: Study 3

	Department of Psychology The University of Western Ontario Room 7418 Social Sciences Centre, London, ON, Canada N6A 5C1 Telephone: (519) 661-2067 Fax: (519) 661-3961		
Use of Human Subjects - Ethics Approval Notice			
Review Number	12 01 15	Approval Date	12 01 20
Principal Investigator	Nick Kuiper/Sol Ibarra-Rovillard	End Date	12 04 30
Protocol Title	Experiences in close relationships		
Sponsor	n/a		

This is to notify you that The University of Western Ontario Department of Psychology Research Ethics Board (PREB) has granted expedited ethics approval to the above named research study on the date noted above.

The PREB is a sub-REB of The University of Western Ontario's Research Ethics Board for Non-Medical Research Involving Human Subjects (NMREB) which is organized and operates according to the Tri-Council Policy Statement and the applicable laws and regulations of Ontario. (See Office of Research Ethics web site: <http://www.uwo.ca/research/ethics/>)

This approval shall remain valid until end date noted above assuming timely and acceptable responses to the University's periodic requests for surveillance and monitoring information.


During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the PREB except when necessary to eliminate immediate hazards to the subject or when the change(s) involve only logistical or administrative aspects of the study (e.g. change of research assistant, telephone number etc). Subjects must receive a copy of the information/consent documentation.

Investigators must promptly also report to the PREB:

- changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- all adverse and unexpected experiences or events that are both serious and unexpected;
- new information that may adversely affect the safety of the subjects or the conduct of the study.

If these changes/adverse events require a change to the information/consent documentation, and/or recruitment advertisement, the newly revised information/consent documentation, and/or advertisement, must be submitted to the PREB for approval.

Members of the PREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the PREB.



Clive Seligman Ph.D.
 Chair, Psychology Expedited Research Ethics Board (PREB)

The other members of the 2011-2012 PREB are: Mike Atkinson (Introductory Psychology Coordinator), Rick Goffin, Riley Hinson Albert Katz (Department Chair), Steve Lupker, and Karen Dickson (Graduate Student Representative)

CC: UWO Office of Research Ethics
This is an official document. Please retain the original in your files

Appendix O

Letter of Information

Project Title: Experiences in Close relationships

Experimenter(s): M. Sol Ibarra-Rovillard & Nicholas Kuiper

This study is being conducted by M. Sol Ibarra-Rovillard, M.Sc., and Nicholas Kuiper, Ph.D., of the University of Western Ontario. In this research, we are interested in examining how daily interpersonal interactions relate to emotions and well-being. You will be asked to complete 10 daily diary questionnaires online. The first and last questionnaires will take less than 20 minutes to complete, and questionnaires 2-9 will take less than 10 minutes to complete. You will receive two research credits for your participation.

In order to remind you to complete the online questionnaires, we will send you a reminder email each day at 6pm. If by 9pm you have not yet completed the online diary, you will receive a second reminder email. In order to receive these emails, you will be asked to provide a primary email address (the one you check most regularly), as well as a back-up email address (in case we fail to contact you using the primary email address) before completing your first online questionnaire.

There are no known physical or psychological risks associated with this study. Your responses will be used for research purposes only and will be kept entirely confidential. You may withdraw from this study at any point in time, for any reason, without loss of credit. Furthermore, you have the right to omit any specific question without penalty. Upon completion of the 10 diary entries, you will be emailed a debriefing form offering further information pertaining to the study. Please feel free to contact the researchers with any questions or concerns that you may have in regards to this study.

Informed Consent

Project Title: Experiences in Close Relationships

Investigators (s): M. Sol Ibarra-Rovillard; Nicholas Kuiper

(Click Here) I have read the letter of information and I agree to participate in this study.

M. Sol Ibarra-Rovillard, MSc.
PhD Candidate
Department of Psychology, UWO

Dr. Nick Kuiper, Ph.D.
Thesis Supervisor
Department of Psychology, UWO

Appendix P
All Emails: Study 3

Emails with Link to Questionnaires

Dear *first name last name*,

Thank you very much for your participation in the study on Experiences in Close Relationships.

It is very important that you complete the online diary entries on a daily basis.

You will receive an email like this one every day at 6pm, for the 10-day duration of the study.

If you don't complete the diary questionnaire by 9pm, you will receive another email reminding you to do so. This is the # of the 10 times.

After you complete the 10th diary entry, you will receive two research credits.

The diary log asks about your interpersonal experiences and feelings during the PAST 24 HOURS. It will take less than 10 minutes. Please read the instructions carefully, answer the questions by yourself, and respond as honestly as possible.

Please go to the questionnaire by clicking on the website address below (or copy the complete URL address onto your web browser):

Link to online questionnaire

Thank you very much for your help with this study! If you have any questions, please feel free to contact me by email.

Sincerely,

Sol Ibarra-Rovillard, Msc.

Ph.D. Candidate

Department of Psychology

University of Western Ontario

Reminder Email

Dear *first name last name*,

Sorry to bother you, but just in case you missed the earlier message, I want to remind you to complete the daily diary questionnaire by the end of today.

Thank you very much for your continued participation in the study on Experiences in Close Relationships. Please complete the # of the 10 diary entries today.

After you complete the 10th diary entry, you will receive two research credits.

The diary log asks about your interpersonal experiences and feelings during the PAST 24 HOURS. It will take less than 10 minutes. Please read the instructions carefully, answer the questions by yourself, and respond as honestly as possible.

Please go to the questionnaire by clicking on the website address below (or copy the address onto your web browser):

Link to online questionnaire

Again, thank you very much for your help with this study! If you have any questions, please feel free to contact me by email.

Sincerely,

Sol Ibarra-Rovillard, MsC.

Ph.D. Candidate

Department of Psychology

University of Western Ontario

Debriefing Email

Dear #1 #2,

Thank you for completing the diary logs in the study on Experiences in Close Relationships! You will now receive your two research credits.

In our research, we are interested in the link between perceived emotional support in close relationships and individuals' well-being. In this particular study, we were interested in investigating the effects of receiving emotional support from a close relationship partner, for both negative and positive events, on emotional experience. To that end, you were asked to provide information every day, at the end of the day, about the worst event of the day, whether you shared it with the close relationship partner you identified at the start of this study, and whether this relationship partner tried to help you feel better. Similarly, you were

asked to provide information every day, at the end of the day, about the best event of the day, whether you shared it with the close relationship partner you identified at the start of this study, and whether this relationship partner responded in an enthusiastic way. Also, you were asked to provide information on the way you perceived these responses provided by your relationship partner. Finally, in order to assess well-being, you were asked to provide information on your daily affect at the end of each diary entry, and to provide information on your level of satisfaction with life and your levels of depression, stress, and anxiety at both the first and last diary entries.

Past research has suggested that perceived available support for negative events from close others leads to enhanced well-being (Sarason, Sarason, & Pierce, 1994). However, recent research on daily received emotional support, suggests that days in which an individual received emotional support from a close relationship partner are associated with worse well-being than days in which this support was not received (Bolger, Zuckerman, & Kessler, 2000). There are a number of possible reasons for these unexpected findings. This study will investigate a number of possible moderators suggested by past research that may alter the way daily received support affects daily well-being, including: desire for emotional support (Siewert, Antoniw, Kubiak, & Weber, 2011) perceived responsiveness to basic psychological needs (i.e., relatedness, competence, and autonomy (Maisel & Gable, 2009); perceived empathic understanding (Thoits, 2011); and level of reciprocity of emotional support in the relationship (Uehara, 1995).

Recently, researchers have started to investigate the effects of receiving support from close others for positive events. Since the sharing of positive events with others has been termed ‘capitalization’, the study of supportive responses from close others for positive events has been termed ‘responses to capitalization’. Past research on responses to capitalization has consistently shown that this type of response from close others is associated with enhanced well-being (Gable, Reis, Impett, & Asher, 2004). Therefore, it is possible that the effects of positive responses to capitalization on well-being are stronger than the effects of emotionally supportive responses to negative events, and thus, may be less influenced by moderators. This study will investigate this idea, and compare the effects of these two forms of support on individuals’ daily well-being. Finally, this study will explore whether the total amount of wanted and received emotional support and supportive responses to capitalization predict changes in subjective well-being and/or depressive symptoms from baseline levels to the levels assessed at the end of the 10-day diary period.

If you have any questions, feel free to contact M. Sol Ibarra-Rovillard.

If you have questions about your rights as a research participant, you should contact the Director of the Office of Research Ethics.

References

- Bolger, N., Zuckerman, A., & Kessler, R. C. (2000). *Invisible support and adjustment to stress*. *Journal of Personality and Social Psychology*, 79(6), 953-961. doi:10.1037/0022-3514.79.6.953

Gable, S. L., Reis, H. T., Impett, E. A., & Asher, E. R. (2004). What do you do when things go right? *The intrapersonal and interpersonal benefits of sharing positive events*. *Journal of Personality and Social Psychology*, *87*(2), 228-245. doi:10.1037/0022-3514.87.2.228

Maisel, N. C., & Gable, S. L. (2009). The paradox of received social support: The importance of responsiveness. *Psychological Science*, *20*(8), 928-932.

Curriculum Vitae

Name: Maria Sol Pound (née Ibarra-Rovillard)

Post-secondary Education and Degrees: University of Toronto
Toronto, Ontario, Canada
2004-2007, B.Sc. Honours

The University of Western Ontario
London, Ontario, Canada
2007-2009, M.Sc.

The University of Western Ontario
London, Ontario, Canada
2009-2015 Ph.D.

Scholarships and Awards

SSHRC Doctoral Fellowship Award
2012-2013

Ontario Graduate Scholarship (OGS)
2012-2013 (declined)

Ontario Graduate Scholarship (OGS)
2011-2012

SSHRC J. Armand Bombardier Canada Graduate Scholarships (CGS) Master's Award 2008-2009

Linda Mamelak Undergraduate Award
University of Toronto, Department of Psychology
2005-2006

In-course Scholarship New College, University of Toronto 2005-2006

Named Dean's List Scholar
Faculty of Arts and Science
University of Toronto
2005, 2006 & 2007

Related Work	Teaching Assistant
Experience	University of Western Ontario 2007-2013
	Research Assistant University of Western Ontario 2008
	Research Assistant Centre for Addiction and Mental Health 2005-2007
	Research Assistant Ontario Institute for Studies in Education 2005-2006

Peer-reviewed Publications:

Ibarra-Rovillard, M. S., Kuiper, N. A. (2011). Social support and social negativity findings in depression: Perceived responsiveness to basic psychological needs. *Clinical Psychology Review, 31*, 342-352.

Ibarra-Rovillard, M. S., Kuiper, N. A. (2011). The effects of humor and depression labels on reactions to social comments. *Scandinavian Journal of Psychology, 52*, 448-456.

Conference Proceedings:

Pound, M.S., Kuiper, N. A., & Maiolino, N. B. (2013, June). *Receiving emotional support and the experience of daily affect*. Poster presentation at the Canadian Psychological Association Convention, Quebec City, QC.

Pound, M.S. & Kuiper, N. A. (2012, June). *The Role of perceived emotion regulation in the relationships of perceived emotional support and perceived responses to capitalization with emotional well-being and depressive symptoms*. Poster presentation at the Canadian Psychological Association Convention, Halifax, NS.

Ibarra-Rovillard, M. S. & Kuiper, N. A. (2011, June). *The role of humor and cognitive emotion regulation strategies in depression, anxiety, and stress*. Poster presentation at the

Canadian Psychological Association Convention, Toronto, ON.

Ibarra-Rovillard, M. S. & Kuiper, N. A. (2010, August). *Relative predictive ability of cognitive and personality vulnerabilities to depression in a non-clinical Sample*. Poster presentation at the American Psychological Association Convention, San Diego, California.

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Ibarra-Rovillard, M. S., Ramirez, G., & Geva, E. (2006, October). *A two-year longitudinal follow-up of code-mixing in spanish-english bilinguals*. Conference presentation at the Hispanic Linguistics Symposium, University of Western Ontario, ON.

Ibarra-Rovillard, M. S., Bacchiochi, J., & Ravitz, P. (2006, June). *Relationship between Interpersonal Psychotherapy areas of focus and personality traits*. Poster presentation at Harvey Stancer Research Fair, Department of Psychiatry, University of Toronto, ON.