IN GOOD TIMES AND IN BAD: EMOTIONAL QUALITY OF
RELATIONSHIP-DEFINING MEMORY PREDICTS QUALITY OF MARRIAGE

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A Thesis Submitted to the
University of North Carolina Wilmington in Partial Fulfillment
Of the Requirements for the Degree of
Master of Arts

Department of Psychology

University of North Carolina Wilmington

2007

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ABSTRACT

The current study examined the intimacy function of autobiographical memory in adulthood by focusing on the relation between the emotional quality of autobiographical memory and marital quality. There were three specific study aims. First, the study examined whether the emotional valence (positive or negative) of autobiographical memory predicts marital quality. Second, it examined whether the emotional intensity of autobiographical memory is a stronger predictor of marital quality than valence. Third, the study examined whether the emotional quality (i.e., memory valence and intensity) of autobiographical memory predicts marital quality differently with age. Young, middle-aged, and older men and women ($N = 268$) participated in the study. Participants completed the study measures using an online survey tool. Measures included assessments of positive and negative marital quality. Participants also wrote about two relationship-defining autobiographical memories (one positive, one negative) and rated the emotional quality (i.e., valence and intensity) of these autobiographical memories. Regression analyses revealed that the valence and intensity of negative relationship-defining memories predicted marital quality: less negatively-valenced and less intense negative relationship-defining memories predicted better quality of marriage. Age moderated some of the relations between the emotional quality of relationship-defining autobiographical memories and the quality of marriage. Results are interpreted in the context of the theoretical intimacy function of autobiographical memory. A discussion of the limitations of the current study and its potential implications for marriage counseling is included.

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INTRODUCTION

One of the essential components of a marital relationship is the quality and satisfaction inherent in being in that relationship. Fostering relationship satisfaction and high marital quality is a primary motivation in life and a core aspect of psychological well-being across adulthood (Ryff, 1989). Marital quality, for the current study, is generally defined as a person's feelings and subjective view of his or her marriage and spouse (Fincham & Linfield, 1997). Research on the pattern of marital quality across the lifespan is equivocal, however. Some marriages remain fairly positive and stable throughout the lifespan. Many more vary in marital quality across the lifespan, following a general U-shaped pattern (Weishaus & Field, 1988). In the beginning of a marriage, satisfaction is high; it drops in mid-life when there are children and greater job responsibilities, but then tends to increase with age (Rollins & Feldman, 1970; see also Carstensen, Graff, Levenson, & Gottman, 1996 for a recent review).

Socioemotional selectivity theory provides one explanation for the increase in marital quality in late life (Carstensen, Isaacowitz, & Charles, 1999). According to this theory, social networks become smaller with age as older adults adjust their social goals by choosing (i.e., selecting) to foster those relationships that are the most emotionally meaningful and limiting more peripheral ones (Carstensen et al., 1999). As a result, the social interactions of older adults with spouses and others include a greater proportion of positive emotion and pleasure, and a lesser proportion of negative emotion and conflict than is found in the relationships of younger adults (Carstensen, Pasupathi, Mayr, & Nesselroade, 2000; Levenson, Carstensen, & Gottman, 1993). Thus, the shifts in social goals that occur with age are one possible explanation why overall marital quality is enhanced in late life. On the other hand, cognitive mechanisms may also play a role. Perhaps one cognitive mechanism that may be related to the lifespan pattern of

marital quality is autobiographical memory. Examining this possibility is the focus of the current study.

Functional Approach to Autobiographical Memory

Autobiographical memory is a type of episodic memory comprised of personal memories for life events and experiences (Bluck & Alea, 2002). Some examples of autobiographical memory include the memory one has of his or her wedding day or of a fight one had with his or her partner last week. Psychologists have long theorized and examined *how* people remember such events (e.g., accurately, vividly). More recently, attention has turned to *why* people remember autobiographical experiences and to speculate about whether autobiographical memories serve a function. Theoretically, autobiographical memory is viewed as serving multiple functions in daily life (Bluck & Alea, 2002; Cohen, 1998; Pillemer, 1992). One of the preliminary conclusions about the function of autobiographical memory is that such memory is present in human beings so that we might come to know ourselves better (i.e., our self-concept; Baddeley, 1987; Neisser, 1978). Pillemer (1992) further investigated autobiographical memory to determine if it served any other psychological or adaptive benefits in life, noting that it likely served communicative (i.e., interpersonal goals), psychodynamic (i.e., affective benefits), and directive (i.e., future planning) functions. Cohen's (1998) interpretation of the functions of autobiographical memory yielded a more detailed description of the specific reasons for and uses of autobiographical memory in daily life. She classified three basic functions of autobiographical memory: interpersonal (i.e., self-disclosure), intrapersonal (i.e., self-concept formation), and knowledge-based (i.e., problem solving) functions.

More recently, Bluck and Alea (2002) organized previous attempts at interpreting the functions of autobiographical memory, incorporated several aspects of the overlapping

reminiscence literature, and ultimately identified three coherent and parsimonious autobiographical memory functions. They are the self, directive, and social functions. The self function is primarily about identity and self-continuity, the directive function gives direction and helps a person plan for the future, and the social function focuses on interpersonal interaction and the social-bonding mechanisms of autobiographical memory (Bluck & Alea, 2002).

The social function of autobiographical memory, postulated to be the most fundamental use of autobiographical memory in daily life, involves the goals of developing and maintaining intimacy, teaching and informing others, and eliciting and providing empathy (Alea & Bluck, 2003). Furthermore, although all functions of autobiographical memory are important in daily life, the social function is likely the most relevant to the study of relationships since its goals are intrinsically interpersonal (whereas the other two functions may be primarily intrapersonal). The inherent link between autobiographical memory and social functions is clearest when autobiographical remembering is impaired (e.g., dementia): social relationships experience a drop in overall quality and satisfaction (Robinson & Swanson, 1990).

The Intimacy Function of Autobiographical Memory

Of the three goals of the social function of autobiographical memory, the intimacy goal (i.e., intimacy function) is the most applicable social function of autobiographical memory to draw on when studying marital quality. The exact description of what is involved in the intimacy function of autobiographical memory, as given by Alea and Bluck (2003), is "initiating, maintaining, and developing relationship intimacy" (p. 166). Intimacy, of course, is not limited to the strictest sense of the word, but can include any number of "intimate" objectives, such as strengthening a friendship, enhancing the satisfaction and closeness experienced between spouses, and other forms of social bonding that add to the quality of the relationship (Bluck, Alea,

Habermas, & Rubin, 2005). Further, this function of autobiographical memory is used not just with interpersonal interactions (i.e., sharing memories with others to build social bonds), but also when there is no listener present (i.e., remembering in solitude an event about another to foster one's feelings of intimacy about that relationship; Webster, 1995). Thus, the intimacy function is used both during autobiographical memory-sharing and solitary autobiographical remembering (Alea & Bluck, 2003). The current study examines the latter scenario: whether remembering and writing about relationship-defining autobiographical memories, or personal memories about a significant, emotional relationship event, are related to marital quality.

Although the intimacy function of autobiographical memory likely is prevalent across the adult lifespan, it may be particularly salient in young adulthood and late life (Cohen, 1998), but for different reasons. Early in adulthood, the social function mainly serves to help initiate and develop social relationships (i.e., Erikson's psychosocial stage of intimacy versus isolation; Erikson, 1968). In addition, Carstensen and colleagues' socioemotional theory (1999) suggests that younger adults may be more motivated to seek marital interactions that serve to enhance their knowledge or achievement in some other life domain (i.e., work) rather than focusing on those marital interactions concerned with intimacy maintenance or enhancement of the quality of marriage.

From middle to late life, the social function of autobiographical memory holds an increasingly greater stead in life. During this time, the goal of maintaining and further enhancing the quality of social relationships (generally viewed as necessary for well-being) moves to the foreground of one's motivational goals, and the goal of initiating new relationships is no longer viewed as important (Carstensen et al., 1999; Cohen, 1998). This may imply that remembering autobiographical memories to fulfill a social function is an essential developmental stage of life,

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achieved most effectively in late adulthood (Pasupathi & Carstensen, 2003). Research

substantiates these claims: older adults often report using the intimacy function of

autobiographical memory more often than younger adults (e.g., Webster, 1995; c.f., Alea &

Bluck, 2007). Additional research shows that remembering relationship events is more

emotionally gratifying and more positive in late life than during middle age (Comblain,

D'Argembeau, & Van der Linden, 2005; Pasupathi & Carstensen, 2003).

Taken together, the theoretical and empirical work suggests that remembering

relationship events may be a cognitive mechanism used differentially across adulthood to aid in

creating, developing, and maintaining the satisfaction and quality in interpersonal relationships.

Nonetheless, the use of the intimacy function of autobiographical memory seems more

significant in late life rather than in young adulthood and midlife. However, the question arises

as to whether any autobiographical memory about a significant relationship event (i.e., a

relationship-defining memory) will enhance the quality of marriage (i.e., serve an intimacy

function) or if the memory needs to be of a particular quality. For the current study, relationship-

defining memories are defined as highly significant memories for specific events experienced by

a couple together (i.e., both members of the relationship were present at the event), which help

the couple better define and understand their relationship (adapted from the description of self-

defining memories; Moffitt & Singer, 1994).

Autobiographical Memory Quality: Emotional Valence and Intensity

Autobiographical memory characteristics (e.g., phenomenal qualities of remembering)

are a vital component of the conceptual model of the social functions of autobiographical

memory (Alea & Bluck, 2003). Autobiographical memories vary in quality (e.g., vividness,

significance, etc.; Larsen, 1998). One characteristic of autobiographical memories for significant

relationship-defining events that may be particularly important in whether or not the relationship memory serves an intimacy function is the emotional quality of that memory. There are two principal features of the emotional quality of autobiographical memory considered in the current study: valence and intensity.

Valence

The valence of autobiographical memory refers to whether a memory is either generally positive or generally negative in nature. Thinking or talking about positively-valenced autobiographical memories leads to many beneficial outcomes (e.g., Alea, Vick, & Hyatt, under review), including improved relationship quality (Gable, Reis, Impett, & Asher, 2004). Although it would seem that negatively valenced relationship-defining autobiographical memories would hinder marital quality, the results for negative valence are not as clear-cut. As would be expected, some evidence has shown that it is potentially bad for a relationship if a relationship-defining memory brings about negative affect and good if it creates positive affect (Levenson, Carstensen, & Gottman, 1994). Thus, the intimacy function of relationship-defining autobiographical memories may be compromised when negative relationship events are remembered. Others, however, have pointed to the theory that negative memories could actually serve the intimacy function better than positive memories since negative memories are typically reserved for discussion in close relationships only (Cohen, 1998). Even thinking and writing about negatively-valenced emotional memories can be beneficial: people often lessen or reverse psychological trauma caused by negative events if they are written about. Ultimately, social relationships even benefit from writing down negative event memories (Niederhoffer & Pennebaker, 2002).

In addition, it appears that just because a person remembers an emotionally-charged negative experience, it does not always mean that the corresponding feelings that memory invokes also will be negative. Writing or talking about negative autobiographical memories (e.g., recounting traumatic events) can lead to improvements in mood, such as increased feelings of happiness (Suedfeld & Pennebaker, 1997). Furthermore, these improvements in mood extend to yield a variety of health-related physiological and behavioral benefits (Suedfeld & Pennebaker, 1997), of which enhanced relationship quality may be one such outcome. This may be especially true for older adults (at least when compared to younger adults) who experience more positive emotional quality in the events they remember, even when recalling negative events (Pasupathi & Carstensen, 2003; Pasupathi, Henry, & Carstensen, 2002). Thus, research suggests that remembering both positive and negative events may be related to positive outcomes for older adults, such as promoting social-bonding. How negatively-valenced autobiographical memories influence the quality of the relationships of middle-aged adults is unknown. The current study is the first to include an adult lifespan sample when examining the intimacy function of emotional autobiographical memories (i.e., relationship-defining autobiographical memories).

Intensity

It is possible that the intimacy function of autobiographical memory is most strongly influenced by the emotional intensity of an autobiographical memory rather than its valence. Emotional intensity is the degree of positive or negative emotion in the memory, and it can range from neutral (i.e., hardly any emotional content present in the memory) to extremely intense (i.e., the memory is full of very emotional content, whether positive or negative). Previous comparisons of the emotional valence of autobiographical memories have only analyzed its effects by comparing one emotionally-valenced memory (positive or negative) with a neutral

memory (e.g., Alea & Bluck, 2007; Suedfeld & Pennebaker, 1997), and not by a direct comparison between positive and negative autobiographical memories. Comparing a positive or a negative memory with a neutral memory only may actually confound the effect of emotional valence with emotional intensity: neutral memories have little or no intensity, but positive and negative memories both vary in intensity.

In considering this information, perhaps it is the emotional intensity of the recalled memory, rather than the valence of the memory, that can account for the contradictions presented by studies on valence and its effects on psychosocial well-being. For instance, emotional intensity enhances attentional mechanisms at encoding, so that all features of the event benefit at recall (Talarico, LaBar, & Rubin, 2004). According to Talarico and colleagues (2004), intensity (more so than valence) has a robust effect on the phenomenal properties of autobiographical memories, meaning more emotionally intense events (either positive or negative) are remembered longer and with greater sensorial vividness, clarity, and overall sense of recollection than less emotionally intense events. These are all factors that may influence the effectiveness of personally significant autobiographical memories in serving an intimacy function (Alea & Bluck, 2007). Past a certain level of intensity, however, it is possible that an excessive focus on a negative topic (i.e., extreme negative intensity) may become counterproductive to emotional well-being (Suedfeld & Pennebaker, 1997), and ultimately lessen the quality of a relationship.

Specific Aims and Study Hypotheses

The current study examined whether the emotional quality of relationship-defining memories of married individuals relates to the reported quality of those marital relationships. Marital quality was examined on a two-dimensional level, investigating both the positive and

negative qualities of marriage, rather than just a single dimension of overall marital quality. There are three specific study aims.

The first aim examines whether the emotional valence (i.e., positive or negative) of relationship-defining memories predicts the quality of a marital relationship (i.e., serves an intimacy function). Expectations are unclear. Some research reports that only emotionally positive autobiographical memory has benefits, while others report that emotionally negative autobiographical memory can also have its advantages in terms of social bonding and overall well-being. If both areas of research are true, then the extent to which an autobiographical memory is positive or negative should not matter when it comes to predicting the quality of relationships. This can translate into either valence not being a significant predictor of marital quality or both positively- and negatively-valenced relationship-defining memories predicting marital quality similarly. However, Suedfeld and Pennebaker (1997) have pointed out that excessive attention to negative emotion in autobiographical memory can be counterproductive. Other work shows that negative autobiographical memories may hinder relationship satisfaction (Veroff, Sutherland, Chadiha, & Ortega, 1993). If a valence trend is revealed, it may be that more positively-valenced autobiographical memories predict better marital quality (i.e., higher positive marital quality and lower negative marital quality), thus serving an intimacy function, whereas negatively-valenced autobiographical memories may not.

The second aim examines whether the emotional intensity of relationship-defining memories predicts marital quality. Recent research has pointed to the fact that the phenomenal experience of autobiographical memory is better predicted by emotional intensity rather than memory valence (Talarico et al., 2004). It is expected that emotional intensity will also be a better predictor of the intimacy function of autobiographical memory. Thus, it is hypothesized

that the emotional intensity of positive and negative relationship-defining memories will be a stronger predictor of marital quality than valence (i.e., it will explain additional variance).

The third aim involves examining age differences in the emotional qualities of relationship-defining memory as they relate to the intimacy function of autobiographical memory. More specifically, does age moderate the relation between emotional quality of autobiographical memory and marital quality? Sharing autobiographical memories during late life seems extremely relevant and important to older adults, more so than any other age group (Carstensen et al., 1999; Cohen, 1998). Older adults, compared to younger adults, are also better able to rely on autobiographical memory to gain greater interpersonal intimacy. Thus, it is hypothesized that the emotional quality of autobiographical memory will be more predictive of marital quality in later adulthood, compared to earlier adulthood. However, it is also possible that this relation follows a U-shaped pattern, mimicking the U-shaped pattern found in overall marital quality across the adult lifespan. Thus, the emotional quality of autobiographical memory would be more predictive of marital quality in young adulthood and late life, and less so in mid-life.

METHODS

Design

The current study used a correlational design. There are three predictor variables: valence of the relationship-defining memory, intensity of the relationship-defining memory, and participant age. The emotional valence and intensity of the two relationship-defining memories (i.e., one positive memory, one negative memory) is self-reported by the participants separately for each memory. Age is a continuous variable. The study investigated the extent to which these three variables independently and interactively predict the criterion variable of marital relationship quality, assessed using a two-dimensional approach (i.e., positive marital quality and

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negative marital quality). Cognitive ability was also assessed as a control variable. Although not a specific variable of interest, gender differences were explored.

Participants

Participants were community dwelling adults, including young, middle-aged, and older adults ($N = 268$; 168 females, 100 males).[1] The mean age of the sample was 47.23 years ($SD = 12.32$). Although the analyses were conducted based on an age continuum, the sample consisted of 66 young adults (41 females, 25 males) aged 20-39 years old ($M = 30.70$, $SD = 5.66$), 169 middle-aged adults (110 females, 59 males) aged 40-59 years old ($M = 49.73$, $SD = 4.99$), and 33 older adults (17 females, 16 males) aged 60-85 years old ($M = 67.55$, $SD = 6.71$).

A preliminary test for the sample size required to detect study effects was determined by means of a power analysis, using conventional power and alpha criteria (.80 and .05, respectively) and a medium estimated effect size ($ES = .15$; Cohen, 1992). A medium effect size was used because effect sizes from similar, previous work suggest that medium effects are likely.[2] This test suggested that a minimum of 120 participants was required. The current study exceeded this criterion by more than twofold.

Overall, the sample was primarily Caucasian (91%, $n = 244$). In addition, 4% of the sample was Hispanic ($n = 10$), 2% was African-American ($n = 6$), 1% was Asian or Pacific Islander ($n = 3$), less than 1% was American Indian ($n = 2$), and 1% of the participants listed "other" as their race or ethnicity ($n = 3$). The sample was relatively well-educated ($M = 15.31$

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[1] Four hundred and ten potential participants accessed the online survey. However, only 304 participants satisfied the relationship status criteria and gave their consent to participate in the study. Not all 304 participants responded to every study measure (i.e., 269 gave a positive relationship-defining memory, 260 gave a negative relationship-defining memory); and only 268 completed all the measures of the current study.

[2] An experimental manipulation of the intimacy function of autobiographical memory reported a medium effect size (e.g., Alea & Bluck, 2007). This work also found that there was a medium effect of predicting the intimacy function from the quality of autobiographical memory. Further, when emotional intensity of autobiographical memory is related to the phenomenological qualities of autobiographical memory, a large effect size is found (Talarico et al., 2004). Thus, a medium effect size seemed like an appropriate and conservative estimate of expected effects.

years of education, *SD* = 2.69): young, *M* = 15.80, *SD* = 2.88; middle-aged, *M* = 14.90, *SD* = 2.43; old, *M* = 16.60, *SD* = 3.14. Seventy-five percent of the participants also self-reported that they were in *good* to *very good* health (*M* = 5.06, *SD* = .87, on a 6-point scale): young, *M* = 4.94, *SD* = .84; middle-aged, *M* = 5.07, *SD* = .85; old, *M* = 5.30, *SD* = 1.02.

As the study was conducted online, it is also important to note that 98% of the respondents reported that they were comfortable or capable of using a computer to navigate the online survey and respond to questions. Participants' computer efficiency was generally reported as being *good* (i.e., a score of 4 on a 5-point Likert scale; *M* = 4.08, *SD* = .87). Based on the high level of computer proficiency of the entire sample, it can be assumed that lack of computer proficiency did not drive any relations found in the current study.

For inclusion in the present study, all participants were required to be in a long-term (at least two years) heterosexual marriage. The length of the relationship was set at a minimum of two years (e.g., Alea & Bluck, 2007) so as to avoid the potential confound of the recency of marriage on the quality of the marriage. On average, participants were married for 20.23 years (*SD* = 12.73). In addition, 75% of the participants reported their current marital relationship as being their first marriage. Eighty-six percent of the sample reported having children, broken down by age group: 58% of young adults had children; 96% of middle-aged adults had children; and 88% of older adults had children.

Participants were initially recruited from two sources: a psychology adult participant database (*N* = 150 middle-aged and older adults, managed by the faculty research advisor), and a faculty and staff database from a mid-sized southeastern university. Potential participants were sent an email invitation to complete the study, which included general information about the study and a link to the online survey. In order to increase the size and diversity of the sample (i.e.,

age, race), the author also recruited participants from the general community. Therefore, recruitment letters were emailed to local area organizations and businesses (i.e., local community college, senior centers) for disbursement to their members and employees, as well as to friends and family of the researcher and fellow colleagues. In addition, all participants were encouraged to forward the study invitation to any friends, family, or colleagues who might be interested in participating. Finally, the author's research advisor also offered two points of extra credit to students in her undergraduate psychology classes if they personally participated in the study or if their friends or family participated in the study.

Apparatus

The present study was administered completely online using the survey software SurveyMonkey (1999) for data collection. The software enables the experimenter to design a user-friendly survey. Participant responses are collected with relative ease (e.g., point-and-click) and without requiring the participant to download any software. Furthermore, the survey software allows for embedded logic, so that if a participant does not satisfy some minimum criterion (e.g., not married) they are automatically taken to the end of the survey and thanked for their participation. Navigation of the survey requires only minimal computer skill on the part of the participant: ability to use a computer mouse to click on the appropriate response and to type responses to particular questions and tasks presented in the survey. Since the entire procedure was presented to the participant electronically, and the presence of a researcher was not necessary for test administration, all participants had the convenience of participating in the study without needing to come to the laboratory (i.e., participants could access the survey from a home or work computer connected to the internet).

Measures

Quality of Marriage

The Positive and Negative Quality in Marriage Scale (PANQIMS; Fincham & Linfield, 1997) is a two-dimensional measure of marital quality. Rather than the normal single-dimensional measures that are typically used to assess general relationship satisfaction (e.g., the 3-item Kansas Marital Satisfaction Scale; Schumm et al, 1986), the PANQIMS uses a multidimensional approach to arrive at both a positive and a negative dimension of marital quality. The PANQIMS consists of six questions, with three each addressing either the positive qualities (e.g., "Considering only good feelings you have about your marriage, and ignoring the bad ones, evaluate how good these feelings are") or the negative qualities (e.g., "Considering only bad feelings you have about your marriage, and ignoring the good ones, evaluate how bad these feelings are") of the marital relationship. Participants respond to these questions using a 10-point Likert scale (0 is *not at all* and 10 is *extremely*). For each dimension, scores are summed for the three dimensionally related questions. Higher scores in each dimension reveal more positive and more negative relationship quality, respectively. According to Fincham and Linfield (1997), the two-dimensional approach is a more informative measure of relationship quality, above and beyond that of the conventional single-dimensional measures. Further research has also supported the proposal that measures of both positive and negative relationship quality, and not just an overall measure, represent meaningful differences in the various aspects of a marital relationship (Menchaca & Dehle, 2005). The PANQIMS had good internal consistency: Chronbach's alpha = .91 for positive marital quality; Chronbach's alpha = .93 for negative marital quality.

Autobiographical Memory Emotional Quality

The 25-item Autobiographical Memory Questionnaire (AMQ; modified from Talarico et al., 2004) assesses a number of different qualities of autobiographical memory (e.g., vividness, intensity). Only the eight items that address the emotional quality of the autobiographical memory were used in the current study. The participant completed separate AMQs for each of the two relationship-defining memories (i.e., one positive, one negative memory). Responses to all eight questions are made on 7-point Likert scales.

Two valence items represented the positive and negative emotional quality of the autobiographical memory (e.g., "While remembering the event, the emotions are extremely positive/negative," where 1 is *not at all* and 7 is *entirely*). For each relationship-defining memory, a composite valence score was created.[3] For the positive relationship defining memory, the valence composite score was calculated based on the equation: [positive scale + (8 – negative scale)]/2 (Talarico et al., 2004). The higher the score is the more positive the positive relationship-defining memory. The emotional valence composite score of the negative relationship-defining memory was computed from the equation: [negative scale + (8 – positive scale)]/2. The higher the score is the more negative the negative relationship-defining memory. Since the two items were combined to create a composite measure of valence, Chronbach's alpha is not reported.

Research suggests that emotional valence of the relationship-defining memories is not being confounded with emotional intensity. There are three reasons which suggest that this is the case. First, Talarico and colleagues (2004) verified that the valence item wording was not confounding intensity in a separate sample in which potentially biasing words (i.e., "extremely")

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[3] Analyses were also conducted using the single dimension item of valence for each respective relationship-defining memory. However, these results did not vary significantly from the results reported when using the composite valence scores. Therefore, reported results used the composite valence score in the statistical analyses.

were removed. Valence results were not different from their original results. Second, the frequencies of valence scores indicated that when recalling a positive relationship-defining memory, valence was positive (99% of the composite valence scores were above the median scale score), and when recalling a negative relationship-defining memory, valence was negative (97% of the composite valence scores were above the median scale score). Thus, the relationship-defining memories were appropriately valenced (i.e., the memories were not neutrally-valenced or oppositely-valenced) for the type of relationship-defining memory (i.e., positive or negative) that was prompted in the procedure. Third, an exploratory factor analysis revealed that the two single dimension valence items emerge as a factor, separate from intensity.

The emotional intensity of autobiographical memory was assessed with one specific question (e.g., "The emotions that I feel are extremely intense," where 1 is *not at all* and 7 is *entirely*). The higher the intensity score the more emotionally intense the relationship-defining memory. In addition to the primary single item measure of intensity, two other types of emotional intensity were considered: visceral intensity and emotional persistence. Three questions referred to the visceral responses, or the physical reactions, elicited by an autobiographical memory (e.g., feeling sweaty, tense, and an increased heart rate). Responses were made on a scale where 1 is *not at all* and 7 is *more than for any other memory*. A composite score for visceral intensity was created by averaging the scores on the three visceral intensity items (Chronbach's alpha = .77 for positive memories, .86 for negative memories). The emotional persistence of autobiographical memory was evaluated with two items. One item states, "While remembering the event, I feel the same particular emotions I felt at the time of the event." Responses were made to stems where 1 is *completely different* and 7 is *identically the same*. The second item stated, "While remembering the event, I feel the emotions as strongly as I

did then," and responses were made to 1, *not at all*, and 7, *as clearly as if it were happening now*.

Once again, a composite score for emotional persistence was created by averaging the scores on

these two items (Chronbach's alpha = .86 for positive memories, .88 for negative memories).

Analyses were conducted with the single item measure of emotional intensity and again

with all three types of intensity (i.e., general intensity, visceral intensity, emotional persistence).

Including visceral intensity and emotional persistence in the regression analyses did not explain

additional variance in marital quality and, in some cases, decreased the variance explained by

intensity. For parsimony, the final analyses reported in the current study only use the single item

measure of emotional intensity.

Basic Cognitive Ability

Two measures of basic cognitive ability (i.e., episodic memory and vocabulary

knowledge) were used to examine whether the sample was cognitively normal and to explore

whether these variables were potential confounds (i.e., should be entered in regressions as

covariates). This was especially important in examining the moderating effects of age on

autobiographical memory quality in order to ensure that any age effects were not due to age

related differences in basic cognitive ability. Since autobiographical memory is a component of

episodic memory, it could be necessary to control for whether older participants have impaired

or non-normative episodic memory. Vocabulary knowledge was also included because

individuals with better vocabularies (i.e., older adults; Schaie, 1994) may have memories that are

expressed with a richer emotional quality than others with a more limited vocabulary.

A modified version of the word recall task portion of the Telephone Interview for

Cognitive Status (TICS-m; Welsh, Breitner, & Magruder-Habib, 1993; modified from Brandt,

Spencer, & Folstein, 1988) was used to assess episodic memory. It also ensured that the sample

was a normal, non-demented sample, since this measure is highly correlated with other predictors of dementia (Brandt et al., 1988; Lines, McCarroll, Lipton, & Block, 2003). The word recall task of the TICS-m was further modified for use via electronic survey in the current study. When participants reached the episodic memory task, they were presented with one word (e.g., *cabin*) on the computer screen, asked to read it out loud, and then move on to the next screen, and so on for nine more words (i.e., 10 words total). After the last word, participants typed all the words they could recall in the blank spaces provided. After a delay of approximately three minutes (i.e., the time it took to complete the vocabulary knowledge task), participants were asked to recall the words again. Total word recall was calculated by adding the initial word recall total to the delayed word recall total, with no penalties for repetitions or intrusions (Lines et al., 2003). Therefore, scores could range from 0 to 20. Participants scored an average of 10.74 ($SD =$ 4.40), out of a possible 20. Based on participants' scores from prior studies examining the TICS-m compared to measures of dementia and cognitive impairment (e.g., non-demented participants scored an average near 6.00; Lines et al 2003), it is unlikely that any of the participants from the current study were demented.

The vocabulary knowledge measure is a vocabulary checklist-with-foils (West, Stanovich, & Mitchell, 1993; modified from Zimmerman, Broder, Shaughnessy, & Underwood, 1977). The vocabulary checklist-with-foils technique is a reliable and valid means of assessing differences in vocabulary knowledge between groups (i.e., young vs. older adults, Stanovich, West, & Harrison, 1995; readers vs. nonreaders, West et al., 1993). Participants were presented with an alphabetized list of words (comprised of both real words and pronounceable nonwords) on the computer screen. There are 27 real words (e.g., *absolution, asinine, audible)* and 13 pronounceable nonwords (e.g., *arrate, fusigenic, nonquasity*). Then, they were asked to check

the words that they knew were actual words. A participant's vocabulary score was determined by subtracting the proportion of foils (i.e. nonwords) checked from the proportion of real words checked (West et al., 1993). The best possible score is 1, in which all real words were checked and no nonwords were checked (i.e., 27/27 real words – 0/13 nonwords = 1). The worst possible score is -1, in which no real words were checked and all nonwords were checked (i.e., 0/27 real words – 13/13 nonwords = -1). Participants in the current study had an average vocabulary knowledge score of .50 (*SD* = .21, *range* = .03 to .92).

Screening Questions and Preliminary Measures

Participants were asked two relationship screening questions. First participants were asked about their current relationship status. Only participants who reported being married were able to continue with the study. The second question asked whether participants had been in their current marriage for at least two years. Participants needed to respond "yes" to this question in order to continue with the survey. Participants were asked several more questions about their relationship in addition to the two screening questions. First, participants were asked, "How long have you been in your current marriage?" Participants gave an open-ended response to this question to address how many years they were married. The second question asked, "Do you have any children?" Participants responded "yes" or "no" to this question. Because of the dip in marital satisfaction and quality during midlife that is often theorized to be due at least partially to having children, this variable could potentially need to be controlled in the data analyses.

Participants were also asked several computer skills questions. Since the survey was completed online, it was important to ensure the sample was proficient in using a computer. First, participants were asked, "Do you feel comfortable or capable of answering questions on a computer, navigating the computer by using a mouse, and typing passages?" They responded

"yes" or "no" to this question. Second, participants were asked, "How do you rate your proficiency with using a computer?" Participants rated their computer proficiency on a 5-point Likert scale ranging from 1, *very poor*, to 5, *very good*.

Demographics and Health

A number of standard demographic questions were asked (e.g., age, gender, race, education) to provide descriptive statistics for the sample (modified from Alea & Bluck, 2007). Participant health status was also assessed. One question asked participants to rate subjective health status, as compared to others their age (Maddox, 1962). Responses were made on a 6-point Likert scale with 1 being *very poor* and 6 being *very good*. A similar question was also asked in regard to the health status of the participant's spouse (i.e., the participant rated their spouse's subjective health status). This was done as it seemed likely that poor spousal health could be a confounding factor that would influence the participant's marital quality.

Procedure

The current study was part of a larger research project. However, only the procedural protocol relevant to the current study is described below (see Appendix A). Data collection began in November 2006 and continued through February 2007.

Part I: Informed Consent and Honor Code

Once participants accessed the online survey, they read through a brief overview of the study and answered the two relationship screening questions. Any participants who did not satisfy the relationship criteria were not able to proceed with the survey. They were informed why they were not able to participate in the study, taken to the end of the study, and thanked for volunteering. Participants satisfying the screening criteria moved on to read through the online informed consent letter. This letter detailed what participants could expect from their

participation in this study, what their rights are as a participant, and who to contact if they have

any additional questions or concerns. In order to give their consent to participate, participants

clicked on the statement that asserted they understood what their participation in the study

involved and typed in their name and additional contact information. Next, participants received

written instruction requesting that any items that could assist them with the study (i.e., pen, paper)

be removed from the area. In addition, they were asked not to receive any help from other

individuals as they completed all parts of the study. Before proceeding, participants agreed to

adhere to an honor code when completing the study. Honesty of participant responses cannot be

guaranteed, especially when the researcher is not present. However, it is believed that this honor

code encouraged participants to respond truthfully. Any participant who did not agree with the

informed consent or the honor code was not allowed to proceed with the survey, taken to the end

of the survey, and thanked for volunteering to participate.

Part II: Computer Skills, Relationship Status, and Marital Quality

The second part of the study included basic questionnaires that assessed the computer

skills and relationship status of the participant. Participants continued through the survey by

completing the measure assessing the positive and negative qualities of their marriage

(PANQIMS). The PANQIMS was completed before participants recall their relationship-

defining memories to help ensure that responses about marital quality were not biased by the

relationship-defining memories recalled.[4]

Part III: Relationship-Defining Memories and Autobiographical Memory Quality

The third part of the study involved the relationship-defining memory portion. The order

of memory recall is controlled across all participants, such that participants recalled a negative

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[4] There was an additional task, not relevant to the current study, between the marital quality questions and the memory sharing portion of the study. This task ensured that participants' ratings on the PANQIMS did not directly influence the memories recalled.

relationship memory first, followed by a positive relationship memory. The negative memory was invoked first, to ensure that participants completed the study in a neutral or even positive affective state, rather than leaving in a negative mood. If participants had recalled a negative memory last, the potentially negative affective influence of the memory could more readily carryover with them to their daily tasks following their completion of the study.

When prompted to recall the positive and negative relationship-defining memories, participants recalled a memory of an emotional event during which their spouse was present and involved. More specifically, participants were instructed that relationship-defining memories should be at least one-year old, familiar, clear, and important to the relationship. These instructions were modified slightly from Moffitt and Singer's (1994) research on self-defining memories. The self-defining memory request (reworded for a relationship-defining memory request in the current study) was found to evoke personally significant and emotional memories, while still allowing participants to freely select from many possibly memories (Moffitt & Singer, 1994).

Once participants thought of a negative relationship-defining memory that met the above criteria, they were asked to write about their memory. In the description of their relationship-defining memories, participants were asked to make sure they addressed what happened, who was there, where it was, and when it happened (after Alea & Bluck, 2007). After the participant wrote about his or her negative relationship-defining memory, they completed the AMQ for that memory. The participants then moved on to think and write about their positive relationship-defining memory and completed the AMQ for this memory. Examples of positive and negative relationship-defining memories can be found in Appendix B and Appendix C, respectively.

Part IV: Cognitive Ability Tasks

After writing about the two relationship-defining memories, participants moved on to complete the two cognitive ability tasks. These tasks, along with the demographics and health measures, were included at the end of the study because it provided an additional opportunity for the participants to return to a neutral affective state after recalling the emotional, relationship-defining memories. First, participants did the TICS-m word recall task. It was followed immediately by the vocabulary checklist-with-foils task, which also served as the distraction task before the delayed word recall portion of the TICS-m. After this second task, participants completed the TICS-m delayed word recall task.

Part V: Study Wrap-Up

Participants concluded the study by completing the demographics and health questions. Once the participants finished answering all questionnaires and completed all tasks, they were thanked for their participation in the study, reminded who to contact in case they had any questions, and encouraged to forward the survey to any of their friends, family, or colleagues who might be interested in participating.

RESULTS

The results are organized into three sections. Preliminary correlational analyses were conducted in the first section to identify variables that could potentially confound the relation between the main study variables (i.e., marital quality, emotional quality of autobiographical memories, and age). The second section uses hierarchical multiple regression to examine whether the emotional valence and emotional intensity of relationship-defining memories predict the quality of marriage (i.e., whether autobiographical memory serves an intimacy function). The

third section uses hierarchical multiple regression to examine whether participant age moderates the relation between the emotional quality of relationship-defining memories and marital quality.

Preliminary Analysis

Participant Characteristics

Correlations between participant characteristics (e.g., health status) and marital quality (i.e., positive, negative), emotional quality of relationship-defining memories (i.e., valence, intensity), and age were examined to identify potential confounds. See Table 1 for a full correlational matrix of study variables. Three participant characteristics were related to the study variables: the health status of the participant, the health status of the participant's spouse, and whether the participant had any children. Participants with better personal health reported higher positive marital quality. Participants with spouses who had poor health had higher negative marital quality and lower positive martial quality. Having children also was related to marital quality: participants with children reported lower positive quality in their marriage. One participant characteristic was related to the emotional quality of the relationship-defining memories. Specifically, poor spousal health was related to more intense negative relationship-defining memories. Given these relations, participant health, spousal health, and whether the participant had children were controlled in all regression analyses (i.e., entered first in the regression equations).

The relation of gender to the study variables was also explored, even though gender was not a primary variable of interest in the current study. Correlational analysis showed that gender was related to negative quality of marriage, $r(268) = .21, p < .01$. Females were more likely to report more negative marital quality than males. Gender was also related to the valence of

Table 1

Descriptive Statistics and Correlations for Criterions, Predictors, Moderator, and Control Variables

Variables	*M*	*SD*	*N*	1	2	3	4	5	6	7	8	9	10
Marital quality													
1. Positive	26.14	3.95	298	-									
2. Negative	9.97	7.22	298	-.49**	-								
Positive memory													
3. Valence	6.58	.75	269	.08	-.04	-							
4. Intensity	5.17	1.62	269	.00	.01	.22**	-						
Negative memory													
5. Valence	5.72	1.31	260	-.23**	.29**	-.01	.04	-					
6. Intensity	4.63	1.79	260	-.25**	.25**	.01	.15*	.44**	-				
Moderator													
7. Age	47.23	12.32	268	-.08	-.07	.06	.01	-.03	-.01	-			
Control													
8. Participant health	5.06	.87	268	.19**	-.07	.12	-.02	.01	-.03	.10	-		
9. Spousal health	4.78	1.02	268	.26**	-.30**	.06	-.09	-.12	-.13*	.05	.34*	-	
10. Children	1.86	.34	302	-.13*	.04	-.01	-.01	.11	.02	.39**	.01	-.10	-

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

positive relationship-defining memories, $r(265) = .14$, $p < .05$. Females were more likely than males to report their positive relationship-defining memories as being more positively-valenced. Given these relations, all analyses were rerun controlling for gender in the second step of the regression equations, before the predictor variables were entered in the subsequent steps. None of the results changed when controlling for gender. Thus, gender is not considered further.

Cognitive Ability

Another potential confound with the study variables (i.e., quality of autobiographical memory, age) was basic cognitive ability (i.e., episodic memory and vocabulary knowledge). Differences in episodic memory among participants could influence autobiographical memory quality, as autobiographical memory is a type of episodic memory. Vocabulary knowledge was examined as it could have an effect on how a memory was expressed and thus the quality attached to it. Results showed that neither episodic memory nor vocabulary knowledge were significantly related to the quality of autobiographical memory. Further, although typically related (Schaie, 1994), episodic memory was not correlated with participant age in the current study. Vocabulary knowledge was also not related to age. Therefore, cognitive ability variables were not controlled in the regression analyses.

Emotional Qualities of Memory as Predictors of Marital Quality

Four separate hierarchical regression analyses were conducted to address study aim one and study aim two. The analyses were conducted to examine whether the emotional valence of relationship-defining memories predicted the positive and negative qualities of marriage (study aim one). The analyses also examined whether the emotional intensity of relationship-defining memories was a better predictor of marital quality than emotional valence (study aim two). Thus, two separate regressions were conducted for both positive marital quality and negative marital

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quality for each type of relationship-defining memory recalled (i.e., positive memory and negative memory). [5]

The results for positive marital quality are reported before the results for negative marital quality throughout the results section. Within each set of results reported for positive and negative marital quality, the results for the positive relationship-defining memories are presented before the results for the negative relationship-defining memories. The criterion variable was either positive quality in marriage or negative quality in marriage. The predictor variables were emotional valence and emotional intensity of the relationship-defining memories. Control variables were always entered in the initial step of the regression equation. These included: participant health, spousal health, and whether the participant had children. In the second step of the regression equation, valence of the relationship-defining memories was entered. This would determine whether valence predicts marital quality. In the third step of the regression, emotional intensity of the autobiographical memories was entered in the hierarchical regression analysis. Intensity was entered after valence to examine whether intensity explains additional variance in marital quality above that explained by valence, and possibly reduces any variance explained by valence (i.e., is intensity a stronger predictor than valence). [6]

Positive Quality of Marriage

Positive Memory Valence and Intensity

The first hierarchical regression analysis examined whether the emotional valence and intensity of positive relationship-defining memories predicted the positive quality of marriage.

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[5] The number of participants who provided memories and answered the AMQ for those memories differed for positive ($n = 269$) and negative ($n = 260$) relationship-defining memories. In addition, some participants did not respond to all of the study measures. Thus, sample sizes for analyses vary.

[6] Valence by intensity interactions were explored by rerunning all analyses with the interaction in the last step of the regression equation. The valence by intensity interactions were not related to positive or negative marital quality. They are not considered further in the analyses.

The control variables (i.e., participant health, spouse health, whether participant had children) together accounted for 11% of the variance in the positive quality of marriage, $R^2 = .11$, F (3, 261) = 10.38, $p < .001$. Neither the emotional valence nor the emotional intensity of the positive relationship-defining memory explained additional variance in the positive quality of marriage, $R^2 = .11$, F (1, 260) = .84, $p > .05$ and $R^2 = .11$, F (1, 259) = .02, $p > .05$, respectively. The *Beta* weights are reported in the top portion of Table 2. Thus, the emotional quality of positive relationship-defining memories does not predict the positive quality of a marriage.

Negative Memory Valence and Intensity

The second hierarchical regression analysis examined whether the emotional valence and intensity of negative relationship-defining memories predicted the positive quality of marriage. As before, control variables were entered in the first step of the regression, and accounted for 12% of the variance in positive marital quality, $R^2 = .12$, F (3, 245) = 11.29, $p < .001$. The valence of the memory was entered second in the regression equation. The results showed that the emotional valence of negative relationship-defining memories explained an additional 4% of the variance in positive marital quality, $R^2 = .16$, F (1, 244) = 12.43, $p < .01$. The *Beta* weight (see the bottom of Table 2) indicates that the more negatively-valenced the negative relationship-defining memory, the lower the positive quality in marriage.

As expected, the intensity of the negative relationship-defining memory explained additional variance in the positive quality of marital relationships above the valence of the memory. Intensity accounted for an additional 2% of the variance in positive marital quality, $R^2 = .18$, F (1, 243) = 5.73, $p < .05$ (see the bottom of Table 2 for the *Beta* weight). As the intensity of negative relationship-defining memories increased, the positive quality of marriage decreased. The valence of the negative relationship-defining memory continued to predict the positive

Table 2

Summary of Hierarchical Regression Analyses: Emotional Qualities of Memory as Predictors of Positive Marital Quality

Predictors	*B*	*SEB*	*Beta*	*T*
Positive Relationship-Defining Memory				
Step 2: Valence	.25	.27	.05	.91
Step 3: Intensity	.02	.13	.01	.14
Negative Relationship-Defining Memory				
Step 2: Valence	-.57	.16	-.21	-3.53**
Step 3: Intensity	-.31	.13	-.15	-2.40*

Note. Step 1 (control variables) *Beta* weights are not shown. Positive relationship-defining memory: Step 1, $R^2 = .11$; Step 2, $R^2 = .11$; Step 3, $R^2 = .11$. Negative relationship-defining memory: Step 1, $R^2 = .12$; Step 2, $R^2 = .16$; Step 3, $R^2 = .18$. Adding intensity in the third step, for either positive or negative memories, did not reduce the variance in positive marital quality that was explained by valence.
** $p < .01$, * $p < .05$

quality of marriage even when intensity was considered. Thus, the emotional valence and intensity of negative relationship-defining memories both seem to be predictors of the positive quality in marriage. The more negatively-valenced and the more intense negative relationship-defining memories are, the lower the positive quality of marital relationships (see Figure 1).

Negative Quality of Marriage

Positive Memory Valence and Intensity

Negative marital quality was the criterion variable for the third hierarchical regression analysis. The regression analysis examined whether the valence and intensity of positive relationship-defining memories predicted negative marital quality. Together, the control variables explained 8% of the variance in negative marital quality, $R^2 = .08$, $F(3, 261) = 7.64$, $p < .001$. Both the valence and the intensity of positive relationship-defining memories were unable to account for additional variance in negative marital quality beyond that already explained by the control variables, $R^2 = .08$, $F(1, 260) = .32$, $p > .05$ and $R^2 = .08$, $F(1, 259) = .003$, $p > .05$, respectively. See the top portion of Table 3 for the *Beta* weights. It appears that neither the valence nor the intensity of positive relationship-defining memories predict the negative quality in a marriage.

Negative Memory Valence and Intensity

The fourth hierarchical regression analysis examined whether the emotional valence and intensity of negative relationship-defining memories predicted the negative quality of marriage. The control variables accounted for 10% of the variance in negative marital quality, $R^2 = .10$, $F(3, 245) = 9.00$, $p < .001$. The valence of the negative relationship-defining memory accounted for an additional 7% of the variance in negative marital quality, $R^2 = .17$, $F(1, 244) = 20.01$, $p < .001$. As can be seen from the *Beta* weight (see the bottom portion of Table 3), the more

Figure 1. The relation between positive marital quality and the emotional valence and intensity of negative relationship-defining memories.
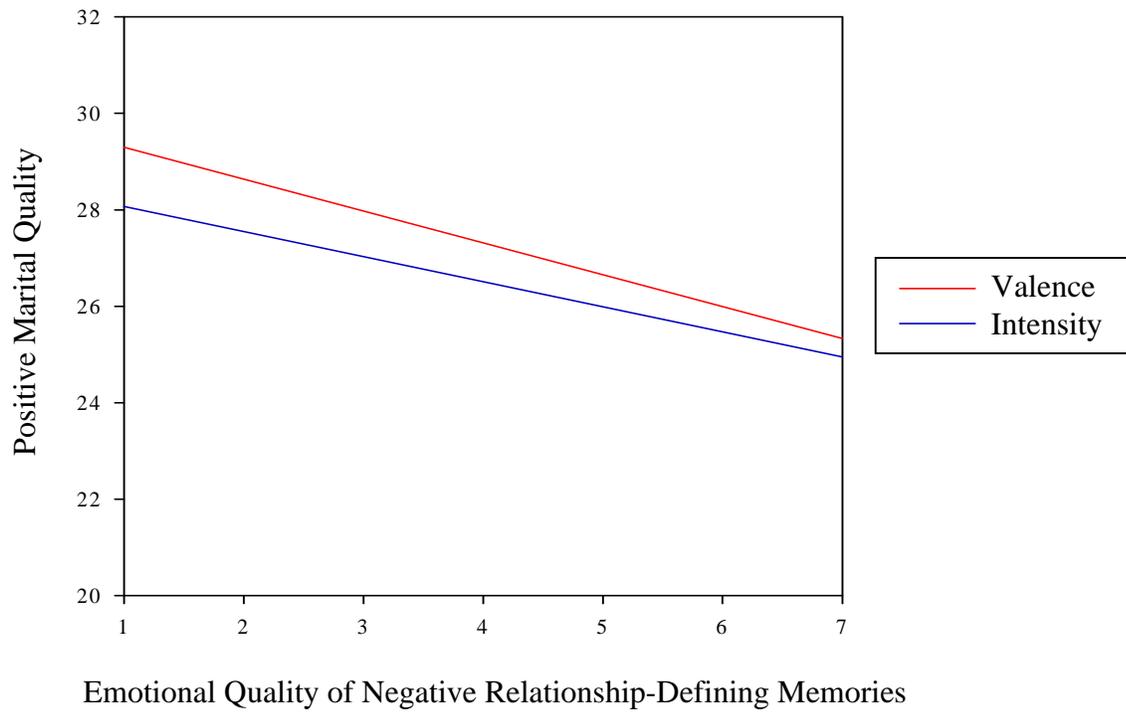
Table 3

Summary of Hierarchical Regression Analyses: Emotional Qualities of Memory as Predictors of Negative Marital Quality

Predictors	*B*	*SEB*	*Beta*	*T*
		Positive Relationship-Defining Memory		
Step 2: Valence	-.32	.56	-.03	-.57
Step 3: Intensity	-.01	.27	-.00	-.05
		Negative Relationship-Defining Memory		
Step 2: Valence	1.44	.32	.27	4.47***
Step 3: Intensity	.39	.26	.10	1.51

Note. Step 1 (control variables) *Beta* weights are not shown. Positive relationship-defining memory: Step 1, R^2 = .08; Step 2, R^2 = .08; Step 3, R^2 = .08. Negative relationship-defining memory: Step 1, R^2 = .10; Step 2, R^2 = .17; Step 3, R^2 = .18. Adding intensity in the third step, for either positive or negative memories, did not reduce the variance in positive marital quality that was explained by valence.
*** $p < .001$

negatively-valenced the negative relationship-defining memory, the higher the negative quality in a marriage (see Figure 2).

The emotional intensity of negative relationship-defining memories accounted for less than 1% additional variance in negative marital quality. This relation was not significant, R^2 = .18, F (1, 243) = 2.28, $p > .05$ (see the bottom of Table 3 for *Beta* weight). The emotional intensity of negative relationship-defining memories does not predict negative quality of marriage. It would appear that the emotional valence of negative relationship-defining memories is a better predictor of negative marital quality than the emotional intensity of negative memories.[7]

The hierarchical regression analyses for study aim one and study aim two examined the relation between the emotional qualities of relationship-defining memories and the positive and negative quality in marriage. The results show that the emotional valence and intensity of positive relationship-defining memories are not related to either the positive or negative qualities of marriage. On the other hand, the emotional qualities of negative relationship-defining memories are related to positive and negative marital quality. There is a negative relation between the valence and intensity of negative memories and positive marital quality. While there is no relation between intensity of negative memories and negative marital quality, there is a positive relation between valence of negative memories and negative marital quality. Thus, contrary to what was expected, intensity is not a better predictor than valence. At least when recalling negative relationship-defining memories, both the emotional valence and intensity (only for positive marital quality) predict the positive and negative qualities of marriage.

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[7] The four regression analyses were rerun with intensity in step two and valence in step three to examine whether the results were due to order of entry in the hierarchical regression analysis. Only one set of results changed: the intensity of negative relationship-defining memories predicted negative marital quality. This relation, however, was removed when valence was entered in the third step.

Figure 2. The relation between negative marital quality and the emotional valence of negative relationship-defining memories.
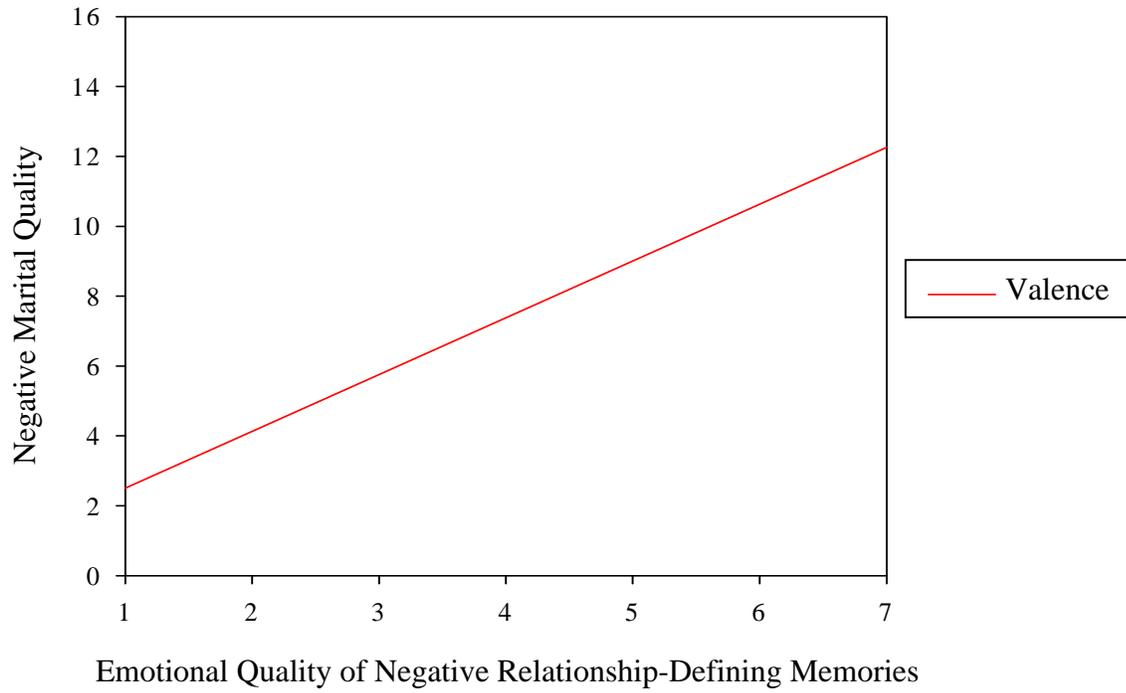
Age as a Moderator of the Relation between the Emotional Qualities of Memory and Marital

Quality

The third aim of the current study was to examine whether age moderated the relation

between the emotional quality of relationship-defining memories (i.e., valence and intensity) and

the positive and negative qualities of marriage. That is, whether the emotional quality of

relationship-defining memories differentially predicts the positive and negative qualities of

marriage with increasing age. To address study aim three, four more hierarchical regressions

were conducted. Again, two separate regression analyses were conducted for both positive

marital quality and negative marital quality for each type of relationship-defining memory

recalled (i.e., positive memory and negative memory).

Control variables were once again entered in the first step of the regression analyses. In

the second step, the emotional valence and intensity memory qualities were entered. The

emotional qualities of the relationship-defining memories were entered together, rather than

separately, since their individual effects were already examined in the previous regression

analyses addressing study aims one and two. Thus, statistics for the independent effects of

valence and intensity will not be reported in this section. Rather, statistical information will

begin at the third step of the regression equation, where the mediating effects of age are explored.

In step three, age was entered in the regression equation to examine (and control for) whether

age independently predicts marital quality. The moderating effects of age were entered in the

fourth and fifth steps of the regression equation. An age by valence interaction was entered in the

fourth step, and an age by intensity interaction was entered in the fifth step of the regression

equation. If either of these two interaction variables explained additional variance in marital

quality beyond the main effect of age, then age would be shown to moderate the relation between the emotional qualities of relationship-defining memories and the qualities of marriage.

Positive Quality of Marriage

Positive Memory: Age by Valence and Intensity

The first moderator regression analysis examined whether age interacts with the valence and intensity of positive relationship-defining memories to predict positive marital quality. Age, entered third in the regression equation, did not account for additional variance (i.e., variance beyond that accounted for by the controls and the valence and intensity of positive relationship-defining memories) in positive marital quality, $R^2 = .11$, $F(1, 258) = .39$, $p > .05$. Similarly, the age by valence interaction did not explain a significant amount of additional variance in positive marital quality, $R^2 = .12$, $F(1, 257) = 1.56$, $p > .05$. However, the age by intensity interaction did account for significantly more variance in positive marital quality, $R^2 = .14$, $F(1, 256) = 7.79$, $p < .01$. It explained an additional 2% of the variance. Thus, age moderates the relation between the intensity of positive relationship-defining memories and positive quality of marriage. *Beta* weights are reported in the top half of Table 4.

To interpret the age by intensity interaction, simple correlational analyses were conducted between the intensity of positive relationship-defining memories and positive quality in marriage for each age group separately (see Figure 3). There was no relation between the intensity of positive relationship-defining memories and positive marital quality for both young and middle-aged adults, $r = -.20$ and $r = -.02$, ps $> .05$, respectively. For older adults, however, there was a positive relation between intensity of positive relationship-defining memories and positive marital quality, $r = .53$, $p < .01$. As the intensity of the positive relationship-defining memories increased, the positive quality in marriage increased. The relation between the intensity of

Table 4

Summary of Hierarchical Regression Analyses: Age as a Moderator of the Relation between the Emotional Qualities of Memory and Positive Marital Quality

Predictors	*B*	*SEB*	*Beta*	*T*
	Positive Relationship-Defining Memory			
Step 3: Age	-.01	.02	-.04	-.62
Step 4: Age x Valence	-.03	.02	-.76	-1.25
Step 5: Age x Intensity	.03	.01	.90	2.79**
	Negative Relationship-Defining Memory			
Step 3: Age	-.02	.02	-.07	-1.09
Step 4: Age x Valence	-.01	.01	-.29	-.92
Step 5: Age x Intensity	.00	.01	.09	.30

Note. Step 1 (control variables) *Beta* weights are not shown. Valence and intensity of the memories were entered together in Step 2 (*Beta* weights are reported in Table 2). Positive relationship-defining memory: Step 1, R^2 = .11; Step 2, R^2 = .11; Step 3, R^2 = .11; Step 4, R^2 = .12; Step 5, R^2 = .14. Negative relationship-defining memory: Step 1, R^2 = .12; Step 2, R^2 = .18; Step 3, R^2 = .19; Step 4, R^2 = .19; Step 5, R^2 = .19.
** $p < .01$

Figure 3. Age as a moderator of the relation between the intensity of positive relationship-defining memories and positive marital quality.
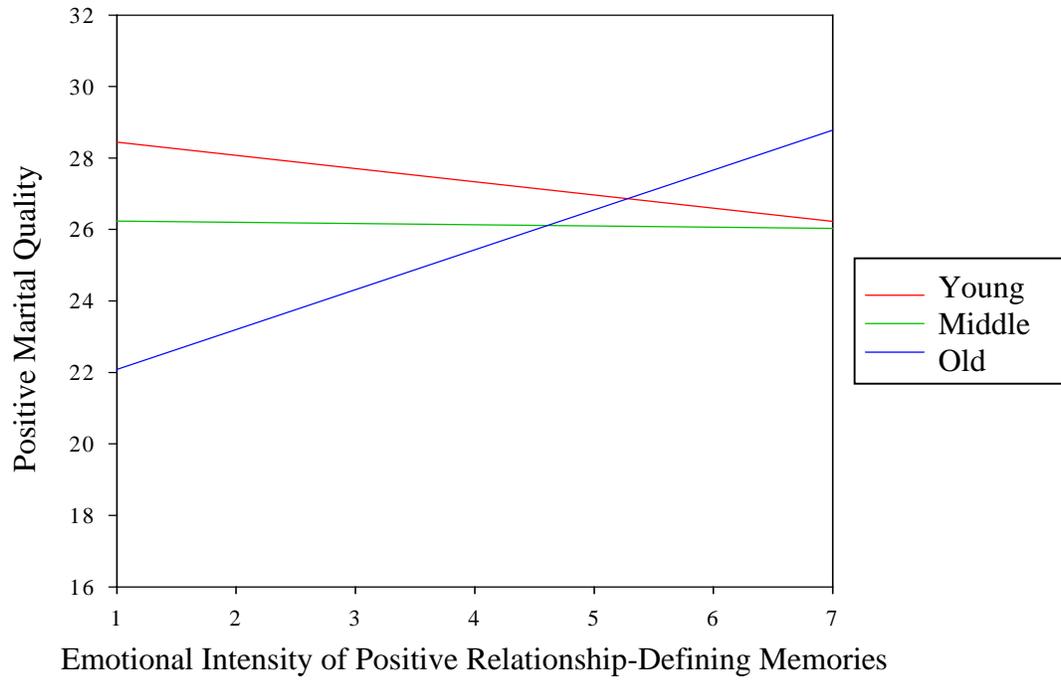
Note. Simple correlations between the intensity of positive relationship-defining memories and positive marital quality by age group: Young, $r = -.20$, $p > .05$; Middle, $r = -.02$, $p > .05$; Old, $r = .53$, $p < .01$.

positive relationship-defining memories and positive quality in marriage is present only in late life.

Negative Memory: Age by Valence and Intensity

The second moderator regression analysis examined whether age moderated the relation between the valence and intensity of negative relationship-defining memories in predicting positive marital quality. Again, age did not explain significant additional variance in positive marital quality, it only added 1% to the variance accounted for in the model, $R^2 = .19$, $F (1, 242) = 1.20$, $p > .05$. Neither the age by valence interaction nor the age by intensity interaction explained additional variance in positive marital quality, $R^2 = .19$, $F (1, 241) = .85$, $p > .05$ and $R^2 = .19$, $F (1, 240) = .09$, $p > .05$, respectively. The *Beta* weights are reported in the bottom half of Table 4. Thus, although the valence and intensity of negative relationship-defining memories independently predict the positive quality of marriage, age does not moderate this effect (i.e., there is lifespan continuity).

Negative Quality of Marriage

Positive Memory: Age by Valence and Intensity

The third moderator regression analysis examined whether age moderates the relation between the valence and intensity of positive relationship-defining memories and negative quality in marriage. Independently, age did not account for additional variance in the negative quality of marriage, $R^2 = .09$, $F (1, 258) = 1.38$, $p > .05$. In addition, neither the age by valence interaction nor the age by intensity interaction of positive relationship-defining memories explained additional variance in the negative quality of marriage, $R^2 = .09$, $F (1, 257) = .00$, $p > .05$ and $R^2 = .10$, $F (1, 256) = 3.16$, $p > .05$, respectively. The *Beta* weights are reported in the top portion of Table 5. Thus, valence, intensity, age, and the interaction of age with these

Table 5

Summary of Hierarchical Regression Analyses: Age as a Moderator of the Relation between the Emotional Qualities of Memory and Negative Marital Quality

Predictors	*B*	*SEB*	*Beta*	*T*
	Positive Relationship-Defining Memory			
Step 3: Age	-.04	.04	-.08	-1.18
Step 4: Age x Valence	-.00	.05	-.01	-.02
Step 5: Age x Intensity	-.04	.02	-.59	-1.78
	Negative Relationship-Defining Memory			
Step 3: Age	-.04	.04	-.07	-1.05
Step 4: Age x Valence	.01	.03	.14	.43
Step 5: Age x Intensity	-.05	.02	-.73	-2.46*

Note. Step 1 (control variables) *Beta* weights are not shown. Valence and intensity of the memories were entered together in Step 2 (*Beta* weights are reported in Table 3). Positive relationship-defining memory: Step 1, R^2 = .08; Step 2, R^2 = .08; Step 3, R^2 = .09; Step 4, R^2 = .09; Step 5, R^2 = .10. Negative relationship-defining memory: Step 1, R^2 = .10; Step 2, R^2 = .18; Step 3, R^2 = .18; Step 4, R^2 = .18; Step 5, R^2 = .20.
* $p < .05$

autobiographical memory qualities do not predict negative marital quality when remembering positive relationship-defining memories.

Negative Memory: Age by Valence and Intensity

The fourth regression analysis examined whether age moderated the relation between the emotional valence and intensity of negative relationship-defining memories and the negative quality of marriage. After controlling for covariates and valence and intensity in the first and second steps of the regression, age was entered in the third step. It did not explain additional variance in negative marital quality, $R^2 = .18$, $F (1, 242) = 1.11$, $p > .05$. The age by valence interaction for the negative relationship-defining memories also did not increase the variance explained in negative marital quality, $R^2 = .18$, $F (1, 241) = .19$, $p > .05$. The age by intensity interaction for the negative relationship-defining memory, however, did account for additional variance in the negative quality of marriage, $R^2 = .20$, $F (1, 240) = 6.03$, $p < .05$ (see the bottom of Table 5 for *Beta* weights). It explained an additional 1% of the variance. Age moderates the relation between negative relationship-defining memories and negative quality in marriage.

Simple correlational analyses further examined the relation between the intensity of negative memories and negative marital quality. These correlations were conducted separately for each age group to interpret the age by intensity interaction (see Figure 4). For both young and middle-aged adults, there was a positive relation between the intensity of negative relationship-defining memories and negative marital quality, $r = .30$, $p < .05$ and $r = .25$, $p < .01$, respectively. For young and middle-aged adults, as intensity of negative relationship-defining memories increased, the negative quality in marriage increased. This relation did not exist for older adults, $r = -.01$, $p > .05$. These results indicate that the intensity of negative relationship-defining

Figure 4. Age as a moderator of the relation between intensity of negative relationship-defining memories and negative marital quality.

Emotional Intensity of Negative Relationship-Defining Memories
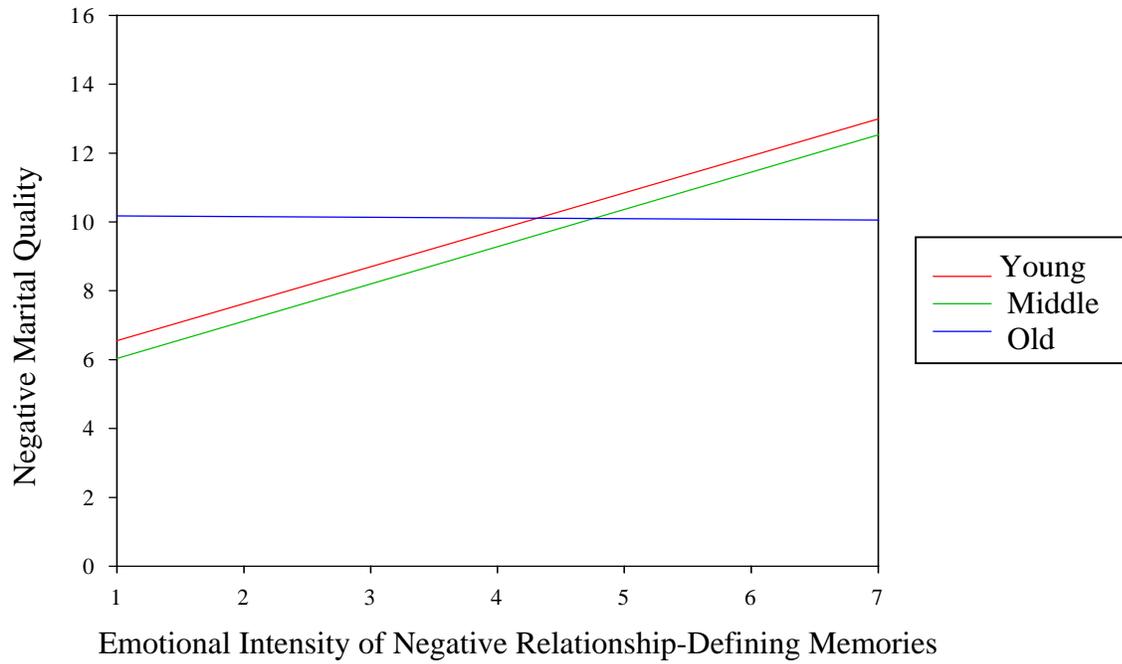
Note. Simple correlations between the intensity of negative relationship-defining memories and negative marital quality by age group: Young, $r = .30$, $p < .05$; Middle, $r = .25$, $p < .01$; Old, $r = -.01$, $p > .05$.

memories is related to negative marital quality for young and middle-aged adults but is not for older adults.

As expected, the hierarchical regression analyses for study aim three revealed that age moderates some of the relations between the emotional qualities of relationship-defining memories and marital quality. The age by intensity interaction predicts positive marital quality for positive memories, such that the relation between intensity and positive marital quality only exists in late life. In addition, the age by intensity interaction predicts negative marital quality for negative memories. Specifically, the relation between intensity and negative marital quality exists only for young and middle-aged adults (i.e., the relation does not exist in late life). Lifespan continuity exists in the relation between the emotional qualities of negative memories and positive marital quality as well as in the relation between valence of the negative memories and negative marital quality.

DISCUSSION

The purpose of the current study was to examine whether the emotional quality of relationship-defining autobiographical memories served an intimacy function (i.e., predicted marital quality). In addition, the current study also examined whether the relation between emotional quality of the memories and marital quality was moderated by age. A summary of the results is presented in Table 6. The results indicate that the hypotheses for study aim one and study aim two were partially supported. Valence predicts the positive and negative qualities of marriage when recalling negative relationship-defining memories. Intensity predicts the positive quality of marriage when recalling negative relationship-defining memories. However, the valence and intensity of positive relationship-defining memories did not predict the positive or negative qualities of marriage. It appears that recalling emotional memories of negative events in

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Table 6

Summary of Study Results

	Positive Quality of Marriage	
Predictors	Positive Memory	Negative Memory
Valence	Did not predict	Predicted: negative relation
Intensity	Did not predict	Predicted: negative relation
Age	Did not predict	Did not predict
Age x Valence	Did not moderate	Did not moderate
Age x Intensity	Moderated: no relation for young or middle-aged adults, positive relation for older adults	Did not moderate

	Negative Quality of Marriage	
Predictors	Positive Memory	Negative Memory
Valence	Did not predict	Predicted: positive relation
Intensity	Did not predict	Did not predict
Age	Did not predict	Did not predict
Age x Valence	Did not moderate	Did not moderate
Age x Intensity	Did not moderate	Moderated: positive relation for young and middle-aged adults, no relation for older adults

a relationship, and not of positive events, relates to the quality of a marriage. The hypothesis for study aim three was also partially supported. Age moderates the relation between the intensity of positive memories and positive marital quality and between the intensity of negative memories and negative marital quality. The intimacy function of autobiographical memory emerges when older adults remember more intense positive events from their marriage and when young and middle-aged adults remember less intense negative events.

The discussion is organized into three broad sections. The first section includes an interpretation of the results and a discussion of how the current study results fit with past theoretical and empirical work. The second section of the discussion provides an overview of the limitations of the current study and possible directions for future research. The third section identifies the potential implications of the current study in applied psychological settings.

The Emotional Qualities of Positive Memories Do Not Predict Marital Quality

With respect to positive relationship-defining memories, neither valence nor intensity predicted the positive or negative qualities of marriage when age is not considered. These results point to the conclusion that recalling positive memories about a relationship does not relate to the positive or negative qualities of a marriage. Therefore, positive relationship-defining memories did not serve an intimacy function, as shown by the current study. For example, remembering a relationship-defining vacation shared with one's spouse does not seem to have an effect on the quality of marriage.

Although it was expected, one potential explanation for not finding a relation between positive relationship-defining memories and marital quality is the positivity bias in autobiographical memory (Charles, Mather, & Carstensen, 2003). In daily life, people tend to recall more positive autobiographical memories than negative or neutral memories (e.g., Rubin

& Berntsen, 2003; Walker, Skowronski, & Thompson, 2003). This finding also may be similar for relationship-defining memories. The participants may have frequently rehearsed their positive relationship-defining memories (more than they rehearsed their negative relationship memories), such that they are barely affected by the positive memories because they are no longer unique or as intense. This implies that positive relationship memories are recalled more often in daily life, which results in them being frequently rehearsed to a point where they no longer serve an intimacy function.

An alternative explanation for not finding a relation between the emotional qualities of positive relationship-defining memories and marital quality could rest in the content of the memories. Although the memories reported for the current study were not content-coded, a brief review of the memories indicated that a large number of participants recalled positive memories of their wedding day, honeymoon, or the birth of their children. These memories may become highly scripted or schematized (Anderson, Cohen, & Taylor, 2000), becoming overgeneralized and possibly adhering more to societal standards of such events. It seems likely that this could reduce the personal significance of these memories which could, in turn, affect how their emotional quality relates to marital quality. Further, as previously discussed, positive autobiographical memories are recalled frequently, resulting in a gradual fading of the emotional affect associated with positive events (Skowronksi, Gibbons, Vogl, & Walker, 2004) The less emotion that is present in, or associated with, a positive relationship-defining memory, the less likely it would seem to serve an intimacy function.

The Emotional Qualities of Negative Memories Do Predict Marital Quality

Emotional quality of autobiographical memory predicts marital quality when participants recalled negative relationship-defining memories. Less negatively-valenced and less intense

negative relationship-defining memories predict higher positive quality of marriage. In addition, when recalling negative relationship-defining memories, more negatively-valenced memories predict higher negative quality of marriage. This means that negative relationship-defining memories, and the emotion associated with the events recalled, are powerful in influencing both positive and negative marital quality. Negative relationship-defining memories appear to serve an intimacy function when they are less negatively-valenced and less intense. Therefore, remembering a relationship event that is negative in content but is not overly negative in the emotion it evokes (e.g., a memory of an argument that has since been resolved) should serve to maintain or improve marital quality.

It should be noted that a small number of participants (3%) dropped out of the current study after recalling a negative relationship-defining memory (i.e., before recalling a positive memory and responding to the background questions) for reasons unknown. Post hoc analyses indicated that these dropouts were lower in positive marital quality and higher in negative marital quality. Since these participants did not complete the autobiographical memory quality ratings, it is difficult to say how their negative memories would have related to their marital quality. If we assume that their negative memories were more negative and more intense, similar to the participants who completed the emotional quality ratings, then these results would likely strengthen what was already found: the emotional quality of negative memories predicts higher negative marital quality and lower positive marital quality. Despite the participant dropouts, the notable relation between emotional quality of the negative memories and marital quality was still evident, and thus the intimacy function of autobiographical memory was served.

The intimacy function of autobiographical memory generally has been discussed as using autobiographical memory to maintain and enhance intimacy in a relationship. The current study

is the first to examine whether remembering negative events is related to marital quality, thereby serving an intimacy function. The current research suggests, however, that autobiographical memory of negative events may serve an anti-intimacy function. It seems that remembering negative relationship-defining memories might lead to decreased intimacy with a spouse, which could cause one to question whether he or she is meant to be in the relationship. This potential anti-intimacy function could serve to help a couple better understand their unhealthy relationship and determine the proper course of action (i.e., counseling, divorce). Ultimately, this anti-intimacy function possibly may cause indirect benefits to well-being and lead to enhanced intimacy in other healthier relationships by limiting or discontinuing time spent in the bad relationship. The theory of the social functions of autobiographical memory (Alea & Bluck, 2003) may need to be broadened to include not only the adaptive social functions of autobiographical memory, like the intimacy function, but possibly the uses of autobiographical memory that are counterproductive to a relationship.

Past research has shown that recalling extremely negative and traumatic events often has beneficial outcomes for psychological well-being and can even improve relationship quality (Niederhoffer & Pennebaker, 2002). However, these prior findings have not been upheld in the current study. The current study revealed that negative relationship-defining memories that are less negatively-valenced and less intense (i.e., not extremely negative) were related to better quality of marriage (i.e., higher positive and lower negative marital quality). This strongly suggests that there is a certain point at which recalling extremely negative memories is detrimental to interpersonal and intrapersonal well-being, as Suedfeld and Pennebaker (1997) have previously suggested, while less negative memories are not detrimental and can actually improve interpersonal and intrapersonal well-being. The emotional valence and intensity of the

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negative relationship-defining memories recalled for the current study might have exceeded the threshold for negativity so that they could no longer yield the expected beneficial outcome of negative memories serving the intimacy function of autobiographical memory (i.e., improved marital quality).

Finally, one important aspect of autobiographical memory that is infrequently examined is the content of the memories. Alea, Bluck, and Semegon (2004) found that self-reports of autobiographical memory quality do not always yield the same results as the content-coded quality of memory, underscoring the need for content-coding in future work. As was suggested for positive relationship-defining memories, exploring the content of negative relationship-defining memories as it relates to marital quality would be a worthwhile endeavor, based on the present research. The results found for the negative relationship-defining memories might have more to do with the nature and content of the negative events recalled (i.e., death of someone close to the family that adversely affects the relationship vs. an argument with the participant's spouse or being angry with something they did) rather than the emotional quality of the memories. Content coding of the memories could help determine if the specific type of event being remembered yields significantly different results than when content is not examined (i.e., the current study).

Age Moderates the Relation between the Emotional Qualities of Relationship-Defining Memories and Marital Quality

Age was a moderator of the relation between marital quality and emotional quality of relationship-defining memories when the valence of the remembered event matched the valence of the marital quality being examined. As predicted, in late life, the emotional intensity of positive relationship-defining memory is strongly related to positive marital quality, but this is

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not true earlier in life. Age also moderates the relation between negative relationship-defining memory and negative marital quality. The relation between these negative memories and negative marital quality is stronger for young and middle-aged adults than it is for older adults (i.e., there is no relation in older adulthood). Taking this information, it is suggested that older adults may experience marital quality enhancement when remembering intense positive events, but young and middle-aged adults would experience marital quality benefits when remembering negative events from their marriage that were not intense.

These results match well with Carstensen and colleagues' (1999) theory about social motives across the lifespan (i.e., socioemotional selectivity theory). The goal of regulating emotion to a more positive state through positive social relationships is especially prominent in older adulthood. This theory seems to be supported by the data in the current study. Older adults are more likely to use positive autobiographical memories to enhance the positive qualities in marriage or serve the intimacy function of autobiographical memory. On the other hand, the data suggests they might regulate their memory of the negative events of a relationship to prevent the negative memories from influencing the quality of marriage. This emotion regulation could be the reason why the intensity of negative relationship-defining memories is not related to negative marital quality for older adults. Remembering intense negative events is detrimental to the quality of marriage, and older adults are seeking to enhance positive social interactions.

For younger and middle-aged adults, where the social goal of knowledge acquisition is paramount (Carstensen et al., 1999), remembering intense positive events about their relationship is not related to the positive qualities in their marriage. Since younger and middle-aged adults are not socially motivated to regulate emotion to a more positive state, the intimacy function of autobiographical memories is not present when recalling positive relationship-defining memories.

Furthermore, young and middle-aged adults are not actively regulating the emotion in their negative memories, which may result in negative memories having more of an influence on the quality of a marriage than positive memories. Rather than trying to seek positively gratifying social interactions like older adults do, young and middle-aged adults may still be using the memory of these negative events for knowledge and information-seeking purposes about their social environment (i.e., to determine whether they want to stay with their partner).

Another related explanation for the effects of the age by intensity interactions could be due to the fading affect bias (Skowronksi et al., 2004). With time, negative memories lose their emotional intensity, whereas positive memories remain at levels of intensity more similar to initial levels from the time of encoding. Because of their age, and the likelihood they are remembering more distant events, older adults have had more time than young and middle-aged adults for the perceived emotional intensity of the negative memories to fade. It is possible, then, that the positive memories of older adults remain intensely positive, but their negative memories become less intense with time. Thus, the social motive of emotion regulation, as postulated by Carstensen, coupled with the potentially decreased intensity of negative relationship-defining memories could be the reason for the finding that the relation between intensity of positive memories and positive marital quality is stronger in late life. For young and middle-aged adults, on the other hand, both positive and negative memories may remain at a high intensity levels, more similar to the initial intensity of the event. If this is true, then it is likely that the more intense negative memories of young and middle-aged adults, which then fade with age, explain why age moderates the relation found between intensity of negative relationship-defining memories and negative marital quality.

Further, since the valence and intensity of only negative relationship-defining memories were found to predict marital quality across the sample, it would be interesting and informative to have participants in future research recall events relating to resolved versus unresolved issues in a relationship (e.g., whether the memory is still problematic for the relationship). It is conceivable that memories for negative relationship-defining events that are resolved are likely to be less negatively-valenced and less intense than those events that have not been resolved or reconciled in the mind's eye. If this is true, then it is possible that older adults have resolved their negative event memories so that they no longer significantly influence marital quality, but young and middle-aged adults have not yet had the time to resolve these memories and thus are susceptible to their deleterious effects on marital quality.

In addition, when participants remember events that are initially negative in affect but, through the process of narrating the event, subsequently yield a positive outcome, this is known as a redemptive sequence (McAdams, Reynolds, Lewis, Patten, & Bowman, 2001). Recent work on redemptive sequences found in negative autobiographical memory revealed that redemption may actually be a stronger predictor of well-being and life satisfaction, and presumably marital satisfaction, than the emotional quality of autobiographical memory (McAdams et al., 2001). If negative relationship-defining memories containing redemptive sequences (vs. non-redemptive negative memories) predict higher levels of positive marital quality and lower levels of negative marital quality, this will emphasize the importance of resolving past negative relationship events in order to enhance marital quality when these events are remembered. Content coding could reveal whether redemptive sequences are found in a person's negative relationship-defining memories. Although it seems plausible that older adults might demonstrate more redemptive sequencing in their relationship memories, content coding of the negative memories in the

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current study could reveal that redemption was lacking in the memories of the older adult participants. Therefore, this could provide another explanation as to why the relation between intensity of negative relationship-defining memories and negative marital quality did not exist for older adults in the current study.

Potential Limitations and Future Directions

Some potential limitations of the current study which should be addressed are discussed below. First, the fact that the study is a correlational design limits the interpretation of the results. Second, the emotional qualities (i.e. valence and intensity) of the relationship-defining memories accounted for a relatively small amount of variance in marital quality. This leaves the possibility that other autobiographical memory qualities also account for variance in marital quality. Finally, potential problems of the online methodology employed in the current study are addressed.

Correlational Design

The current study examined the relations between the emotional qualities of relationship-defining memories and the positive and negative qualities of marriage with hierarchical regression analyses. Although these analyses are generally powerful to detect effects, it is difficult to assess the causality of any significant relations. The current study theorized that the emotional qualities of relationship-defining memories would predict marital quality. However, as the current study employed a correlational design, the reverse could also be true.[8] People in good or bad marriages may recall memories consistent with the current state of the marriage. If people perceive they are in a good relationship, they might further bias this perception of the relationship by recalling memories that support that idea (Karney & Coombs, 2000). An

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[8] Post hoc analyses were rerun with the valence and intensity of the relationship-defining memories serving as the criterion variables and positive and negative marital quality serving as the predictor variables (i.e., entered second in the regression equations after the control variables). These regression analyses showed that the same results were found by switching the predictors with the criterions.

experimental study by Alea and Bluck (2007) found evidence that supports the theory that autobiographical memory quality does predict relationship quality, but these results need to be replicated to be more confident of the direction of this relation. An experimental procedure in which marital quality is tested before and after several sessions of relationship-defining memory recall (e.g., a longitudinal design) might help to further tease apart the causal direction of the relations found in the current study.

Another limitation of a correlational design, when conducting an age study, is that it is impossible to assess whether the observed age relations actually are due to age or whether they are the result of cohort differences. Perhaps as a result of their specific cohort membership, participants possess different perceptions of what marriage and marital quality means or how one should express and describe his or her relationship memories to others. As a result, the data in the current study could have been driven by these cohort differences and not by any direct effect of participant age.

Other Autobiographical Memory Qualities Could Predict Marital Quality

The valence and intensity of negative relationship-defining memories were able to explain some variance in the positive and negative qualities of marriage, which is an impressive finding. Remembering a relationship event accounted for an additional 1% to 7% of the variance in marital quality beyond that already accounted for by the control variables (i.e., participant and spousal health, children), which are continually found in the literature to predict marital quality. In addition to the emotional quality of autobiographical memories, there are other qualities of memory that could potentially explain additional variance in marital quality (i.e., serve an intimacy function). Two other intensity variables (i.e., visceral intensity and emotional persistence) were explored in the current study, but they were not shown to predict marital

quality. Nonetheless, it is possible that other qualities (e.g., vividness, age of the memory) of the relationship-defining memories could be predictors of marital quality, and potentially stronger predictors than valence and intensity. Research has already found that the personal significance of autobiographical memory (Alea & Bluck, 2007) and how the event is relived in the memory (Sanders, 2007) are related to marital quality. Future work should explore the many other autobiographical memory qualities that could potentially serve an intimacy function.

Online Methodology

The online methodology, rather than one restricted by laboratory-based methodology, afforded several benefits. The researcher was able to increase the number and diversity of participants in the study, above what would have been possible if participation necessitated coming to the laboratory to complete the survey in person. However, the actual diversity of the sample was still relatively homogeneous. Future studies should try to obtain a more ethnically diverse sample and might even consider investigating the cross-cultural differences in the intimacy function of autobiographical memory across the lifespan.

The online methodology of the current study also greatly increased the number of middle-aged adults in the current study, which is particularly important for a lifespan study since middle-aged adults are often understudied (Lachman, 2004). In addition, completing the survey online afforded participants a certain degree of anonymity, which hopefully increased participant honesty in responding and decreased social desirability effects. A recent study comparing online methodology to face-to-face methodology revealed that any differences in results that emerged between the two procedural techniques seemed to be due to the effects of social desirability and interviewer bias of the studies conducted in person (Duffy, Smith, Terhanian, & Bremer, 2005).

Therefore, it appears that the anonymity that is afforded to participants in online methodologies may be a legitimate strength of this type of data collection.

Of course, there are inevitably some issues that could arise from administering a survey online (i.e., cannot immediately assist participants if any questions arise) rather than administering a survey in a controlled laboratory setting. In the current study, some participants reported not being able to recall a positive or a negative relationship-defining memory. If these participants had been interviewed by a researcher in a laboratory setting, the participants could have been given structured prompts that could help them pinpoint such a memory. Future studies should try to replicate the current study with an in-person, structured interview methodology. This could help assess whether differences exist between the online methodology results of the current study and the personal interview results of the replicated study.

In future studies using a face-to-face interview, it also would be informative to see if there is any significant effect of having the participant's spouse present when recalling the positive and negative relationship-defining memories. This could indicate whether remembering a relationship-defining memory in isolation produces different results than when remembering a relationship event with someone else (i.e., spouse). It is conceivable that the solitary reflection involved in the current study is especially beneficial for older adults, but perhaps young and middle-aged adults need to share their memories with others to receive the full benefits of the intimacy function of autobiographical memory.

Implications: The Intimacy Function of Autobiographical Memory in Marriage Counseling

These results indicate the importance of the emotional quality of relationship-defining memories in predicting marital quality. It appears that the intimacy function of autobiographical memory is best served by recalling negative relationship-defining memories that are less

negatively-valenced and less intense. This has broad applications for use in marriage counseling. Often times, couples are encouraged to reminisce about the positive relationship events from their marriage so that they might ultimately maintain or improve the quality of the marriage as a result (Adler-Baeder, Higginbotham, & Lamke, 2004). Adler-Baeder and colleagues (2004) even claim that "marital satisfaction is higher among individuals who focus on the positives versus the negatives in their partner and their relationship" (p. 540). As it turns out, besides the personal well-being and satisfaction gained from recalling such positive memories (Gable et al., 2004), thinking and writing about positive relationship-defining memories may not directly lead to enhanced marital quality for all age groups. Couples, instead, might need to focus more on regulating the emotion in negative relationship-defining memories or thinking about them in more positive terms (i.e., possibly by forming a redemptive sequence or resolving the issue in some way). In so doing, individuals will likely see increased positive and decreased negative marital quality.

When age was considered, it was conclusively shown that age moderates the strength by which emotional intensity of relationship-defining memories predict marital quality. That being said, older adults might find more success in marriage counseling when they are encouraged to think about their positive relationship-defining memories. On the other hand, perhaps young and middle-aged adults would profit more from marriage counseling that incorporated remembering negative relationship events and being taught how to restory those events so that the memories are less negatively valenced and less charged with negative emotional intensity.

In good times and in bad, married couples should remember their shared positive and negative events differently in order to have their happily ever after (i.e., to maintain higher levels of positive marital quality and lower levels of negative marital quality). Positive memories, at

least as a couple ages together, should be remembered intensely. On the other hand, remembering negative events with lower intensity and lower negative valence would be especially useful for younger and middle-aged couples. Marriage counseling could prove more beneficial if training to this effect were offered to couples. If a couple can successfully use the intimacy function of autobiographical memory in this way, they should be able to maintain or even enhance the quality of their marriage.

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APPENDIX

Appendix A. Recruitment Letter and Study Protocol

Note. Only portions of the protocol relevant to the current study are included here, even though the study was part of a larger project.

Recruitment Letter

UNCW UNIVERSITY OF NORTH CAROLINA WILMINGTON

November 1, 2006

Dear Family, Friends, and Colleagues:

As members of the Thinking About Life Experiences Lab, we are asking for your help! We are looking for *volunteers for an online research study*. The study examines how individuals *of all ages* remember relationship events. To participate, you must be *currently married, for at least two years*.

The online survey is *user-friendly* and *password-protected*. Please give yourself an hour to complete the survey. To begin the survey, please go to:

http://www.surveymonkey.com/s.asp?u=57242799750

If you would like additional information about the ongoing projects in the TALE Lab please visit our website at: http://people.uncw.edu/alean/research.htm. If you have questions, contact Dr. Nicole Alea (alean@uncw.edu) or Stephanie Vick (scv9582@uncw.edu) via email or by phone at 910-962-7217.

We appreciate your time and commitment to supporting research endeavors of faculty and students at UNCW. *Please take the time to participate* in this research study, and encourage colleagues, friends, and family to do so as well.

Best Regards,

Dr. Nicole Alea
Assistant Professor of Psychology

Stephanie Vick
Psychology Masters Graduate Student

Renee Sanders
Psychology Undergraduate Honors Student

Study Protocol

Welcome to the Relationship Memories Study!

This research is being conducted by Dr. Nicole Alea and her students in the Psychology Department at the University of North Carolina Wilmington. Your participation will advance our understanding about how and why people remember relationship events. It is easy to participate! All data is collected online with a user-friendly survey tool that is completely secure. It will take less than an hour of your time. Directions about how to proceed with the study are given below. Thank you for volunteering to take part in this study!

Directions
- Read all instructions carefully.
- Respond to all items. You will be prompted to do so if you miss an item.
- Respond truthfully to each item, as your responses are completely confidential.
- After completing each page (after answering all questions, completing all tasks, reading any descriptions), click the 'SUBMIT' button at the bottom of the page. Clicking on 'SUBMIT' will move you to the next page and submit your responses to the researchers.
- Do not go back to a previous page once your responses have been submitted.
- Complete the entire survey in a single session.
- If you decide you no longer wish to continue, click 'exit this survey' at the top right of the page. Please only exit the survey if you are sure you do NOT want to continue.

<div align="center">

SUBMIT

</div>

Honesty Code

It is important to the quality of this research that your responses to the questions and tasks are:
- as truthful as possible, and are completed to the best of your ability.
- completed without the assistance of others.
- completed without the use of any external aids (i.e., paper and pencil).

Therefore, we ask that you complete the survey by yourself and that you remove any pens/pencils, paper, or other recording devices from the area around you. If you agree with this honesty code, please read and respond to the following statements.

1. I agree to respond to all questions and tasks honestly and to the best of my ability.
   - yes
   - no

2. I have removed all items that could potentially assist me with this study, and I will not use them or the assistance of others while I am a participant in this study.
   - yes
   - no

<div align="center">

SUBMIT

</div>

Response if agree with both: Thank you for agreeing to be in the study, and to answering all items truthfully and to the best of your ability.

Response if disagree with either: Unfortunately, you cannot complete the research study without adhering to the honesty code. Please click on 'SUBMIT' to go to the end of the study.

Pre-Screening Questions

Before beginning, we need to ensure that you meet the criteria for participation. Please answer the following questions.

1. What is your current relationship status?
   o single
   o long-term dating relationship
   o married
   o civil union/life partnership
   o divorced/separated
   o widowed
   o other: _____

2. If in a relationship, have you been in your current relationship for at least 2 years?
   o yes
   o no

<div align="center">

SUBMIT

</div>

Response if meet criteria: Great! You meet the criteria for participation! On the next page there is a more detailed description of the study. It is an informed consent document required by the University that informs you of your rights as a participant. Please read through the information and, if you feel comfortable, give your consent to participate.

Response if do not meet criteria: Unfortunately, you do not meet the criteria to participate. For this study, we are looking for individuals who have been married for at least 2 years. Please click 'SUBMIT' to go to the end of the study.

<h3 align="center">Consent to Participate in a Research Study</h3>

What Is The Research About?
You are being invited to take part in a research study about how and why people remember relationship events. If you take part in this study, you will be one of about 150 people to do so.

Who Is Doing The Study?
The person managing data collection is Stephanie Vick, Graduate Student at the University of North Carolina Wilmington (UNCW). Dr. Nicole Alea, Assistant Professor at UNCW is her supervisor. Trained graduate and undergraduate UNCW student research assistants will also be involved in managing and analyzing data.

What Is The Purpose Of This Study?
The purpose of this study is to examine how and why adults of different ages remember relationship events.

Where Is The Study Going To Take Place And How Long Will It Last?
The research procedures will be completed online, at a computer (with internet access) of your choosing. It will take about an hour.

What Will I Be Asked To Do?
The main part of the study involves remembering and writing about relationship events, such as the first time you met your spouse. You will also be asked to complete questionnaires about yourself, your relationship, and the memories you share. In addition, there are a few tasks that you will be asked to do, like identifying words.

What Are The Possible Risks And Discomforts?
To the best of our knowledge, the things you will be doing have no more risk of harm than you would experience in everyday life.

Will I Benefit From Taking Part In This Study?
You will not gain any personal benefit from taking part in this study, though many people enjoy reminiscing and writing about their memories.

Do I Have To Take Part In This Study?
If you decide to take part in the study, it should be because you want to volunteer. There will be no penalty and you will not lose any benefits or rights you would normally have if you choose not to volunteer. You will not be treated differently by anyone if you choose not to participate in the study. You can stop at any time during the study and still keep the benefits and rights you had before volunteering.

What Will It Cost Me To Participate?
There are no costs associated with taking part in this study.

Will I Receive Any Payment Or Reward For Taking Part In This Study?

You will not receive any payment or reward for taking part in this study.

Who Will See The Information I Give?
We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information or what that information is. The survey is conducted via a secure, reputable online data collection company (see www.surveymonkey .com if you have any further questions or concerns).

To further ensure confidentiality, your name will be initially attached to a participant ID number. This list will be kept in a secure data file in the researcher's lab. This list will be destroyed after data collection is complete. Further, any identifying information in the memories you share will not be used when this data is written up or presented (i.e., pseudonyms will be used).

Your information will be combined with information from other people taking part in the study. When we write up the study to share it with other researchers, we will write about the combined information. You will not be identified in these written materials.

However, there are some circumstances in which we may have to show your information to others. We may be required to show your information to people such as the UNCW Institutional Review Board, in order to demonstrate that the research has been done correctly. Moreover, the law may require us to show your information in court, or to tell authorities if you have abused a child or are a danger to yourself or others.

Can My Taking Part In The Study End Early?
If you decide to take part in the study you still have the right to decide at any time that you no longer want to continue. There will be no penalty and no loss of benefits or rights if you stop participating in the study. You will not be treated differently by anyone if you decide to stop participating.

What If I Have Questions?
If you have any questions about participating in the study, please contact Stephanie Vick at 910-962-7217 or scv9582@uncw.edu. Later, if you have further concerns contact her faculty supervisor, Dr. Nicole Alea at 910-962-3377. If you have questions about your rights as a research participant, contact Dr. Candace Gauthier, Chair of the UNCW Institutional Review Board, at 910-962-3558.

<div align="center">

Research Participant Statement and Signature

</div>

Please read the statement below and check the appropriate box.

"Typing my name and providing my contact information in the blanks below means that I understand that my participation in this research study is entirely voluntary. I may refuse to participate without penalty or loss of benefits. I may stop participating at any time without penalty or loss of benefits. I also understand that the contact information given below is confidential and will only be used by the research team, for research purposes."

- I give my consent to participate in the research study, and agree to the above statement.
- I do not give my consent to participate in the research study, and do not agree to the above statement.

Please provide your name and contact information below. This information is a proxy for your signature.

Title	First Name	Last Name

Email Address	Confirm Email Address

Phone	Today's Date	Current Time

Name of person providing information to the participant:

Dr. Nicole Alea

UNCW IRB Protocol: 2006-602
Approved: 10/02/06
Expires: 10/02/07

Before clicking 'SUBMIT', PLEASE PRINT THIS PAGE FOR YOUR RECORDS.

[SUBMIT]

Response if agree to participate: Now that you have agreed to participate, we can begin with the main part of the study. Remember, complete all items on a page and then click 'SUBMIT' to send your answers to the researchers.

Response if do not agree to participate: (Send to end of survey and TALE website)

Computer Skills

Please answer the questions below about your computer skills.

1. Do you feel comfortable or capable of answering questions on a computer, navigating the computer by using a mouse, and typing passages?
   o   yes
   o   no

2. How do you rate your proficiency with using a computer?
   very poor   poor   adequate   good   very good

<div align="center">

SUBMIT

</div>

Relationship Characteristics and Quality

The questions on the next few pages ask about the characteristics of your marital relationship, and how you view your marriage and spouse.

1. How long have you been in your current marriage?
_____ years

2. Is this your first marriage?
   o   yes
   o   no

3. Do you have any children?
   o   yes
   o   no

<div align="center">

SUBMIT

</div>

Below are questions about your views of your marital relationship. Be sure to respond based on how your relationship is in general, and not based on only a few specific events. Please be truthful with your responses, according to the honor code to which you agreed.

1. Considering only the positive qualities of your spouse, and ignoring the negative ones, evaluate how positive these qualities are.

   0   1   2   3   4   5   6   7   8   9   10
   not at   extremely
   all

2. Considering only the positive feelings you have towards your spouse, and ignoring the negative ones, evaluate how positive these feelings are.

   0   1   2   3   4   5   6   7   8   9   10
   not at   extremely
   all

3. Considering only good feelings you have about your marriage, and ignoring the bad ones, evaluate how good these feelings are.

0	1	2	3	4	5	6	7	8	9	10

not at
all
                                                                        extremely

4. Considering only the negative qualities of your spouse, and ignoring the positive ones, evaluate how negative these qualities are.

0	1	2	3	4	5	6	7	8	9	10

not at
all
                                                                        extremely

5. Considering only the negative feelings you have towards your spouse, and ignoring the positive ones, evaluate how negative these feelings are.

0	1	2	3	4	5	6	7	8	9	10

not at
all
                                                                        extremely

6. Considering only bad feelings you have about your marriage, and ignoring the good ones, evaluate how bad these feelings are.

0	1	2	3	4	5	6	7	8	9	10

not at
all
                                                                        extremely

SUBMIT

Response: Thank you for completing the questions about your marital relationship!

The next section of the survey asks you to remember and write about three different relationship events. Follow the directions for each memory. You will also be asked to answer some questions about each memory. While, inevitably, we say things that present a picture of our relationship that might not be completely accurate, please make every effort to be honest and avoid misrepresenting your relationship. You should try to describe your relationship memory as you remember it occurring, without altering it to represent what you wish would have happened.

This is the main part of the study, so please take your time reminiscing and writing about these relationship events. After you are finished with this section, the remaining sections (two tasks and two short questionnaires) should only take about 10 minutes to complete.

Negative Memory

Please remember a specific NEGATIVE event that you and your spouse experienced TOGETHER. This negative relationship memory should have the following attributes:

1. It is at least one year old.
2. It is a memory from your relationship that you remember very clearly. The memory still feels important to you even as you think about it, and it leads to strong feelings.
3. It is a memory that might be the memory you would tell someone else if you wanted that person to understand the negative aspects of the relationship between you and your spouse.
4. It is a memory about a specific event, but it can be linked to other similar memories that share the same theme.
5. It is a memory that you have thought about. It is familiar to you, like a picture you have studied or a song you have learned by heart.

In the space provided below, please write about the memory you have of this negative relationship event. Not all negative relationship memories are about an argument; but if you decide to write about one, please do not write about the content of the argument, but rather the context in which it occurred. Please be as specific as possible, including as many details as you can remember. Make sure to address: WHAT happened, WHO was there, WHERE it was, and WHEN it happened. To include all of this information, it will likely take more than just a few sentences.

```

```

SUBMIT

Negative Memory Questions

The following questions ask you about the memory which you just recalled about this negative event. Please respond to the statements below with only that particular memory in mind.

6. While remembering the event, I feel the same particular emotions I felt at the time of the event.

1	2	3	4	5	6	7
completely different						identically the same

7. While remembering the event, I feel the emotions as strongly as I did then.

1	2	3	4	5	6	7
not at all		vaguely		distinctly		as clearly as if it were happening now

8. While remembering the event, the emotions are extremely positive.

1	2	3	4	5	6	7
not at all		hardly		somewhat		entirely

9. While remembering the event, the emotions are extremely negative.

1	2	3	4	5	6	7
not at all		hardly		somewhat		entirely

10. The emotions that I feel are extremely intense.

1	2	3	4	5	6	7
not at all		hardly		somewhat		entirely

11. While remembering the event, I feel my heart pound, or race.

1	2	3	4	5	6	7
not at all						more than for any other memory

12. While remembering the event, I feel sweaty or clammy.

1	2	3	4	5	6	7
not at all						more than for any other memory

13. While remembering the event, I feel tense all over or I feel knots, cramps, or butterflies in my stomach.

1	2	3	4	5	6	7
not at all						more than for any other memory

SUBMIT

Positive Memory

Please remember a specific POSITIVE event that you and your spouse experienced TOGETHER. This positive relationship memory should have the following attributes:

1. It is at least one year old.
2. It is a memory from your relationship that you remember very clearly. The memory still feels important to you even as you think about it, and it leads to strong feelings.
3. It is a memory that might be the memory you would tell someone else if you wanted that person to understand the positive aspects of the relationship between you and your spouse.
4. It is a memory about a specific event, but it can be linked to other similar memories that share the same theme.
5. It is a memory that you have thought about. It is familiar to you, like a picture you have studied or a song you have learned by heart.

In the space provided below, please write about the memory you have of this positive relationship event. Please be as specific as possible, including as many details as you can remember. Make sure to address: WHAT happened, WHO was there, WHERE it was, and WHEN it happened. To include all of this information, it will likely take more than just a few sentences.

[text entry box]

SUBMIT

Positive Memory Questions

The following questions ask you about the memory which you just recalled about this positive event. Please respond to the statements below with only that particular memory in mind.

6. While remembering the event, I feel the same particular emotions I felt at the time of the event.

1	2	3	4	5	6	7
completely different						identically the same

7. While remembering the event, I feel the emotions as strongly as I did then.

1	2	3	4	5	6	7
not at all		vaguely		distinctly		as clearly as if it were happening now

8. While remembering the event, the emotions are extremely positive.

1	2	3	4	5	6	7
not at all		hardly		somewhat		entirely

9. While remembering the event, the emotions are extremely negative.

1	2	3	4	5	6	7
not at all		hardly		somewhat		entirely

10. The emotions that I feel are extremely intense.

1	2	3	4	5	6	7
not at all		hardly		somewhat		entirely

11. While remembering the event, I feel my heart pound, or race.

1	2	3	4	5	6	7
not at all						more than for any other memory

12. While remembering the event, I feel sweaty or clammy.

1	2	3	4	5	6	7
not at all						more than for any other memory

13. While remembering the event, I feel tense all over or I feel knots, cramps, or butterflies in my stomach.

1	2	3	4	5	6	7
not at all						more than for any other memory

SUBMIT

Response: Thank you for sharing your memories with us and answering the questions about each memory. You are almost finished with the survey!

Now you will move on to complete a few tasks. The tasks will take about 5 minutes to complete.

List Learning Task

The first task is a list learning task. To complete the task, please read the words that will appear on the following pages out loud. There will be ten words, with one word per page. Say the word out loud, ONLY ONCE. Then, click 'SUBMIT' to move to the next word.

(Note: Each of the following words will be on a separate page with the 'submit' button at the bottom of each page)

<div align="center">

Cabin
Pipe
Elephant
Chest
Silk
Theatre
Watch
Whip
Pillow
Giant

</div>

<div align="center">

SUBMIT

</div>

In the blanks below, please write down (in any order) as many of the words as you can remember from the list you have just read out loud.

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

<div align="center">

SUBMIT

</div>

Word Identification Task

This is a word identification task. Below is a list of letter strings, some of which are actual words and others are not. Please read through the list of items and put a check mark next to those items that you know are real words.

- ☐ Absolution
- ☐ Arrate
- ☐ Asinine
- ☐ Audible
- ☐ Ceiloplaty
- ☐ Comectial
- ☐ Concurrent
- ☐ Confluence
- ☐ Connote
- ☐ Denotation
- ☐ Disconcert
- ☐ Epicurean
- ☐ Eventuate
- ☐ Fusigenic
- ☐ Gustation
- ☐ Hyplexion
- ☐ Ineffity
- ☐ Inflect
- ☐ Irksome
- ☐ Litany
- ☐ Metenetion
- ☐ Neotatin
- ☐ Nuance
- ☐ Nitrous
- ☐ Nonquasity
- ☐ Optimize
- ☐ Polarity
- ☐ Purview
- ☐ Reportage
- ☐ Reverent
- ☐ Rochead
- ☐ Sheal
- ☐ Sparkhouse
- ☐ Substratum
- ☐ Suffuse
- ☐ Tradured
- ☐ Ubiquitous
- ☐ Unction
- ☐ Wanderlust
- ☐ Waterfowl

SUBMIT

List Learning: Part 2

In the blanks provided below, please write down again (in any order) the words that you remember from the list that you read out loud prior to the word identification task.

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

SUBMIT

Response: Thanks for completing those tasks! They can be difficult.
There are only two short questionnaires remaining, and then you will be done!

Health Questions

The next few questions ask about your health status, as well as the health of your spouse. Follow the instructions for each question.

1. Compared to other people your age, how do you believe your health to be?
   o   1 Very Poor
   o   2 Poor
   o   3 Moderately Poor
   o   4 Moderately Good
   o   5 Good
   o   6 Very Good

2. Compared to other people your spouse's age, how do you believe your spouse's health to be?
   o   1 Very Poor
   o   2 Poor
   o   3 Moderately Poor
   o   4 Moderately Good
   o   5 Good
   o   6 Very Good

SUBMIT

Background Information

You are almost done! These last few questions will provide us with some general information about you and how you heard about the study. Follow the instructions for each question.

1. What is your gender?
- o 1 Male
- o 2 Female

2. What is your date of birth?
MM / DD / YYYY

4. What race or ethnicity do you most closely associate with? If none of the options below describe your race or ethnicity, choose 'other' and describe.
- o 1 Caucasian
- o 2 African-American
- o 3 Hispanic
- o 4 Asian or Pacific Islander
- o 5 American Indian
- o 6 Other write-in

5a. What is the highest level of education that you have attended?
- o 1 Grade School
- o 2 High School
- o 3 Trade, Business, or Technical School
- o 4 Four-Year College
- o 5 Graduate or Professional School

5b. How many years did you attend this level of education? Drop down box with #s 1-12

SUBMIT

End of Study

Thank you for taking the time to participate. Your participation will help us to better understand how and why people remember relationship events. To completely finish the Relationship Memories Study you must click on 'SUBMIT' below!

Please encourage your friends and family to volunteer by sending them the link you used to access this study!

If you have any questions or concerns, please do not hesitate to contact the student researcher, Stephanie Vick (scv9582@uncw.edu; 910-962-7217), or her faculty advisor, Dr. Nicole Alea (alean@uncw.edu; 910-962-3377).

CLICK ON 'SUBMIT' AND YOU ARE FINISHED!

Thank you again!

SUBMIT

Note. Once participant hits submit they are directed to the UNCW Adult Participant Pool website. http://people.uncw.edu/alean/adult_participant_pool.htm

Appendix B. Example of a Positive Relationship-Defining Memory

A few years back, we took a trip to Greece. We were on a ship bound for Athens, and stopped over at a few islands on the way. My husband had never been anywhere outside of the United States (abroad) and I was so excited for him to see and experience this journey. (He was raised in the Greek Orthodox faith and we were married in a Greek   Church). One of our stops was at a tiny island called Kythira. The sea was a gorgeous blue and we went ashore to the beach there and swam in the Aegean. After our swim, we dried off and walked into the village to find lunch. We found a tiny little restaurant and they could speak little or no English, so we ended up in their kitchen pointing out what we wanted to eat - a plate of pasta with tomatoes and a salad of olives and feta. To this day, we think it is the finest meal we've ever eaten--just because of the freshness and the circumstances and the hospitality of these people. While walking further into the village after our delicious lunch, we neared an alley with a door open into a little room where a very weathered Greek man sat listening to the most gorgeous tenor/opera type music, resonating through this small alley way. My husband and I both immediately broke into tears at the beauty of it and the wonderful memory of our day, thanking God that we were so blessed to be in this time and in this place experiencing this together. We talk about this all the time!

Appendix C. Example of a Negative Relationship-Defining Memory

One Thanksgiving, John wanted to spend time with his family although it was supposed to be spent with my family. We had previously decided that alternating years would work best and had stuck to that. But this year, he was determined to spend it with his family. I persisted that we stick to the plan we had established and that it would be spent at our home with my family. I told him that inviting his family to our house would be a good idea. His family didn't have the money to travel to North Carolina though. So after much fighting and disagreements, Thanksgiving was spent at our house with my family as planned. John's mother passed away one week after Thanksgiving that year. I have felt guilty ever since for not spending Thanksgiving with his family. He has made me feel guilty as well. It put a strain on our marriage and families, and I feel like he has never forgiven me for it, even though I had no way of foreseeing that his mother would pass away.

BIOGRAPHICAL SKETCH

Stephanie Vick was born in upstate New York, but lived most of her life in Charlotte, North Carolina with her mom, dad, and sister. She received her undergraduate education at Wake Forest University in Winston-Salem, NC, where she minored in International Studies and French and earned a Bachelor of Arts in Psychology in May 2004. Beginning in Fall 2005, Stephanie continued her studies and research in psychology at the graduate level at the University of North Carolina Wilmington. While there, she conducted autobiographical memory research with Dr. Nicole Alea, and her research was partially funded by the UNCW Graduate Student Summer Research Program. Stephanie has presented some of this research at the conferences of the Association for Psychological Science as well as the Southeastern Psychological Association; and a manuscript, for which she is second author, is currently under review for publication in a scholarly journal. She will earn a Master of Arts in Psychology in May 2007, but plans to continue further exploring her research with Dr. Alea and will attempt to publish her findings. Upon completion of her degree, Stephanie will live in Zurich, Switzerland and travel throughout Europe for several months. She is an avid traveler and has previously lived and studied in Dijon, France with the Wake Forest study abroad program and has traveled extensively elsewhere. Ultimately, Stephanie hopes to continue her education in psychology at the doctoral level. Before that time, however, she will broaden her understanding and appreciation of the field of psychology by working in a clinical or counseling related position.