Social support, emotional well-being, and emotion regulation: A mediation model

by

Salomi Rami

A Thesis Submitted in Partial Fulfillment of the
Requirements for the Degree of Bachelor of Science
with Honors in Biopsychology, Cognition, and Neuroscience from the
University of Michigan

2013

Advisors:

Dr. Oscar Ybarra

David Lee

Abstract

Previous research has shown that social support helps people deal with negative experiences. contributing to one's emotional well-being. However, we know less about exactly how social support influences well-being. The present studies investigated one possible mechanism through which social support affects emotional well-being—that is, one's strategy of emotion regulation. Study 1 examined the influence of social support on one's positive affect over the past two months, and whether this was influenced by one reappraising his or her emotions. Participants completed an online survey that evaluated their emotion regulation approach, social support, and well-being. Results showed that people who had more social support were more likely to experience greater positive affect, and reappraisal was a potential mechanism. Extending these results, Study 2 focused on how social support helps people cope with specific negative experiences. Results showed that the more social support participants reported receiving, the lower their emotional reactivity to a recalled personal negative event. Interestingly, participants thinking that the event was less important to them influenced this effect. Collectively, these findings show how one's emotion regulation strategies can serve as a mechanism through which social support has an influence on emotional well-being.

Keywords: social support, emotion regulation, reappraisal, perceived importance, positive affect, emotional well-being.

Social support, emotional well-being, and emotion regulation: A mediation model

Imagine that you just broke up with your boyfriend or girlfriend. Or maybe without warning, you were suddenly fired from your job. How would you cope with such distressing situations? Maybe you will go to a friend in hope that he or she can provide you with some comforting words. Maybe a family member will reassure you that you are indeed cared for and valued, despite the tough circumstances. According to Cobb (1976), social support is defined as information that assures an individual that he or she is loved and appreciated. Like the above examples, many people use social support as a way to cope with negative situations.

Previous studies have shown that individuals with higher social support have better emotional well-being (Cobb, 1976). However, few studies have provided insight into the underlying mechanism through which social support affects emotional well-being. Our studies aim to test if factors, such as emotion regulation strategies, play a significant role in the relationship between social support and emotional well-being.

How social support influences well-being

Numerous past studies have shown that social support helps people cope with various life problems or emotional distress (Cobb, 1976; House, 1981; Turner, 1981). People's collective network of family, friends, and coworkers helps them through difficult times. However, studies show that it is not the mere number of relationships one has that enhances well-being; instead it is the strength of the relationships that matters (Dubow & Ullman, 1989). So, for example, a large group of friends may not have a positive effect if you are not receiving the adequate amount of constructive and encouraging support from them. Even a few family members and

friends in your social circle are enough as long as they contribute in a dedicated manner that benefits the relationship.

There are many different types types of social support. House (1981) discusses these types, in particular instrumental support and emotional support (also see Cohen and Wills, 1985). Instrumental support is defined as providing material resources, financial aid, or needed services. Examples of this would include answering friends' questions about a task or providing them with the tools to do the task. Emotional support is defined as offering care or empathy to somebody who needs it. This can include encouragement and trust as well. This type of support can enhance psychological health by increasing one's self-esteem.

Previous research has shown how beneficial social support is for one's overall well-being (Cobb, 1976; Turner, 1981). Emotional support is likely to be advantageous in a variety of stressful situations, while instrumental support may be more valuable when the resources provided are specific to the stressful event (Cohen & Wills, 1985). For example, loneliness can be alleviated through emotional support, while economic problems are more likely to be resolved through instrumental support. Cohen and Wills (1985) suggest that social support provides positive emotions, a sense of predictability and stability in life, and it also reinforces one's self-worth and self-esteem. Additionally, a lack of positive social support could result in negative psychological conditions, like depression and anxiety. Social support appears critical to enhancing a person's overall well-being.

How emotion regulation influences well-being

In addition to social support, the way a person regulates his or her emotions contributes greatly to well-being. Emotion regulation involves how a person can influence the emotions being experienced, in addition to when and how these emotions are felt and/or expressed (Gross,

1998b). It has been empirically shown that in daily life situations, people regularly increase, decrease, and maintain both positive and negative emotions (Parrott, 1993); clearly emotion regulation plays a large role in all our lives constantly. One study showed that 90% of undergraduate college students claimed that they adjust their emotions about once a day (Gross, Feldman Barrett, & Richards, 1998).

Gross (1988a) came up with an emotion regulation process model in which two differing strategies of emotion regulation were proposed: reappraisal and suppression. Reappraisal is a way of regulating emotion such that individuals change the way they think about a situation in order to decrease its emotional impact. For example, one would consider a mediocre grade on an essay to be an opportunity for development and doing better next time, as opposed to a failure in writing. In this case, reappraising one's emotions may help reduce negative feelings associated with the unsatisfactory grade. Suppression is another emotion regulation strategy in which a person attempts to inhibit their experience and expression of inner feelings. An example would be not speaking to anyone about the pain you felt when experiencing a death in the family. Studies have shown that reappraisal is preferable to suppression when it comes to psychological health and well-being (Gross, 1998a).

One of the first studies to demonstrate that reappraising emotions could reduce distress was conducted by Lazarus and Alfert (1964). These researchers showed that participants who watched an unpleasant surgical procedure with a narrative that changed their beliefs about the video had decreased stress responses compared to participants who watched the video with no accompanying information that allowed for reappraisal. Other studies have shown that positive emotion regulation strategies, like reappraisal, can be used to avoid or lessen symptoms of depression (Beck, Rush, Shaw, & Emery, 1979). Additionally, it is possible that individuals who

were previously depressed can prevent a relapse if they develop better strategies of emotion regulation (Gross & Munoz, 1995). People who use reappraisal everyday are known to be more optimistic, have greater life satisfaction, and a greater sense of self-worth than individuals who often use suppression (Gross & John, 2003; Gross, Richards, & John, 2006). Furthermore, people who use reappraisal often are known to have closer relationships with their family and friends and are also better liked by others than those using reappraisal less frequently (Gross, Richards, & John, 2006). It is likely that this is one of the reasons that reappraisal contributes to being more content with life and having better emotional well-being. Similar to social support, reappraising one's emotions has been shown to be highly positively correlated with well-being.

How social support influences emotion regulation

As discussed above, both social support and reappraisal have an enormous effect on a person's well-being. Generally, one would think that since social support provides encouragement and can help increase self-esteem, people with greater social support can better focus on or come up with positive aspects of a negative situation—ways to reappraise their negative situation or emotions. In fact, there is some evidence that is suggestive of a relationship between social support and reappraisal. For instance, a cross-sectional study done on women with rheumatoid arthritis showed that support from others might contribute to an individual's ability to successfully cope, and that in turn can improve overall well-being (Manne & Zautra, 1989). In this study, social support from the patient's husband positively correlated with the patient's ability to reappraise her emotions. The combination of support and reappraisal together contributed to a better emotional well-being. Accordingly, if the patient received criticism from her husband, she was found to have more maladaptive coping methods, contributing to a

worsening of mental health. This study showed what a large role social support could have on emotion regulation.

Cohen and Wills (1985) proposed a hypothesis in which social support acts as a buffer, protecting the individual from the negative emotions caused by potentially stressful events. Stress is caused when an individual appraises a situation to be somewhat threatening in some way, and that individual may not have the appropriate coping mechanisms to deal with it (Lazarus, 1966). This is what causes the feelings of vulnerability and may even lower one's self-esteem. According to the "buffering hypothesis," social support may prevent the negative experience from being appraised as stressful to begin with, reducing the event's negative effect on a person's emotional well-being (Cohen & Wills, 1985). So theoretically as well, there is a suggestion that social support affects people's emotion regulation strategies—whether they reappraise their emotions.

This can occur through many ways. Supportive relationships may be able to encourage the affected individual to use a more effective coping or emotion regulation strategy (Cobb, 1976). Members providing social support may even use their own past experiences to give advice to one on what or what not to do in a similar, distressing situation (Cohen & McKay, 1984). Supportive individuals may also be able to compel a person to take part in certain behaviors, such as exercise, eating a healthy diet, and getting adequate rest, which could not only decrease stress, but also improve a person's ability to handle stressful situations (House & Wells, 1978). More than anything, having a strong positive support system can help people pay more attention to the positive aspects of a stressful situation (Pearlin & Schooler, 1978). Negative social support, on the other hand, may influence a person's coping ability in a dysfunctional way. Examples of negative support may include leading the individual to appraise the situation in a

more stressful manner, making the person think of the negative aspects of the situation, or even suggesting unconstructive emotion regulation strategies.

Taken together, previous research can be combined to pose an interesting relationship: if receiving greater social support is positively correlated with more emotion reappraisal, and both social support and emotion reappraisal are associated with greater well-being, it is possible that emotion regulation is the mechanism through which social support has its effect on well-being.

Overview of present research

Based on these previous studies and discussion, the present research aims to investigate whether people's emotion-regulation tendencies can explain the positive effect of social support on emotional well-being. Our hypothesis is that emotion regulation provides a mechanism through which social support positively predicts emotional well-being. The proposed mediation model suggests that social support influences emotion regulation, which in turn, influences emotional well-being. The results of these studies may help explain the pervasive—yet not fully understood—association previous studies have found between social support and well-being.

Study 1

The overall purpose of the first study was to develop an understanding of the mediating effect of reappraisal strategies of emotion regulation on the relationship between social support and emotional well-being. Participants were asked to complete an online survey that assessed social support, reappraisal emotion regulation strategies, and also their general positive affect. Social support included both the instrumental and emotional support participants received from their immediate family. It is known that social support usually occurs in close relationship contexts, so in this study we concentrated on the support received from immediate family members. High positive affect reflects a state of increased energy, optimism, and alertness

(Watson, Clark, & Tellegen, 1988). This study also focused on general reappraisal strategies, such as changing the way a person thinks about the situation in order to feel calmer. Previous research has shown consistent relationships between social support and well-being, good evidence for greater reappraisal and better well-being, and some suggestions of a link between social support and reappraisal. In this study, our aim was to test all of these relationships. We hypothesized that social support would predict positive affect, and this effect would mediated by reappraisal strategies (emotion regulation).

Method

Participants

One hundred and seventeen participants (67 females) were recruited from the University of Michigan Introduction to Psychology Subject Pool. Participants received partial course credit. The age range for the participants was 18-22 years old (M = 18.69).

Procedure

Participants came into a university Psychology Department computer lab to complete a survey on the computer that included the measures listed below, sociodemographic questions, as well as other psychological factors unrelated to the scope of this study. Additionally, multiple trap questions were spread throughout the survey to ensure that participants were following instructions.

Measures

The primary variables we were interested in this study were the amount of social support participants received from their immediate family, the degree to which they used reappraisal to regulate emotions, and their reports of positive affect.

Predictor variable: Social support. The predictor variable, *social support*, included emotional support and instrumental support. Researchers have identified many other types of social support, but we chose to use instrumental and emotional support because they are the most common and comprehensive (Cohen & Wills, 1985). The items included "If you needed encouragement, emotional support, or just wanted to talk and be listened to, how supportive would your immediate family be?" and "If you needed assistance, for example, because you got sick, needed a ride, help with errands, or advice, how supportive would your immediate family be?" Participants used a five-point scale (1 = Not at all supportive, 5 = Very supportive). We averaged these two items to create an overall social support variable, with high scores indicating more social support received from one's family (r = .62, p < .001).

Mediating variable: Reappraisal. The mediating variable, *reappraisal*, dealt with specific items related to strategies of reappraising one's emotions. These items were taken from Gross's process model of emotion regulation (Gross, 1998a). Examples of these items are "I control my emotions by changing the way I think about the situation I'm in" and "When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm." Participants used a seven-point scale (1 = Strongly disagree, 7 = Strongly agree) to indicate their response. The six items were averaged to generate an overall reappraisal variable, with higher scores indicating more use of reappraisal strategies of emotion regulation ($\alpha = .83$).

We did not include suppression as part of our analysis because it is unclear how social support may be related to suppression. For instance, it is possible that in certain situations, controlling the expression of one's emotions is necessary to maintain a polite, mature, and lasting relationship. In this case, suppression may be positively associated with social support. However, many previous studies have also shown that emotional suppression is linked to lower social

support and less social satisfaction as well (Srivastava, Tamir, McGonigal, John, & Gross, 2009). In a close and supportive relationship, you would expect to be able to express your emotions with each other. Therefore, it is reasonable that using suppression as an emotional regulation strategy would be associated with negative social support.

Outcome variable: Positive affect. The outcome variable, *positive affect*, consisted of ten items from the Positive and Negative Affect Schedule (PANAS) (Watson, Clark, & Tellegen, 1988). Participants were asked to evaluate to what extent they have been feeling various positive feelings and emotions in the past two months. Some of the ten positive emotions included "interested," "excited," and "inspired." Participants used a five-point scale (1 = Very slightly, 5 = Extremely) to respond to these items. We created an overall *positive affect* variable, with higher scores reflecting the experience of more positive emotions ($\alpha = .89$).

We did not include negative affect as part of our study. Previous studies have shown that positive and negative affect act independently of each other (Bradburn, 1969; Diener & Emmons, 1984). Moreover, other studies have found that generally, only positive affect and not negative affect, is correlated to social factors (Bradburn, 1969; Watson, Clark, & Tellegen, 1988). Therefore, our study focused on only positive affect as a way of measuring emotional well-being.

Covariates. We controlled for relevant demographic variables, including participants' age, gender (coded 1 = male, 2 = female), (dummy-coded) race/ethnicity, and family's annual income (nine-point scale: 1 = Below \$20,000, 8 = \$160,000 and above, "Don't know" was recoded as missing data). Participants' age was controlled for because previous research shows that older adults experience more positive affect than younger adults, and this may be due to a difference in emotion regulation (Carstensen et al., 2011). As for gender, previous studies have

shown that it is possible that women, more than men, up-regulate positive emotion when trying to down-regulate negative emotion, contributing to a difference in reappraisal of emotions (McRae, Ochsner, Mauss, Gabrieli, & Gross, 2008). This, in turn, can lead to a variation in emotional well-being. We also controlled for race/ethnicity given that people from different cultures may have different ways of regulating emotions (Butler, Lee, & Gross, 2007). In addition, we controlled for parents' education level and income because lower family income and lower education levels are both generally associated with the experience of harsher and more difficult life conditions, which may predispose such individuals to having more vulnerabilities in dealing with their emotions, not to mention experiencing overall less positive affect in their lives (cf. Pearlin & Schooler, 1978). Participants used a seven-point scale for this measure (1 = Grade school and 7 = Graduate or professional school). Finally, we controlled for whether the participant was currently consulting a professional about a psychological or neurological problem. We did this because psychological issues could interfere with a person's ability to control their emotions. After completing the survey, participants were given course credit and were debriefed.

Results

To test our hypotheses, we conducted a total of four different regression analyses, one for each proposed link in our mediation model, and one controlling for the mediating factor reappraisal (see Figure 1 for mediation model predicted in Study 1). The first regression analysis tested the relationship between social support and reappraisal. Consistent with our prediction, results indicated that social support reliably predicted reappraisal of emotions, $\beta = .24$, p < .01. The more social support one received from family, the more likely he or she was to use reappraisal strategies of emotion regulation.

The second regression analysis tested the relationship between reappraisal and positive affect. This revealed that reappraisal predicted positive affect, β = .45, p < .001, which was consistent with our prediction as well. The more people reappraised their emotions, the greater their positive affect.

The final two regression analyses were done in two stages. First, a backward elimination was done. Given that many factors might have played a role in influencing a person's general well-being over a two-month period, we wanted to control for relevant variables to allow a more precise analysis. During this stage, all the covariates were entered into the model predicting the *positive affect*. In the second stage of the analyses, we included only covariates that met the p < 1.00 criterion and included our predictor variable, *social support*, to predict *positive affect*. The backward elimination method resulted in the exclusion of all covariates except annual *family income*. For the third regression analysis, *social support* and the covariate *family income* were included in the regression model to predict *positive affect*. This analysis revealed that social support predicted positive affect, $\beta = .23$, p < .04, consistent with our hypothesis. Thus, more social support from family led to greater positive affect.

We tested this relationship again, now including *social support, family income*, and *reappraisal* in this analysis to predict positive affect. When we controlled for *reappraisal*, the results were no longer significant, $\beta = .11$, p < .30. Therefore, it is likely that *reappraisal* is a mediating factor between *social support* and *positive affect*. To test if this mediation was significant, we conducted the Sobel test.

Social support, reappraisal, and positive affect: Mediation model. Our next step was to test the proposed meditational model—whether emotion regulation affects the relationship between social support and well-being. To do this, we evaluated whether reappraisal strategies of

emotion regulation were a mediator for the effect of social support on positive affect. The Sobel test revealed that this mediation effect was significant, z = 2.22, p < .03. These results showed that the effect of social support from family members on positive affect was mediated by the extent to which one used reappraisal to regulate emotions.

Discussion

This study tested the relationships among social support, reappraisal, and emotional well-being. Consistent with past research, we found positive correlations among each of the three factors. Interestingly, we also found that reappraisal was a mediator of the relationship between social support and positive affect. The greater social support individuals had, the more they reappraised their emotions. This in turn led to more positive affect, or greater emotional well-being. The results of this study suggest that the frequently discussed link between social support and emotional well-being may in fact have an underlying mechanism through emotion regulation. For instance, the more support people receive from their family, the more likely it is that they will be able to reappraise a situation in a less distressing manner, increasing their positive emotions.

Using the results from this study and findings from previous research, there were two primary reasons that we decided to carry out Study 2. Firstly, Study 1 focused on general reappraisal tendencies and people's emotional well-being over the last two months. But how might social support contribute to the way a person copes with a specific personal experience? Secondly, we wanted to test how exactly social support influences the way people reappraise their negative experiences. Given these questions, in Study 2 we tested whether an individual's supportive network influences how people deal with personal negative experiences and whether this is mediated by his or her reappraisal strategies.

Study 2

Previous research has shown that the way an event or situation is perceived plays a large role in the extent to which a person reacts emotionally towards that event (Lazarus, 1966). Therefore, that single event may cause more or less distress to an individual depending on the way that individual construes the event (Lazarus, 1966). Cohen and Wills (1985) have discussed how social support may serve as a buffer against stressful situations by reducing an event's perceived importance. In this case, changing the perceived importance of an event may be one way of reappraising one's emotions.

For example, let's say you just got laid off from your job. You might think that this occurred due to your personal performance being unsatisfactory given the company's standards, and this way of thinking will likely make you feel badly, both about yourself and about losing your job. However, if you have the social support of your family and friends, they might convince you that you losing your job had nothing to do with your performance and instead due to the company's economic hardships. This information could help change your way of thinking about this unfortunate event or yourself, because your family and friends have reassured you that despite this struggle, you are still valued for your hard work and experience. Social support can increase self-esteem and also change the way people feel about difficult experiences. According to Cohen and Wills (1985), the greater social support one receives, the less significant he or she should feel that a particular stressful event to be; consequently, this should have the effect of reducing ones negative emotions toward the event. This is what Study 2 hoped to show.

In Study 2, we asked individuals to recall a personal, negative experience and we investigated how the amount of social support they received predicted how they coped with that experience. In particular, we focused on how the perceived importance people ascribed to the

negative event mediated the effect of social support from family on negative emotional reactivity. We expected that people who receive greater levels of social support would perceive their personal negative event as less important, and this in turn would influence their emotional reactivity such that they feel less negative about the event.

Method

Participants

Forty-four participants were recruited through Amazon Mechanical Turk (25 females). Each participant was compensated monetarily. The age range for the participants was 20-57 years old (M = 32.02).

Procedure

Participants completed a survey on the computer. First, they were asked to write about a negative experience that was still bothering them. Instructions stated:

Please think of a recent negative experience that is still bothering you. This can be about a personal goal that you are struggling to achieve, a conflict with someone you know, or any other personal event that is distressing and currently on your mind. Please take a few minutes to describe the event in detail—for instance, what the event is about, how important it is to you, and how you feel about it.

Then, we administered a filler task that asked participants how many times in the past week they had engaged in various activities, such as checking their email and drinking coffee. The purpose of the filler task was to allow participants to take their mind off of the negative experience, in addition to dissociating the negative recall task from the following social questions.

After the filler task, they were asked questions about social support from family, consistent with what was asked in Study 1 (see below). There were also other questions about family and friends unrelated to the scope of this study. Participants were then given another filler, similar to the first one. Again this filler was given so that participants do not discover what we were measuring, in addition to dissociating the social questions from the following questions evaluating the previously recalled negative event.

Finally, we assessed how participants felt about the negative event now (see below). We also measured sociodemographic factors. Multiple trap questions were spread throughout the survey to ensure that participants were reading instructions.

Measures

The primary measures used in this study were social support, perceived importance of event, and negative emotional reactivity to event (described below).

Predictor variable: Social support. The predictor variable, *social support*, included both emotional support and instrumental support. The two items included in our overall social support variable were the same two items used in Study 1. Participants used the same five-point scale ($1 = Not \ at \ all \ supportive$, $5 = Very \ supportive$) and higher scores indicated more social support received by family (r = .76, p < .001).

Mediating variable: Perceived importance. The mediating variable took into consideration the participant's perceived importance of the negative event. The question asked, "As you think about the event now, how important is this event to you?" Participants used a five-point scale $(1 = Not \ at \ all, 5 = Very \ much)$ to indicate their response. Higher scores indicated that the participant perceived the event to be more important. In this case, perceived importance is

taken to reflect how participants have reappraised their emotions, with lower importance score signaling more reappraisal or "undoing" of the event.

Outcome variable: Negative emotional reactivity. The outcome variable, *negative emotional reactivity* associated with the recalled negative event, consisted of three items evaluating how the participant felt about the event at the time of recalling it. Examples included, "As you think about the event now, how negative is this event to you?"; "How stressed are you emotionally by this event?"; and "How upset are you by this event?" Participants used the same five-point scale used for the perceived importance variable. The three scores were averaged to generate an overall negative emotional reactivity variable, with higher scores reflecting more negative emotions towards the event ($\alpha = .91$).

Results

To test our hypotheses, we conducted four different regression analyses, one for each proposed link in our mediation model, and one controlling for the mediating factor *perceived importance* (see Figure 2 for mediation model predicted in Study 2). In our first regression analysis, results revealed that social support significantly predicted perceived importance of the given negative event, $\beta = -.39$, p < .01. This was consistent with our predictions. The more social support one received from family, the less likely he or she was to perceive the recalled event as important.

Also, consistent with previous research (Cohen & Wills, 1985), our second regression showed that perceived importance was found to predict negative emotional reactivity, β = .62, p < .001. Thus, the more important one felt the negative event to be, the more negative feelings they had towards the event.

The results of our third regression analysis indicated that social support reliably predicted negative emotional reactivity, β = -.46, p < .002. The more social support one received, the less negative emotions they felt in response to the event. We tested this relationship again, now controlling for *perceived importance* to evaluate its mediating effect. Our results showed that β = -.25, p < .05, implying that perceived importance may have a mediating affect between *social* support and negative emotional reactivity. To test the significance of this mediation, we carried out the Sobel test.

Social support, perceived importance, and negative emotional reactivity: Mediation model. Perceived importance was tested as a mediator for the effect of social support on negative emotional reactivity to the recalled events. The analysis using the Sobel test yielded support for this mediation effect, z = -2.41, p < .02. These results showed that the effect of social support from family members on emotional reactivity to a given negative event was mediated by how important people perceived the event to be. This suggests that people with more social support perceive negative events to be less significant, and therefore this decreases the negative emotions associated with that event.

Discussion

In Study 1, we showed that reappraisal served as a mechanism through which social support positively relates to general, emotional well-being. But we wondered how social support contributes to the way an individual deals with a specific personal experience, and also the particular means by which social support affects the way individuals reappraise their negative experiences. This is why we conducted Study 2, where participants' negative emotional reactivity was assessed in regards to a negative experience that they had previously undergone. Results showed that the more social support people reported receiving from their family, the

more likely they were to perceive a specific and personal negative event as less important.

Correspondingly, the lower importance attached to the event, the less negative emotions people reported having toward the event. These results were consistent with our hypotheses. It is interesting to find this effect given that participants were asked to spontaneously recall and make judgments about their supportive network after they thought about the negative event; moreover, this influenced both how they perceived the event and also their emotions toward it.

These results are consistent with the framework proposed by Cohen and Wills (1985) that stated that social support can act as a buffer against stress. Additionally, they provide empirical support that social support offers a way in which the individual can perceive a stressful event as less important. This, consequently, can lead to a decrease of negative emotions felt toward the event. Our results show that changing the way a stressful situation is appraised can be one mechanism that can explain the association between social support and emotional reactivity.

General Discussion

Study 1 showed that a greater amount of social support is related to increases in positive affect. This focus was broad in that it studied general emotion regulation strategies and emotional well-being over the past two months. Study 2 showed that more social support is associated with less negative emotional reactivity towards a stressful event. This study focused on specific events that people find distressing. Regardless of focus, not only did reappraising emotions affect emotional well-being, but also changing one's thoughts about a specific stressful situation (perceived importance) was found to help protect you from the negative emotions associated with that event. Further, and more importantly, these emotion regulation tendencies were shown to mediate the effect of social support on emotion-relevant outcomes.

Previous research has shown a consistent, positive link between social support and emotional well-being. However, the mechanism through which this occurs had not yet been fully established. Previous associations have showed that social support predicts emotion regulation, and that emotion regulation also predicts well-being, suggesting a possible mechanism. Through the present research, we not only replicated these past established relationships, but we also demonstrated that emotion regulation strategies, in particular how one tends to reappraise emotions or responses to negative events, can help explain the link between social support and emotional well-being. These results suggest that more social support contributes to one reappraising his or her emotions and related events, and this in turn leads to better emotional well-being.

Our results provide insight into the interplay among people's psychological health, social support, and emotion regulation strategies. Social support is a great resource for dealing with stressful situations. It can both improve self-esteem and provide people with positive coping mechanisms, such as the one studied in this research—reappraisal. Knowing the positive influence that social support and reappraisal can have, we believe that our results can shed light on the way people approach their relationships and the types of support they provide to others.

Limitations and Implications

Our studies have their limitations. Study 1 focused only on college students. It is possible that age can have an affect on emotion regulation. We are not completely sure on how the capacity for emotion regulation develops, and it is very possible that age has an effect (Gross & John, 2003). Additionally, research suggests that older adults tend to experience more positive affect than younger adults (Carstensen et al., 2011). According to Isaacowitz (2012), this may occur because older adults may be better at regulating emotion because they tend to focus

themselves away from negative matters or toward positive matters. Certain experiences in life might form the basis for emotion regulation, and therefore it can differ between children, adolescents, and adults. Future studies should test the generalizability of these results by evaluating this study on a larger scope of people that encompasses both the young and old.

Additionally, Study 2's focus was on negative events. Aside from posing as a buffer against stressful events, part of social support is also to enjoy positive moments together. In that case, it would be interesting to test whether our results would extend to participants' positive experiences. For instance, one could wonder whether reappraisal could increase one's positive affect for a positive event. Additionally, how would social support influence how an individual reappraises a positive event? For example, let's say a person has just been accepted to their dream medical school. If social support triggers an individual to perceive this event as being more significant, could this increase the happiness he or she feels towards this achievement? Future research could provide insight into whether emotion regulation affects emotional reactivity to a positive event. These are questions that, if studied, could help us understand the scope of life experiences that are impacted by social support and emotion regulation.

Another limitation is that in both studies we focused on support from immediate family members. It is clear that friends, classmates, and colleagues can contribute to people's social support as well. So, future research could include one's entire social network as opposed to just family members. It is also possible that friends and family provide various types of social support. In that case, does one type have a greater impact than the other? For example, in various circumstances, people may prefer to go to either family or friends for social support. It is also more likely for family to provide instrumental support, like financial aid, than friends. It is possible that, in some situations, that instrumental support may be more beneficial than the

emotional support provided by friends. Only future research can help elucidate why this may occur and the effect it may have on well-being.

Cohen and Wills (1985) have also found that social support protects against stress but only when they assess participant's "perceived" rather than actual social support. It is possible that this depends on whether the support is instrumental or emotional. For example, in regards to emotional support, if a person believes they have received less emotional support than was actually provided to them, this might not have as much of a positive effect as it could have on his or her well-being. On the other hand, instrumental support, such as financial aid, shows more concrete results. Therefore, perceived support may not play as large of a role in this case. An interesting avenue for future research would be to examine both perceived social support and actual social support provided to see whether these differences in results are apparent.

Finally, coping mechanisms and social support can change throughout the experience of a long-term stressful event. Keeping track of both coping methods and social support over the progression of the event might give more insight into how specifically these two factors work together to enhance emotional well-being.

Conclusion

Previous research has established the association between social support and emotional well-being without particularly identifying the mechanism through which this occurs. Our findings suggest that emotion regulation may be this missing link. We discovered that the greater social support people receive, the more likely they are to reappraise their emotions, and this leads to better emotional well-being. This provides insight into ways that individuals can use both social support and emotion regulation to cope with stress and difficult situations. These results

help fill an important gap between the two literatures and suggest exciting opportunities for future research.

References

- Beck, A. T, Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression*. New York: Guilford Press.
- Bradburn. N. M. (1969). The structure of psychological well-being. Chicago: Aldine.
- Butler, E. A., Lee, T. L., & Gross, J. J. (2007). Emotion regulation and culture: Are there social consequences of emotion suppression culture-specific? *Emotion*, 7(1), 30-48.
- Carstensen, L. L., Turan, B., Scheibe, S., Ram, N., Ersner-Hershfield, H., Samanez-Larkin, G. R., ... Nesselroade, J. R. (2011). Emotional experience improves with age: Evidence based on over 10 years of experience sampling. *Psychology and Aging*, *26*(1), 21–33.
- Cobb, S. (1976). Social support as a moderator of life stress. *Psychosomatic Medicine*, *38*(5), 300-314.
- Cohen, S., & McKay, G. (1984). Social support, stress and the buffering hypothesis: A theoretical analysis. In A. Baum, J. E. Singer, & S. E. Taylor (Eds.), *Handbook of psychology and health* (pp. 253-267). Hillsdale, NJ: Erlbaum.
- Cohen, S., & Wills, T. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98(2), 310-357.
- Diener, E., & Emmons, R. A. (1984). The independence of positive and negative affect. *Journal of Personality and Social Psychology*, 47(5), 1105-1117.
- Dubow, E. F., & Ullman, D. G. (1989). Assessing social support in elementary school children:

 The survey of children's social support. *Journal of Clinical Child Psychology*, *18*(1), 52-64.
- Gross, J. J. (1998*a*). Antecedent- and response-focused emotion regulation: Divergent consequences for experience, expression, and physiology. *Journal of Personality and*

- Social Psychology, 74(1), 224-237.
- Gross, J. J. (1998b). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, 2(3), 271-299.
- Gross, J. J., Feldman Barrett, L. A., & Richards, J. M. (1998). *Emotion regulation in everyday life*. Manuscript in preparation.
- 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.
- Gross, J. J., & Munoz, R. F. (1995). Emotion regulation and mental health. *Clinical Psychology: Science and Practice*, *2*(2), 151-164.
- Gross, J. J., Richards, J.M., & John, O.P. (2006). Emotion regulation in everyday life. In D. K. Snyder, J. A. Simpson, & J. N. Hughes (Eds.), *Emotion regulation in families:*Pathways to dysfunction and health (pp. 13-35). Washington DC: American Psychological Association.
- House, J. S. (1981). Work stress and social support. Reading, MA: Addison-Wesley.
- House, J. S., & Wells, J. A. (1978). Occupational stress, social support and health. In A.
 McLean, G. Black, & M. Colligan (Eds.), *Reducing Occupational Stress: Proceedings of a National Institute of Occupational Safety and Health conference* (pp. 78-140).
 Washington, DC: National Institute for Occupational Safety and Health.
- Isaacowitz, D. M. (2012). Mood regulation in real time: Age differences in the role of looking. *Current Directions in Psychological Science*, 21(4), 237-242.
- Lazarus, R. S., (1966). Psychological Stress and the Coping Process. New York: McGraw-Hill.
- Lazarus, R. S., & Alfert, E. (1964). Short-circuiting of threat by experimentally altering

- cognitive appraisal. Journal of Abnormal and Social Psychology, 69(2), 195-205.
- Manne, S. L., & Zautra, A. J. (1989). Spouse criticism and support: their association with coping and psychological adjustment among women with rheumatoid arthritis. *Journal of Personality and Social Psychology*, *56*(4), 608-617.
- McRae, K., Ochsner, K. N., Mauss, I. B., Gabrieli, J. J. D., & Gross, J. J. (2008). Gender differences in emotion regulation: An fMRI study of cognitive reappraisal. *Group Processes and Intergroup Relations*, 11(2), 143-162.
- Parrott, W. G. (1993). Beyond hedonism: Motives for inhibiting good moods and for maintaining bad moods. In D. M. Wegner & J. W. Pennebaker (Eds.), *Handbook of mental control* (pp. 278-308). Englewood Cliffs, NJ: Prentice Hall.
- Pearlin, L. I., & Schooler, C. (1978). The Structure of Coping. *Journal of Health and Social Behavior*, 19(1), 2-21.
- Srivastava, S., Tamir, M., McGonigal, K. M., John, O. P., & Gross, J. J. (2009). The social costs of emotional suppression: A prospective study of the transition to college. *Journal of Personality and Social Psychology*, *96*(4), 883-897.
- Turner, R. J. (1981). Social support as a contingency in psychological well-being. *Journal of Health and Social Behavior*, 22(4), 357-367.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*(6), 1063-1070.

Author Note

Salomi Rami, Department of Psychology, University of Michigan, Ann Arbor.

I would like to thank Dr. Oscar Ybarra and David Lee for all their support in writing this thesis. I am extremely grateful for the knowledge and experience that I have gained through their guidance. Correspondence concerning this thesis should be addressed to 3023 Mapleleaf Ct., Sterling Heights, MI 48314.

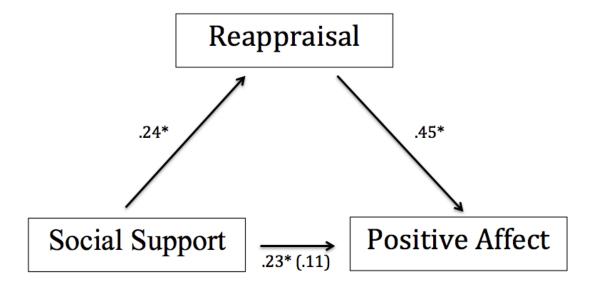


Figure 1. Standardized regression coefficients for the relationship between social support by immediate family members and positive affect as mediated by a reappraisal strategy of emotion regulation. The value in parentheses indicates the standardized regression coefficient when controlling for reappraisal. *p < 0.05.

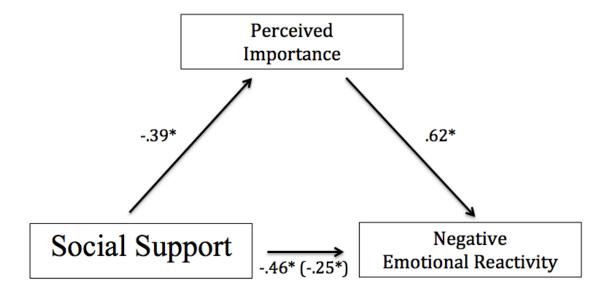


Figure 2. Standardized regression coefficients for the relationship between social support by immediate family members and negative emotional reactivity as mediated by perceived importance. The value in parentheses indicates the standardized regression coefficient when controlling for perceived importance. *p < 0.05.