EMOTIONS IN MARRIAGE: UNDERSTANDING MARITAL EXCHANGES AND THE IMPACT OF STRESS

A thesis submitted to Kent State University in partial fulfillment of the requirements for the degree of Master of Arts

by

Meggan Ruth Bradshaw

August, 2009
Thesis written by
Meggan Ruth Bradshaw
B.S., Edinboro University, 2007
M.A., Kent State University, 2009

Approved by

________________________________, Advisor
Kristin D. Mickelson

________________________________, Chair, Department of Psychology
Mary Ann Stephens

________________________________, Dean, College of Arts and Sciences
John R. Stalvey
# TABLE OF CONTENTS

LIST OF FIGURES ...........................................................................................................v

LIST OF TABLES ..................................................................................................................... vi

CHAPTER

1 INTRODUCTION ...............................................................................................................1

  Research on Positive Emotions .......................................................................................2
  Positive Emotions and Social Relationships .................................................................7
  Proposed Study ..............................................................................................................10

2 STUDY 1 ..........................................................................................................................13

  Method ..............................................................................................................................13
  Sample .............................................................................................................................13
  Measures ........................................................................................................................14
  Analysis Procedures ......................................................................................................17
  Results ...............................................................................................................................18
  Descriptive Statistics ....................................................................................................18
  Positive Emotion as a Moderator ..................................................................................21
  Discussion ......................................................................................................................21

3 STUDY 2 ..........................................................................................................................26

  Method ..............................................................................................................................26
  Sample .............................................................................................................................26
  Measures ........................................................................................................................27
  Analysis Procedures ......................................................................................................29
  Results ...............................................................................................................................30
  Descriptive Statistics ....................................................................................................30
  Discussion ......................................................................................................................32
TABLE OF CONTENTS (Continued)

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>GENERAL DISCUSSION .................................................................34</td>
</tr>
<tr>
<td></td>
<td>Role of Emotions in Marital Exchanges ........................................34</td>
</tr>
<tr>
<td></td>
<td>Positive Emotions as a Moderator ................................................37</td>
</tr>
<tr>
<td></td>
<td>Future Directions ........................................................................38</td>
</tr>
<tr>
<td></td>
<td>Conclusions ................................................................................39</td>
</tr>
<tr>
<td>REFERENCES .......................................................................................40</td>
<td></td>
</tr>
<tr>
<td>APPENDICES ......................................................................................46</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>MIDUS STUDY MEASURES ...............................................................47</td>
</tr>
<tr>
<td>B</td>
<td>BABY T.I.M.E. STUDY MEASURES ..................................................52</td>
</tr>
<tr>
<td>C</td>
<td>POSITIVE-TO-NEGATIVE RATIO .....................................................57</td>
</tr>
</tbody>
</table>
## LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>22</td>
</tr>
<tr>
<td>2</td>
<td>23</td>
</tr>
</tbody>
</table>

1. Role of positive and negative emotions on spousal conflict
2. Role of positive and negative emotions on relationship problems
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Correlations for Study 1 Variables (N=2,065)</td>
<td>18</td>
</tr>
<tr>
<td>2</td>
<td>Means for Study 1 Variables</td>
<td>19</td>
</tr>
<tr>
<td>3</td>
<td>Multiple Linear Regression Analyses for Study 1</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>Correlations for Study 2 Variables (N = 104)</td>
<td>31</td>
</tr>
<tr>
<td>5</td>
<td>Means for Study 2 Variables</td>
<td>31</td>
</tr>
<tr>
<td>6</td>
<td>Multiple Linear Regression Analyses for Study 2</td>
<td>32</td>
</tr>
</tbody>
</table>
CHAPTER 1

INTRODUCTION

There are currently over one million divorces a year in the United States, with estimates that almost 50% of marriages will ultimately end in divorce (Bramlett & Mosher, 2002). Marital dissolution is a serious social issue in terms of its negative consequences for the mental and physical health of spouses and their children (Levinger & Moles, 1979; Emery, 1988). Marital dissolution occurs for many reasons, most often stemming from difficulties communicating, solving problems, and coping (Bodenmann et al., 2007). Everyday stressors also, over time, are a main component in contributing to divorce (Bodenmann et al., 2007). Learning how to improve marital satisfaction and identifying markers for marital satisfaction are both important keys reducing divorce rates. One identified factor in marital satisfaction is the expression of positive emotion within the relationship, both as a main influence on marital satisfaction and also as a mechanism for handling negative emotions. However, little is known about how positive emotions specifically influence negative emotions in marital exchanges. For my thesis, I begin with the historical role of positive emotions in research and the many benefits of experiencing positive emotions. Next, I discuss ways to increase individual positive emotions when dealing with everyday situations and specific negative experiences. Finally, I examine how these results translate to social and marital relationships.
Positive emotion can be defined as the experience of happiness through good feelings, such as feeling happy, in good spirits, peaceful, and full of energy (e.g., Fredrickson, 2001; Lyubomirsky, King, & Diener, 2005). Negative emotion can be defined as a range of feelings from being nervous or shaky, having the blues, or feeling sad (Fredrickson & Branigan, 2005; Fredrickson, 2000). For the purposes of understanding the various ways emotions function in everyday life, emotions are separated into state and trait-like qualities. State-like emotions are temporary fluctuations in mood while trait-like emotions are stable individual differences in mood often linked with cognitive and behavioral personality styles (Cohen & Rodrigues, 1995). For purposes of this thesis, I will focus mainly on the trait-like definitions of emotion.

Until recently, positive emotions have been overlooked in psychology due to antiquated ideologies that linked mental health with the absence of mental dysfunction rather than with the presence of mental flourishing. Historically, the effects of positive emotions have been less obvious from a physiological standpoint, and thus, have only begun to be strenuously studied for the past two decades. Since then, major breakthroughs have occurred in positive emotion research linking positive emotions to increased creativity and efficiency, along with enhanced thinking patterns and openness to new information (Fredrickson, 2001). Under this guideline, the broaden-and-build theory has developed, suggesting that, over time, an expansion in positive thinking patterns enhances a build-up of coping skills that further enables increased creativity and efficiency, thereby ensuring continually higher levels of performance (e.g. Fredrickson,
Positive emotions are now being recognized as an important factor in “increasing longevity, forming necessary social bonds, and increasing cognitive functioning” (Fredrickson, 2001).

Through the benefits that positive emotions have on promoting play and creativity, positive emotions also increase the range of possible choices an individual can make in any given situation (Aspinwall, 2001; Fredrickson & Branigan, 2005; Fredrickson & Joiner, 2002). Having choice options lead to increased flexibility and coping resources which, in turn, facilitate additional positive emotions; creating an upward spiral of increased functioning. Additionally, positive emotions have been shown to have an “undoing effect” on negative reactions to stress, such as anger, fear, anxiety, sadness and crying (Fredrickson, Mancuso, Branigan, & Tugade, 2000; Fredrickson & Maynard et al., 2000). These negative stress responses regularly cause physiological changes that can be measured and studied to show the significant impact of negative emotions on a person. For example, stress responses arouse autonomic nervous system responses, such as increased heart rate, vasoconstriction, and increased blood pressure; factors well-known for leading to long-term negative physical and mental health outcomes, including cardiovascular disease, hypertension, diabetes, depression, and anxiety (Fredrickson & Levenson, 1998; Fredrickson & Maynard et al., 2000; Tugade & Fredrickson, 2004; McEwen & Seeman, 1999; Alonso et al., 2004, respectively). The negative physical and mental byproducts created by these unhealthy responses to stress accentuate the need for methods of coping with daily and long-term stress.
Positive emotions may be one such method of coping in that they may be able to diminish the deleterious effects of negative emotions. Yet, positive emotions have not historically displayed easily observable physiological changes, and therefore, the importance of positive emotions has often been overlooked and downplayed. One promising line of research on the value of positive emotions in health involves the use of “grateful lists,” specifically the creation of lists of things a person is thankful for. In a series of studies, Emmons and McCullough (2003) examined whether individuals who created lists of experiences they were grateful and thankful for (i.e., gratitude group) experienced better outcomes than those who wrote simply about life experiences that affected them (i.e., a control group). In the first study, individuals in both groups wrote weekly for ten weeks. The grateful group reported higher levels of well-being and optimism for the upcoming week, while also reporting fewer negative physical symptoms compared to the control group. Furthermore, participants in the gratitude condition reported exercising an average 1.5 hours more per week compared to the control group. Interestingly, however, the gratitude group did not report an increase in global positive affect. In order to test whether global positive affect could be enhanced by increasing the intensity of gratitude reports, Emmons and McCullough (2003) concentrated the number of reports in their second study to include a daily report for two weeks (as opposed to weekly reports). The daily production of thankful lists by participants did indeed result in an increase in positive affect. Yet, in this study, they failed to find increased physical activity or fewer reports of physical symptoms for the gratitude group as found in the first study. A third study was performed to see if the full results would be found over a longer
time span with a clinical sample. Adults with congenital and adult-onset neuromuscular diseases were recruited for a three-week daily diary study. These results indicated both an increase in global positive affect and an increase in sleep quality and duration. Interestingly, the enhanced positive affect of patients was also noticed and reported by their spouses.

Others have begun to examine the function of positive emotions in dealing with specific negative experiences (self-reported problems or stressful situations). One study at the University of Michigan looked at the effect of the 9/11 attacks on students’ well-being (Fredrickson, Tugade, Waugh, & Larkin, 2003). Results showed that some students actually reported increased levels of well-being following the attacks. The authors defined this increase as resiliency - in other words, being able to recover quickly from misfortune or tragedy. Results further confirmed the hypothesis that resilient people are able to thrive through the use of positive emotions. For this reason, some researchers have speculated that positive emotions may be a moderator that resilient people use to buffer the aftereffects of negative emotions (Tugade & Fredrickson, 2004). Fredrickson et al. (2003) also found that positive emotions appear to be a key element in individual flourishing and well-being when dealing with average to moderate levels of stress related to the 9/11 attacks. However, positive emotions were not as useful when dealing with high levels of stress. This latter finding may explain the University of Michigan results as the students in this study were likely sheltered from the most devastating effects of 9/11 because of their physical distance from the terror sites (i.e., being in Michigan as opposed to New York City).
Based on the above study, the results of resiliency in extremely traumatic experiences should be interpreted with caution. One preliminary study examining posttraumatic stress disorder (PTSD), including victims of terrorism and rape, in fact revealed a deleterious effect accompanying therapeutic growth (Hobfoll et al., 2007). Initial reports suggested that as posttraumatic growth (PTG) occurred and individuals began to experience positive emotions following the trauma, this growth was paired with a strong discrimination against outside groups (e.g., for those exposed to terror in Gaza, PTG was linked with greater psychological distress, extreme political attitudes, and support for retaliatory violence to outside groups). To date, these findings have only been evident in particularly extreme negative situations involving PTSD, suggesting a possible threshold point for overcoming extreme negativity using positive emotions.

Relatedly, other research has shown that while an increase in positive emotions is linked with a decrease in time spent experiencing negative emotions, positive emotions have not been shown to decrease the depth of negativity felt by participants (Fredrickson, Mancuso, Branigan, & Tugade, 2000). In fact, previous attempts to use positive emotion therapy to increase well-being have been found to actually foster increased levels of negative emotions (Folkman & Moskowitz, 2000). It appears that the more a person practices and experiences positive emotions, the more negative their emotions can become at the other extreme. The cause for this trend is unclear; but, one possible explanation may involve heightened expectations for success accompanying extreme positivism (i.e., positive feelings for a fulfilling experience foster an increased investment in the outcome). Thus, if the outcome fails to be satisfying it is met with greater
disappointment. Another possible explanation for this trend could be that individuals who experience extremely positive events also experience extreme unhappiness (i.e., people who experience emotions intensely are more likely to feel very happy as well as very sad). Nonetheless, for moderately negative experiences, research shows positive emotions can decrease the effect negative experiences have on individual perceptions of happiness and well-being.

*Positive Emotions and Social Relationships*

One area that remains unclear is whether and how these results translate from the individual to social relationships. One recent study has examined the role of positive emotions in college roommates’ abilities to bond during the first month of school (Waugh & Fredrickson, 2006). This study used self-reports of feelings of connection with a new roommate during the first month of school to examine the role of positive regard for the roommate in cultivating a sense of closeness and affiliation. Positive emotions, in conjunction with a high positive-to-negative emotion ratio, were related to a stronger relationship between the two individuals.

While the role that positive emotions play in social interactions with relationships has been looked at in regard to college-aged students living in dorms, it is unknown whether these results will generalize to relationships outside the college population. Specifically, what is the role of positive emotions in marital interactions? Current research has not systematically examined the direct role that positive emotions play in the relationship between negative emotions and marital interactions. In particular, will positive emotions moderate the link between negative emotions and marital interactions?
One way to begin understanding these issues is by reviewing several studies that looked at the effect of positive emotions on different aspects of marital relationships. For example, one study examined newlywed interactions with a focus on divorce and stability predictors (Gottman, Coan, Carrere, & Swanson, 1998). Overall, results indicated that experiencing positive emotions increased marital resilience and satisfaction.

Another study looked at affect and problem-solving skills in marital satisfaction; specifically, affect was measured using non-verbal cues such as facial expressions and posture, while problem-solving skills were divided into positive skills (e.g., humor and affection) and negative skills (e.g., unhelpful responses, devaluation of partner, denial of responsibility, and making demands) (Johnson et al., 2005). Results in this study found that expressions of humor, affection, and interest or enthusiasm diminished the impact of negative spousal verbalizations on an individual’s marital satisfaction. Moreover, positive affect interacted with negative spousal problem-solving skills, such that high levels of positive affect attenuated the impact of a spouse’s negative problem-solving skills on marital satisfaction. Furthermore, this mitigating effect for high levels of positive affect was found even with high levels of negative skills. On the other hand, low levels of positive affect exacerbated the impact of a spouse’s negative problem-solving skills on marital satisfaction.

While affect is often viewed as a more stable trait than emotion, researchers are finding that both affect and emotion have the propensity to be altered through varying methods, such as learning new coping or communication skills, and increasing positive feelings about a situation or person (e.g., Johnson et al., 2005; Emmons & McCullough,
2003). The value of these findings appears to be that by learning how to increase positive emotions, a couple can increase their marital satisfaction and avert divorce.

Of course, the opposite could be true as well – a couple should be able to recognize detrimental coping styles and then take action to change those behaviors, thereby also increasing marital satisfaction. Much research focuses on the importance of skills training for the individual as well as the couple and its efficacy is well-known.

As the research suggests, one of the basic problems occurring in marriages may stem from an inability to successfully stop an argument once it begins - resulting in a cycle of fighting based on habitual negative responses (Weiss, 1980). These ineffective responses may be due to a lack of skills that would enable a change in negative responses to occur. Positive sentiment override (PSO) creates the necessary change in communication through a change in the reaction to a negative comment. For example, rather than matching a negative comment with a negative reply, one partner disregards the initial comment and responds, instead, with a neutral or positive reply. For PSO to be effective, this reply must also be provided without the expectation of positive reciprocation from the spouse. PSO effectively stops a response-by-response accountability approach where each person is “keeping score” in the relationship, acting in turn with mirrored responses of negativity. PSO has been linked to an increase in marital satisfaction in relationships with negative communication styles (Weiss, 1980).

Positive sentiment override has also been shown to be related to perceptions of a spouse’s affect in conflict situations. Hawkins, Carrere and Gottman (2002) looked at husbands’ and wives’ perceptions of spousal affect and found that when wives perceived
low-intensity negative affect from their spouse, employing PSO resulted in the wife rating her husband’s negative affect as neutral. Interestingly, when males perceived low-intensity negative affect from their spouse and employed PSO, the cycle of fighting was also stopped, but the males still accurately assessed the wife’s negative affect. Furthermore, when high-intensity negative affect was present in either spouse, PSO did not appear to counteract an individual’s perceptions of their spouse’s negative affect, nor did PSO improve marital satisfaction.

*Proposed Study*

To summarize, prior research in positive emotions suggests that positive emotions foster an upward spiral of increasing well-being and functioning, as well as mitigating deleterious effects from negative reactions (Fredrickson, 2001; Fredrickson & Branigan, 2005; Fredrickson, Mancuso, Branigan, & Tugade, 2000; Fredrickson & Maynard et al., 2000). Taken alone, completing daily gratitude lists have shown promise in increasing positive emotions within the individual on a day-to-day basis (Emmons & McCullough, 2003). Overall, when dealing with a particular traumatic situation, the ability to cultivate positive emotions has been shown to buffer individuals from low to moderate levels of negative stress effects (Fredrickson, Tugade, Waugh, & Larkin, 2003).

Not surprisingly, research in marital relationships links positive emotions to higher marital satisfaction (Gottman et al., 1998; Gottman, 1994). Moreover, when attempting to change communication styles, positive emotions have been found to mitigate the impact of negative spousal verbalizations on marital satisfaction, such that high levels of positive affect attenuated the impact of a spouse’s negative problem-
solving skills on marital satisfaction (Johnson et al., 2005). Another area of relationship research found that positive emotions act to increase marital satisfaction when one partner responds to a negative comment with a neutral or positive comment (i.e., PSO); changing the interaction dynamic while decreasing negative communication styles (Weiss, 1980; Hawkins et al., 2002). Yet, previous research in marital relationships has not specifically examined the role positive emotions play in the link between negative emotion and perceptions of either constructive or destructive marital exchanges. Moreover, most research on the dynamic interplay between positive emotion and negative emotions on social networks has focused primarily on individual college students, with less known about marital relationships.

Based on the prior literature review, we predicted positive emotions would be related to better marital exchanges and negative emotions would be related to worse marital exchanges (Hypothesis 1). Furthermore, our research question focuses on the role positive emotions play in influencing negative emotions and marital exchanges. We hypothesized that positive emotions will act as a moderator in the link between negative emotions and marital exchanges. Specifically, the second hypothesis proposes an interaction between positive and negative emotions, such that positive emotions will act as a buffer between negative emotions and marital exchanges at low and moderate levels of negative emotions. At high levels of negative emotions, positive emotions will lose their impact. In order to test these hypotheses, analyses were conducted on 2 datasets: 1) the MIDUS dataset, a nationally representative sample of 2,286 married/cohabiting
individuals, and 2) the Baby T.I.M.E. Study (Baby Transitions in Marital Exchanges) dataset of 104 married/cohabiting couples expecting their first child.
CHAPTER 2

STUDY 1

Method

Sample

Secondary data analyses were conducted on the MIDUS survey, a nationally representative telephone-mail survey carried out in 1995-1996 under the auspices of the John D. and Catherine T. MacArthur Foundation Network on Successful Midlife Development. The sample of 3032 respondents was recruited from a random digit dial sampling frame of the coterminous United States. Eligibility was restricted to people in the age range 25 to 74. Men and older respondents were oversampled. Only one respondent was selected from each eligible household. The survey was carried out in two phases. The first, a telephone interview, averaged thirty minutes to complete. The second, a self-administered mail questionnaire, was estimated to average two hours. The phase-one response rate was 70.0% and the conditional phase-two response rate was 86.8%, for an overall response rate of 60.8% (http://midmac.med.harvard.edu/tech.html).

Tract-level data from the 1990 Census were linked to the telephone central office codes of all sample households and used to weight the survey for differences between respondents and nonrespondents on a profile of Census variables. All results reported in
this paper are based on these weighted data. For our current analyses, we used the subsample of married/cohabiting individuals (N = 2070) to better understand the intertwining role of positive and negative emotions in marital exchanges. Multiple linear regression analyses were conducted to examine if positive emotions moderate the relationship between negative emotions and marital exchanges.

Measures

Sociodemographics. Seven demographic characteristics were assessed: gender, years married, age, education, income, race/ethnicity, and presence of children. Years married ranged from 1 to 59 years and was represented as a continuous variable. Age ranged from 25 to 74 and consisted of 5 groups (25 to 34 years old, 35 to 44 years old, 45 to 54 years old, 55 to 64 years old, and 65 to 74 years old). For analytic purposes, age was dummy-coded and a reference group was chosen (age 25 to 34). Education was represented as a continuous variable based on number of completed years of formal education from 0 to more than 16 years of formal education. Income was represented as a continuous variable of total family income before taxes in the year prior to the interview (range $0-300,000). Race/ethnicity was self-identified and consisted of Whites, Black, or Other (e.g., Native American or Aleutian Islander/Eskimo, Asian or Pacific Islander). For analytical purposes race/ethnicity was dummy-coded and a reference group was chosen (Whites). Presence of children in the household was defined as having a child 18 years of age or younger living with the respondent. This variable was dichotomized, with 1 indicating the presence of a child(ren) and 0 representing no children in the home.
Positive Emotions. In order to assess positive emotions, participants responded to a six-item measure consisting of a series of questions about how often during the past 30 days the respondent felt cheerful and extremely happy (see Appendix A for a complete list). Response categories were rated on a 5-point Likert scale (1 = all of the time; 2 = most of the time; 3 = some of the time; 4 = a little of the time; 5 = none of the time). A scale was constructed by first reversing the scale of the six items, obtaining a weighted mean score for the items, and then standardizing the mean score to obtain an overall positive emotions index, with higher scores indicating more positive emotions. Cronbach’s alpha for this scale is high at .92.

Negative Emotions. We assessed negative emotions with a six-item measure consisting of a series of questions about how often during the past 30 days the respondent felt so sad nothing could cheer you up and nervous (see Appendix A for a complete list). Response categories were rated on a 5-point Likert scale (1 = all of the time; 2 = most of the time; 3 = some of the time; 4 = a little of the time; 5 = none of the time). A scale was constructed by first reversing the scale of the six items, obtaining a weighted mean score for the items, and then standardizing the mean score to obtain an overall negative emotions index, with higher scores indicating more negative emotions. Cronbach’s alpha for overall negative emotions was high at .87.

Constructive Marital Exchanges. Two aspects of constructive marital exchanges were assessed in the current study: spousal empathy and relationship rating. Spousal empathy was assessed with a six-item measure (e.g., how much does your spouse or
partner really care about you and how much does he or she understand the way you feel about things) (see Appendix A for a complete list). Response categories were rated on a 4-point Likert scale (1 = a lot; 2 = some; 3 = a little; 4 = not at all). A scale was constructed by first reversing the scale of the six items, obtaining a weighted mean score for the items, and then standardizing the mean score to obtain an overall spousal empathy index, with higher scores indicating more perceived empathy from the spouse. Cronbach’s alpha for overall spousal empathy was high at .91. One item assessed the relationship rating. Participants were asked: “Would you describe your relationship as excellent, very good, good, fair, or poor?” The responses were reverse coded with higher numbers indicating better relationship ratings.

**Destructive Marital Exchanges.** Two aspects of destructive marital exchanges were assessed in the current study: spousal conflict and problems in the relationship. Spousal conflict was assessed with a six-item measure (e.g., how often does your spouse or partner make too many demands on you and how often does he or she make you feel tense) (see Appendix A for study measures). Response categories were rated on a 4-point Likert scale (1 = often; 2 = sometimes; 3 = rarely; 4 = never). A scale was constructed by first reversing the scale of the six items, obtaining a weighted mean score for the items, and then standardizing the mean score to obtain an overall spousal conflict index, with higher scores indicating more spousal conflict. Cronbach’s alpha for overall spousal criticism was high at .88. Additionally, participants responded to relationship problems with one item: “During the past year, how often have you thought your relationship might be in trouble- never, once, a few times, most of the time, or all the time?”
Potential Covariate. One additional measure was included as a potential covariate: spousal mental health, measured using a single item. Participants were asked “How would you describe your spouse or partner’s overall mental health at the present time: excellent, very good, good, fair, or poor?” The item was reverse coded so that higher numbers represented better health.

Analysis Procedures

Preliminary analyses were conducted with all potential covariates (i.e., gender, years married, age, education, income, race/ethnicity, presence of children, and spouse mental health) entered simultaneously into multiple linear regression analyses predicting all marital exchange variables. Based on preliminary analyses, all variables (except income) were significantly related to the outcomes and were retained for analyses. While income was not significantly related to either outcome, it was still retained for demographic purposes. To address the research questions, the data were analyzed using multiple linear regression analysis with the two constructive and two destructive marital exchange measures as outcome variables. (See Tables 1 and 2 for simple summaries and bivariate correlations of all major study variables.) To test moderation, an interaction term was created and the main effects were entered first before adding the interaction term. Both $\Delta R^2$ and the individual coefficients were examined to determine significance. Preliminary examination of the data revealed that all of the assumptions of linear regression (e.g., linearity, multivariate normality, and random residuals) were met in the current dataset. Examination of the bivariate correlation matrix also did not reveal any problems with multicollinearity (see Table 1).
Table 1. Correlations for Study 1 Variables (N = 2,065)

<table>
<thead>
<tr>
<th></th>
<th>Positive Emotion</th>
<th>Negative Emotion</th>
<th>Spousal Empathy</th>
<th>Relationship Rating</th>
<th>Spousal Conflict</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emotion</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive Emotion</td>
<td>--</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative Emotion</td>
<td>-.60</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Constructive Marital Exchanges</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spousal Empathy</td>
<td>.30</td>
<td>-.23</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relationship Rating</td>
<td>.34</td>
<td>-.24</td>
<td>.75</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td><strong>Destructive Marital Exchanges</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spousal Conflict</td>
<td>-.32</td>
<td>.29</td>
<td>-.66</td>
<td>-.65</td>
<td>--</td>
</tr>
<tr>
<td>Relationship Problems</td>
<td>-.32</td>
<td>.30</td>
<td>-.61</td>
<td>-.67</td>
<td>.59</td>
</tr>
</tbody>
</table>

*Note.* All correlations significant at \( p < .0001 \)

**Results**

**Descriptive Statistics**

The sample was primarily White (86%), with at least 12 years of education (87%), and 50% had at least one child living at home. Ninety-one percent of the couples were married. As shown in Table 2, emotion scores ranged from 1 to 5 for both positive emotion and negative emotion with respondents reporting higher average levels of positive emotion (M = 3.40) and comparatively low levels of negative emotions (M = 1.55). A similar trend was seen for constructive and destructive marital exchanges, such that participants reported constructive marital exchanges more often than destructive marital exchanges (M = 3.56 for spousal empathy on a scale from 1 to 4 and M = 3.88 for
relationship rating on a scale from 1 to 5; M = 2.25 for spousal conflict on a scale of 1 to 4 and M = 1.89 for relationship problems on a scale of 1 to 5) (see Table 2).

Table 2. Means for Study 1 Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>(SD)</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emotion</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive Emotions</td>
<td>3.40</td>
<td>(0.76)</td>
<td>1-5</td>
</tr>
<tr>
<td>Negative Emotions</td>
<td>1.55</td>
<td>(0.65)</td>
<td>1-5</td>
</tr>
<tr>
<td><strong>Constructive Marital Exchanges</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spousal Empathy</td>
<td>3.56</td>
<td>(0.59)</td>
<td>1-4</td>
</tr>
<tr>
<td>Relationship Rating</td>
<td>3.88</td>
<td>(1.05)</td>
<td>1-5</td>
</tr>
<tr>
<td><strong>Destructive Marital Exchanges</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spousal Conflict</td>
<td>2.25</td>
<td>(0.65)</td>
<td>1-4</td>
</tr>
<tr>
<td>Relationship Problems</td>
<td>1.89</td>
<td>(1.10)</td>
<td>1-5</td>
</tr>
</tbody>
</table>

Table 3 presents results from analyses on the influence of emotions on marital exchanges. Two models were examined for each outcome: 1) main effect model with negative and positive emotions predicting marital exchanges and 2) the interaction model of negative and positive emotions added.

As shown in Table 3, in support of Hypothesis 1, higher levels of positive emotions were related to greater reports of constructive marital exchanges and fewer reports of destructive marital exchanges. However, higher levels of negative emotions were only related to greater reports of destructive marital exchanges.
Table 3. *Multiple Linear Regression Analyses for Study 1*

<table>
<thead>
<tr>
<th>Constructive Marital Exchanges</th>
<th>Spousal Empathy</th>
<th>Relationship Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$b$</td>
<td>(se)</td>
</tr>
<tr>
<td><strong>MODEL I</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative Emotion</td>
<td>.00</td>
<td>(.02)</td>
</tr>
<tr>
<td>Positive Emotion</td>
<td><strong>.13</strong></td>
<td>(.02)</td>
</tr>
<tr>
<td><strong>MODEL II</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative Emotion</td>
<td>.03</td>
<td>(.06)</td>
</tr>
<tr>
<td>Positive Emotion</td>
<td><strong>.15</strong></td>
<td>(.04)</td>
</tr>
<tr>
<td>Positive X Negative</td>
<td>-.01</td>
<td>(.02)</td>
</tr>
<tr>
<td>Total $R^2$</td>
<td></td>
<td>.30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Destructive Marital Exchanges</th>
<th>Spousal Conflict</th>
<th>Relationship Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$b$</td>
<td>(se)</td>
</tr>
<tr>
<td><strong>MODEL I</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative Emotion</td>
<td>.10 *</td>
<td>(.02)</td>
</tr>
<tr>
<td>Positive Emotion</td>
<td><strong>-12</strong></td>
<td>(.02)</td>
</tr>
<tr>
<td><strong>MODEL II</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative Emotion</td>
<td>-.12</td>
<td>(.06)</td>
</tr>
<tr>
<td>Positive Emotion</td>
<td><strong>-.24</strong></td>
<td>(.04)</td>
</tr>
<tr>
<td>Positive X Negative</td>
<td><strong>.08</strong></td>
<td>(.02)</td>
</tr>
<tr>
<td>Total $R^2$</td>
<td></td>
<td>.33</td>
</tr>
</tbody>
</table>

* $p \leq .01$ ** $p \leq .001$
Positive Emotion as a Moderator

When adding the interaction term to the model, Hypothesis 2 was supported for both destructive marital exchange variables, such that positive and negative emotions significantly interacted on spousal conflict, $\Delta R^2 = .05, F(1, 1862) = 13.85, p < .0001$ and relationship problems, $\Delta R^2 = .05, F = (1, 1865) = 10.90, p < .001$. For the two constructive marital exchange variables, however, no moderation was found.

Decompositions of the interaction terms for destructive marital exchanges are shown in Figures 1 and 2. Both graphs show that positive emotions are linked with fewer reports of destructive marital exchanges at low and moderate levels of negative emotions, while at high levels of negative emotions positive emotions show no buffering relationship.

Discussion

This study supports previous findings that positive and negative emotions have a direct relation with marital relationships, such that positive emotions are related to better marital exchanges, whereas negative emotions are related to worse marital exchanges (Hypothesis 1). Our analyses provide partial support for the second hypothesis, positive emotions as a buffer for negative emotions, but only with destructive marital exchanges - not with constructive marital exchanges. Decomposition of the interaction term showed that, in support of our prediction, positive emotion was significantly related to fewer destructive marital exchanges at low or moderate levels of negative emotions (see Figures 1 and 2). However, at high levels of negative emotions, positive emotions were no longer
Figure 1. Role of positive and negative emotions on spousal conflict
Figure 2. Role of positive and negative emotions on relationship problems
related to fewer destructive marital exchanges. In other words, contrary to the broaden-and-build theory which suggests that positive emotions should limit the deleterious impact of negative emotions, high levels of negative emotions reduced the beneficial impact of positive emotions for destructive marital exchanges.

Taken together these findings provide a more nuanced picture of the link between negative and positive emotion on the individual. In accordance with Rook (1984), the negative does seem to have a stronger impact on the individual than the positive – but only at the highest levels of the negative. Furthermore, negative emotion only impacted destructive marital exchanges, not constructive marital exchanges. This result suggests that something unique is going on with negative emotion and destructive marital exchanges. One possible explanation is that positive emotions cannot blunt the impact of high levels of negative emotion in destructive marital exchanges. Thus, positive emotions appear to have a complex relationship with negative emotions, in that both level of negative emotions and the valence of the marital exchange need to be considered.

**Limitations.** There are several caveats for Study 1. Although the study employs a large, nationally representative sample, this study involves secondary analyses of previously collected data. As such, the measures that were used to test the hypotheses were taken from the existing study, even though those measures may not have completely operationalized the intended constructs. For example, the spousal mental health measure was assessed with only one item.
In addition, the data are correlational for Study 1, and therefore there is no way to determine if emotions and marital exchanges have a unidirectional or bidirectional relationship with each other. In other words, due to the cross-sectional design of the study, the potential exists for the direction of the link to be reversed so that marital quality impacts the amount of emotions being reported.

While the current study utilized a large data set with couples married for varying numbers of years, the study only assessed the individual and not the couple. Our analyses strongly suggest the importance of examining both positive and negative emotions and their intertwining relationship, in both partners in a marriage, over an extended period of time to see how positive emotion and negative emotion affect long-term marital exchanges.

Study 1 was conducted as a snapshot of the individual during their life, but did not address any specific life event or issue. Conducting a study during a known life stressor may function to more clearly illustrate the way emotions interact with marital exchanges. Study 2 addresses several of these concerns by examining both members in a relationship during a major life event, namely preparation for the birth of their first child.
CHAPTER 3

STUDY 2

During times of transition, emotions may impact marital exchanges differently. For example, negative emotions may have more of an impact during negative stressful life events and positive emotions may have more of an impact during positive life events. A second study was conducted to see how preparation for parenthood, a major life event, influences emotions in marital exchanges. In congruence with Study 1 hypotheses, Study 2 proposes that positive emotions will be related to better marital exchanges and negative emotions will be related to worse marital exchanges (Hypothesis 1). Hypothesis 2 proposes an interaction between positive and negative emotions for marital exchanges. To test these hypotheses, 104 married and cohabiting couples were assessed during the last trimester of pregnancy.

Method

Sample

The Baby T.I.M.E. Study (Baby Transitions in Marital Exchanges) is a telephone-email survey carried out in 2008. The sample of 104 couples (N = 208) was recruited from Internet chat rooms targeted for expecting parents, as well as birthing classes at a local hospital. Eligibility was restricted to heterosexual couples who were
cohabiting or married, over the age of 18, expecting their first child, and currently between 22 and 34 weeks pregnant with their first child. The survey was carried out in two phases. The first, a self-administered online survey, estimated to average 20 minutes to complete, followed with a telephone interview, averaged 30 minutes to complete. Both partners completed the survey. As in Study 1, multiple linear regression analyses were conducted to examine if positive emotions moderate the relationship between negative emotions and marital exchanges.

Measures

Sociodemographics. Six demographic characteristics were assessed: gender, length of marriage/cohabitation, age, education, income, and race/ethnicity. Length of marriage/cohabitation ranged from 0 to 12 years and was represented as a continuous variable. Age ranged from 21 to 52 and was represented as a continuous variable. Five categories were created for education based on number of completed years of formal education: 0-11; 12; 13-15; 16; and 17 or more. Income was represented as a quasi-continuous variable consisting of several categories of total family income before taxes in the year prior to the interview (range $0-120,000+). Race/ethnicity was self-identified and consisted of White (non-Hispanic), African American, Hispanic, Asian, or Other. For analytical purposes race/ethnicity was dummy-coded and a reference group was chose (White).

Positive Emotions. In order to assess positive emotions, participants responded to a six-item measure consisting of a series of questions about how often during the past 7
days the respondent felt cheerful and in good spirits (see Appendix B for study measures). Response categories were rated on a 7-point Likert scale (0 = not at all; 6 = daily). A scale was constructed by obtaining a mean score for the items for an overall positive emotions index, with higher scores indicating more positive emotions. Cronbach’s alpha for overall positive emotions was high at .86.

**Negative Emotions.** Negative emotions were assessed with a six-item measure consisting of a series of questions about how often during the past 7 days the respondent felt that they couldn’t shake off the blues even with help from family or friends and nervous or shaky (see Appendix B for study measures). Response categories were rated on a 4-point Likert scale (0 = not at all; 1 = a little of the time; 2 = some of the time; 3 = most of the time). A scale was constructed by obtaining a mean score for the items for an overall negative emotions index, with higher scores indicating more negative emotions. Cronbach’s alpha for overall negative emotions was moderate at .57.

**Constructive Marital Exchanges.** Constructive marital exchanges were assessed with a six-item measure consisting of a series of questions about how often the spouse interacted positively with the partner during the past 30 days (e.g., how often did your partner show you that he or she cares and how often did your partner understand the way you felt about things) (see Appendix B for study measures). Response categories were rated on a 5-point Likert scale (0 = none; 1 = a little; 2 = some; 3 = quite a bit; 4 = a lot). A scale was constructed by obtaining a mean score for the items for an overall
constructive marital exchange index, with higher scores indicating more marital support. Cronbach’s alpha for overall constructive marital exchanges was moderate at .75.

*Destructive Marital Exchanges.* Destructive marital exchanges were assessed with a four-item measure consisting of a series of questions about how often the spouse interacted negatively with the partner during the past 30 days (e.g., how much did you feel that your partner did not understand what you were going through and how much did you feel that your partner was withdrawn or avoided you) (see Appendix B for study measures). Response categories were rated on a 5-point Likert scale (0 = none; 1 = a little; 2 = some; 3 = quite a bit; 4 = a lot). A scale was constructed by obtaining a mean score for the items for an overall destructive marital exchange index, with higher scores indicating more marital problems. Cronbach’s alpha for overall destructive marital exchanges was moderate at .69.

*Analysis Procedures*

Preliminary analyses were conducted with all six potential covariates (i.e., gender, length of marriage/cohabitation, age, education, income, and race/ethnicity) entered simultaneously into linear regression analyses predicting both marital exchange variables. Based on preliminary analyses, three variables were significantly related to the outcome variables and were retained for analyses (gender, length of marriage/cohabitation, and education). To address the research questions, the data were analyzed using multiple linear regression analysis with the two marital exchange measures as outcome variables. (See Tables 4 and 5 for simple summaries and bivariate correlations
for all major study variables.) To test moderation, an interaction term was created and the main effects were entered first before adding the interaction term. Both $\Delta R^2$ and the individual coefficients were examined to determine significance. Preliminary examination of the data revealed that all of the assumptions of linear regression (e.g., linearity, multivariate normality, and random residuals) were met in the current dataset. Examination of the bivariate correlation matrix also did not reveal any problems with multicollinearity (see Table 5). Positive and negative emotions were standardized prior to analyses.

Results

Descriptive Statistics

The sample was primarily White (89%), with at least 16 years of education (75%). As shown in Table 4, positive emotion scores ranged from 0 to 6 with respondents reporting higher average levels of positive emotion (M = 4.45) while negative emotion scores ranged from 0 to 3 with comparatively low levels of negative emotions reported (M = .45). A similar trend was seen for constructive and destructive marital exchanges, such that participants reported constructive marital exchanges more often than destructive marital exchanges on a scale of 0 to 4 (M = 3.13 and M = .82, consecutively) (see Table 4).
Table 4. *Correlations for Study 2 Variables (N = 104)*

<table>
<thead>
<tr>
<th></th>
<th>Positive Emotion</th>
<th>Negative Emotion</th>
<th>Constructive Exchanges</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emotion</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive Emotion</td>
<td>--</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>Negative Emotion</td>
<td>-.51</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td><strong>Marital Exchanges</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constructive</td>
<td>.35</td>
<td>-.20</td>
<td>--</td>
</tr>
<tr>
<td>Destructive</td>
<td>-.42</td>
<td>.34</td>
<td>-.59</td>
</tr>
</tbody>
</table>

*Note.* All correlations were significant at p<.01.

Table 5. *Means for Study 2 Variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>(SD)</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emotion</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive Emotion</td>
<td>4.45</td>
<td>0.89</td>
<td>0-6</td>
</tr>
<tr>
<td>Negative Emotion</td>
<td>0.45</td>
<td>0.38</td>
<td>0-3</td>
</tr>
<tr>
<td><strong>Marital Exchanges</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constructive</td>
<td>3.13</td>
<td>0.53</td>
<td>0-4</td>
</tr>
<tr>
<td>Destructive</td>
<td>0.82</td>
<td>0.63</td>
<td>0-4</td>
</tr>
</tbody>
</table>

*Note.* Positive and negative emotions were standardized for all analyses.

Table 6 presents results from analyses on the influence of emotions on marital exchanges. Two models were examined for both outcomes: 1) main effect model with negative and positive emotions predicting marital exchanges and 2) the interaction model of negative and positive emotions added.
Table 6. *Multiple Linear Regression Analyses for Study 2*

<table>
<thead>
<tr>
<th>Constructive Exchanges</th>
<th>Destructive Exchanges</th>
</tr>
</thead>
<tbody>
<tr>
<td>$b$</td>
<td>$(se)$</td>
</tr>
<tr>
<td><strong>MODEL I</strong></td>
<td></td>
</tr>
<tr>
<td>Negative Emotion</td>
<td>-.02 (.04)</td>
</tr>
<tr>
<td>Positive Emotion</td>
<td>.34 *** (.04)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

As shown in Table 6, replicating the results from Study 1, a main effect was found for positive emotions such that higher levels of positive emotion were related to both greater reports of constructive marital exchanges and fewer reports of destructive marital exchanges. Higher levels of negative emotion, however, were only significantly related to greater reports of destructive marital exchanges. Unlike Study 1, when adding the interaction term to the model, Hypothesis 2 was not supported for either constructive or destructive marital exchanges – in other words, positive and negative emotions did not significantly interact on marital exchanges.

**Discussion**

This study supports previous findings that positive and negative emotions have a direct relation with marital exchanges, such that positive emotions are related to better marital exchanges, whereas negative emotions are related to worse marital exchanges.
(Hypothesis 1). Additionally, negative emotion only impacted destructive marital exchanges, not constructive marital exchanges. Our analyses did not provide support for our second hypothesis, positive emotion as a buffer for negative emotion in marital exchanges.

Limitations. Study 2 addresses several of the issues in Study 1, first by looking at both partners in a relationship rather than the individual and by interviewing the couples during a specific life event. Nevertheless, there are still several limitations to Study 2 as well. The data are cross-sectional and longitudinal research is imperative to clarify the direction of the relationship between emotions and marital exchanges. However, the study did find a relationship between emotions and marital exchanges, warranting further research with longitudinal data to clarify the results.

Additionally, the dataset for Study 2 is comprised of couples that are married or cohabiting; therefore, the participants are not necessarily married, and it is unclear if emotions impact relationships differently for couples who have been married for a long time as compared to those couples who have only recently married. Furthermore, measuring long-term marital exchanges to verify that destructive marital exchanges do in fact lead to worse marital outcomes and dissolution is important to verify.
CHAPTER 4

GENERAL DISCUSSION

For my thesis, I sought to examine the ability of positive emotions to benefit marital exchanges with respect to negative emotions. To this end, I considered both helpful (constructive) and unhelpful (destructive) marital exchanges. Across both studies, the importance of positive emotions were highlighted in the context of both greater constructive marital exchanges and fewer destructive marital exchanges, while negative emotions were only associated with more destructive marital exchanges. Potential explanations for the relationship between positive emotion and marital exchanges are discussed, as well as the relationship between negative emotions and destructive marital exchanges and the lack of relationship between negative emotions and constructive marital exchanges.

Role of Emotions in Marital Exchanges

Positive emotions were consistently related to more constructive marital exchanges and fewer destructive marital exchanges in both studies. The relationship between positive emotions and both constructive and destructive marital exchanges taps into the strength of positive emotions in relationships. The value of positive emotions in improving marital exchanges supports the notion of positive emotions working to
“broaden-and-build” upon previous levels of positive emotion to improve marital exchanges (Fredrickson, 2001).

Additionally, negative emotions were consistently related only to greater reports of destructive marital exchanges. Thus, negative emotions appear to only impact conflict in relationships. This domain specific result is contrary to what others have found with respect to negative emotions and exchanges. Rook (2001) found an asymmetrical relationship between exchanges and emotions such that negative exchanges were related to both positive and negative emotions while positive exchanges were only related to positive emotions. My thesis, on the other hand, found that positive emotions appear to cross-over and impact both positive and negative marital exchanges, but negative emotions only impact negative exchanges. Thus, in my thesis, positive emotions appeared to have more potency. However, it is important to note that Rook looked at the impact of daily exchanges on emotions, while we looked at the relationship of emotions on exchanges. This difference in directionality could be one potential explanation for the contradictory findings. Yet, the consistency of the asymmetrical cross-over results in both a nationally representative sample of middle-aged adults and a sample of couples experiencing the transition to parenthood suggest that something more may be at play. Future research needs to tease apart more clearly the causality and cross-over effects between emotions and exchanges.

One other issue to consider is that the relationship between negative and positive emotions and marital exchanges may be better represented as a ratio than main effects. Fredrickson and colleagues (2003 and 2005) proposed that for an individual to flourish
there needed to be a positivity-to-negativity ratio of 3 positive for every 1 negative emotion experienced. Similarly, Gottman (1994) reported an essential cut-off point for quantifying the number of negative and positive emotions expressed during conflict resolution. In Gottman’s study, more than one negative emotion for every four positive emotions during an argument was indicative of marital dissatisfaction and dissolution. As evidenced by the interaction in Study 1, an equal rating of positive and negative emotions would not be indicative of a satisfying relationship. In other words, when high levels of negative emotions are included in the model, equally high ratings of positive emotions did not predict favorable marital exchanges (see Figures 1 and 2).

In order to test this idea of a positivity-to-negativity ratio, we conducted a set of post hoc analyses with the MIDUS dataset. First, we created a ratio of positive emotion to negative emotions, by taking the positive emotion score and dividing it by the negative emotion score, with scores above 1 indicating a greater ratio of positive emotions to negative emotions. This single continuous variable was then entered into regression analyses with the covariates for each of the four marital exchange outcomes. As shown in Appendix C, the positive-to-negative ratio was significant for each outcome in the expected direction. Specifically, a higher positive to negative ratio was related to more constructive marital exchanges and fewer destructive marital exchanges. Our next step is to decompose this variable to understand where the threshold may lie for positive-to-negative emotions – we are interested to see whether the 3:1 or 4:1 ratios evidenced by Fredrickson or Gottman was replicated in Study 1.
**Positive Emotions as a Moderator**

My third hypothesis proposed that positive emotions would buffer low and moderate levels of negative emotions in marital exchanges. Partial support for this hypothesis was found, but only in Study 1. Study 1 results indicated that positive emotions buffered the deleterious relationship between negative emotions and *destructive* marital exchanges for low and moderate levels of negative emotions. However, positive emotions were not related to destructive marital exchanges at high levels of negative emotion.

The impact of negative emotions may only be relevant in non-stress or daily situations. Study 1 looked at individuals who were not undergoing any particular life event, and provided only a “snapshot” into one’s relationship dynamics. How emotions function in the relationship during times of stress is unclear. Additionally, the length of the relationship may also impact the influence of positive emotions on negative emotions, such that older couples may be less sensitive to negative emotions. Whereas negative emotions may be more salient for newly married couples, positive emotions may be more important for those who have been married longer, by enabling positive emotions to attenuate the deleterious impact of negative emotions in destructive marital exchanges.

Conversely, due to the positive event context (expecting one’s first child) for Study 2, there may not have been enough variability in negative emotions to demonstrate the interaction between positive and negative emotions on marital exchanges. Furthermore, the timeframe for the assessment of emotions in Study 2 was only 7 days compared to 30 days for Study 1. As a result, the lack of an interaction in Study 2 may
suggest that the moderating role of positive emotions is more applicable for trait-like
emotions as opposed to state-like emotions.

Future Directions

A longitudinal study building on and supporting the previous findings is needed to
clarify these mixed results. A study is currently being conducted to follow the
participants from Study 2 at three additional time points. Wave 2 is being collected 1
month post-partum; Wave 3 at 4 months post-partum; and Wave 4 is being conducted 9
months post-partum. Following participants for nearly a year through the transition to
parenthood will help to illuminate how positive and negative emotions work together to
impact relationship quality through a major, life-changing experience.

In order to address the inconsistencies between results for Study 1 and Study 2,
future research could first look at couples who are newly married (between 0 to 7 years)
as compared to couples who have been married a long time (20 or more years) to see how
emotions impact marital exchanges differently. Also, future research would benefit from
examining “stressed” couples versus matched controls. For instance, assessing couples
adapting to the birth of their first child compared to couples matched on length of
marriage who have not had a child could highlight the role of stress in emotions and
marital exchanges.

Another important caveat to mention would be the potential usefulness of daily
diary studies to examine the relationship between emotions and marital exchanges. Using
diary studies could make it easier to see how emotions from one day impact marital
exchanges the next day. Completing daily diary studies for several days at a time at
several time points across the transition to parenthood would further differentiate changes in how emotions impact relationships throughout this particular life event.

Conclusions

The research in this thesis contributes to current understanding of how positive and negative emotions function within different contexts related to marital exchanges. Positive and negative emotions are related to marital exchanges in a complex manner and identification of which contexts links with which emotion will help to tease apart the role of emotion and its relationship with marital exchanges. The environmental situation of the cohort under investigation may be an important predictor in how emotions will impact marital relationships. Specifically, during good marital experiences, positive emotions appear to be the most helpful in supporting marital exchanges. Thus, high levels of positive emotion overcome potential difficulties from low and moderate levels of negative emotions during marital exchanges. Meanwhile, negative emotions become stronger than positive emotions when dealing with destructive marital exchange habits, such that high levels of negative emotions diminish any benefits of positive emotions. Thus, when studying emotions within marital relationships, it appears that taking the context as well as the valence of the outcome into account is essential when interpreting the results.
REFERENCES
REFERENCES


APPENDICES
MIDUS STUDY MEASURES

POSITIVE EMOTIONS

1. During the past 30 days, how much of the time did you feel cheerful?
   all of the time     most of the time     some of the time     a little of the time     none of the time
   1                   2                     3                         4                         5

2. During the past 30 days, how much of the time did you feel in good spirits?
   all of the time     most of the time     some of the time     a little of the time     none of the time
   1                   2                     3                         4                         5

3. During the past 30 days, how much of the time did you feel extremely happy?
   all of the time     most of the time     some of the time     a little of the time     none of the time
   1                   2                     3                         4                         5

4. During the past 30 days, how much of the time did you feel calm and peaceful?
   all of the time     most of the time     some of the time     a little of the time     none of the time
   1                   2                     3                         4                         5

5. During the past 30 days, how much of the time did you feel satisfied?
   all of the time     most of the time     some of the time     a little of the time     none of the time
   1                   2                     3                         4                         5

6. During the past 30 days, how much of the time did you feel full of life?
   all of the time     most of the time     some of the time     a little of the time     none of the time
   1                   2                     3                         4                         5
NEGATIVE EMOTIONS

1. During the past 30 days, how much of the time did you feel so sad nothing could cheer you up?
   
   all of the time     most of the time     some of the time     a little of the time     none of the time
   1                2                3                4                5

2. During the past 30 days, how much of the time did you feel nervous?
   
   all of the time     most of the time     some of the time     a little of the time     none of the time
   1                2                3                4                5

3. During the past 30 days, how much of the time did you feel restless or fidgety?
   
   all of the time     most of the time     some of the time     a little of the time     none of the time
   1                2                3                4                5

4. During the past 30 days, how much of the time did you feel hopeless?
   
   all of the time     most of the time     some of the time     a little of the time     none of the time
   1                2                3                4                5

5. During the past 30 days, how much of the time did you feel that everything was an effort?
   
   all of the time     most of the time     some of the time     a little of the time     none of the time
   1                2                3                4                5

6. During the past 30 days, how much of the time did you feel worthless?
   
   all of the time     most of the time     some of the time     a little of the time     none of the time
   1                2                3                4                5
SPOUSAL EMPATHY

1. How much does your spouse or partner really care about you?
   - a lot
   - some
   - a little
   - not at all
   - 1
   - 2
   - 3
   - 4

2. How much does he or she understand the way you feel about things?
   - a lot
   - some
   - a little
   - not at all
   - 1
   - 2
   - 3
   - 4

3. How much does he or she appreciate you?
   - a lot
   - some
   - a little
   - not at all
   - 1
   - 2
   - 3
   - 4

4. How much can you rely on him or her for help if you have a serious problem?
   - a lot
   - some
   - a little
   - not at all
   - 1
   - 2
   - 3
   - 4

5. How much can you open up to him or her if you need to talk about your worries?
   - a lot
   - some
   - a little
   - not at all
   - 1
   - 2
   - 3
   - 4

6. How much can you relax and be yourself around him or her?
   - a lot
   - some
   - a little
   - not at all
   - 1
   - 2
   - 3
   - 4
SPOUSAL CONFLICT

1. How often does your spouse or partner make too many demands on you?

<table>
<thead>
<tr>
<th></th>
<th>often</th>
<th>sometimes</th>
<th>rarely</th>
<th>never</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

2. How often does he or she make you feel tense?

<table>
<thead>
<tr>
<th></th>
<th>often</th>
<th>sometimes</th>
<th>rarely</th>
<th>never</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

3. How often does he or she argue with you?

<table>
<thead>
<tr>
<th></th>
<th>often</th>
<th>sometimes</th>
<th>rarely</th>
<th>never</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

4. How often does he or she criticize you?

<table>
<thead>
<tr>
<th></th>
<th>often</th>
<th>sometimes</th>
<th>rarely</th>
<th>never</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

5. How often does he or she let you down when you are counting on him or her?

<table>
<thead>
<tr>
<th></th>
<th>often</th>
<th>sometimes</th>
<th>rarely</th>
<th>never</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

6. How often does he or she get on your nerves?

<table>
<thead>
<tr>
<th></th>
<th>often</th>
<th>sometimes</th>
<th>rarely</th>
<th>never</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
APPENDIX B

BABY T.I.M.E. STUDY MEASURES
BABY T.I.M.E. STUDY MEASURES

POSITIVE EMOTIONS

1. To what extent you have generally felt cheerful during the past 7 days?

   not at all                               daily
   0      1      2      3      4      5      6

2. To what extent you have generally felt in good spirits during the past 7 days?

   not at all                               daily
   0      1      2      3      4      5      6

3. To what extent you have generally felt happy during the past 7 days?

   not at all                               daily
   0      1      2      3      4      5      6

4. To what extent you have generally felt calm and peaceful during the past 7 days?

   not at all                               daily
   0      1      2      3      4      5      6

5. To what extent you have generally felt satisfied during the past 7 days?

   not at all                               daily
   0      1      2      3      4      5      6

6. To what extent you have generally felt full of life during the past 7 days?

   not at all                               daily
   0      1      2      3      4      5      6
NEGATIVE EMOTIONS

1. In the past 7 days, how often have you felt that you couldn’t shake off the blues even with help from family or friends?

   none/rarely  a little  moderate  most
   1           2         3         4

2. In the past 7 days, how often have you felt nervous or shaky?

   none/rarely  a little  moderate  most
   1           2         3         4

3. In the past 7 days, how often have you felt so restless you couldn’t sit still?

   none/rarely  a little  moderate  most
   1           2         3         4

4. In the past 7 days, how often have you felt that your life is hopeless?

   none/rarely  a little  moderate  most
   1           2         3         4

5. In the past 7 days, how often have you felt that everything you did was an effort?

   none/rarely  a little  moderate  most
   1           2         3         4

6. In the past 7 days, how often have you thought your life had been a failure?

   none/rarely  a little  moderate  most
   1           2         3         4
CONSTRUCTIVE MARITAL EXCHANGES

1. In the past 30 days, how much did your spouse or partner show you that he or she really cares about you?

<table>
<thead>
<tr>
<th>none</th>
<th>a little</th>
<th>some</th>
<th>quite a bit</th>
<th>a lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

2. In the past 30 days, how much did your spouse or partner understand the way you felt about things?

<table>
<thead>
<tr>
<th>none</th>
<th>a little</th>
<th>some</th>
<th>quite a bit</th>
<th>a lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

3. In the past 30 days, how much did your spouse or partner show you he or she appreciated you?

<table>
<thead>
<tr>
<th>none</th>
<th>a little</th>
<th>some</th>
<th>quite a bit</th>
<th>a lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

4. In the past 30 days, how attentive was your spouse or partner?

<table>
<thead>
<tr>
<th>none</th>
<th>a little</th>
<th>some</th>
<th>quite a bit</th>
<th>a lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

5. In the past 30 days, how much did you talk about your feelings or thoughts with your spouse or partner?

<table>
<thead>
<tr>
<th>none</th>
<th>a little</th>
<th>some</th>
<th>quite a bit</th>
<th>a lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

6. In the past 30 days, how much were you able to relax and be yourself around your spouse or partner?

<table>
<thead>
<tr>
<th>none</th>
<th>a little</th>
<th>some</th>
<th>quite a bit</th>
<th>a lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
DESTRUCTIVE MARITAL EXCHANGES

1. In the past 30 days, how much has your spouse or partner made hurtful remarks or said insensitive things about your situation, even if unintentional?

   none  a little  some  quite a bit  a lot
   0     1        2       3         4

2. In the past 30 days, how much did you feel that your spouse or partner did not understand what you were going through?

   none  a little  some  quite a bit  a lot
   0     1        2       3         4

3. In the past 30 days, how much did you feel that your spouse or partner was withdrawn or avoided you?

   none  a little  some  quite a bit  a lot
   0     1        2       3         4

4. In the past 30 days, how much has your spouse or partner disappointed you?

   none  a little  some  quite a bit  a lot
   0     1        2       3         4
APPENDIX C

POSITIVE-TO-NEGATIVE RATIO
### Positive-to-Negative Ratio

*Positive-to-Negative Ratio for Study 1*

<table>
<thead>
<tr>
<th>Constructive Marital Exchanges</th>
<th>$b$</th>
<th>$(se)$</th>
<th>$\Delta R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spousal Empathy</td>
<td>.08</td>
<td>(.01)</td>
<td>.02</td>
</tr>
<tr>
<td>Relationship Rating</td>
<td>.15</td>
<td>(.02)</td>
<td>.02</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Destructive Marital Exchanges</th>
<th>$b$</th>
<th>$(se)$</th>
<th>$\Delta R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spousal Conflict</td>
<td>-.13</td>
<td>(.01)</td>
<td>.05</td>
</tr>
<tr>
<td>Relationship Problems</td>
<td>-.22</td>
<td>(.02)</td>
<td>.04</td>
</tr>
</tbody>
</table>

*Note.* All coefficients were significant at $p<.0001$.

All sociodemographic variables were controlled for in the analyses.