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LOMA LINDA UNIVERSITY
School of Behavioral Health
in conjunction with the
Faculty of Graduate Studies

Relational Savoring among Intimate Partners of Cancer Patients

by

Adrianna Elyse Holness

A Dissertation submitted in partial satisfaction of
the requirements for the degree
Doctor of Philosophy in Clinical Psychology

September 2017

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Each person whose signature appears below certifies that this dissertation in his/her opinion is adequate, in scope and quality, as a dissertation for the degree Doctor of Philosophy.

_____, Chairperson

David A. Vermeersch, Professor of Psychology

_____, Co-Chairperson

Jessica L. Borelli, Associate Professor of Psychology, Pomona College

_____

Adam L. Aréchiga, Associate Professor of Psychology

_____

Rebecca E. Ballinger, Licensed Clinical Psychologist

ACKNOWLEDGEMENTS

I would like to express my deepest gratitude to Dr. Borelli without whom this project could not have been completed. Thank you for your dedication and willingness to embark on new adventure with me. I am so grateful for your continued mentorship over the past six years. Thank you for encouraging me to pursue my dream of becoming a clinical psychologist and for tolerating my constant hatred of all things statistically related. I am truly honored to call you both a friend and a mentor.

I would also like to thank my committee members for their advice and direction. Your insight and expertise in the field of health psychology has helped me to gain a new appreciation for the complexities of the attachment bond for those faced with daily stressors.

To my family and friends, your love and support throughout the process helped keep me grounded and focused on my future goals. And finally, I would like to thank God for pointing me in this direction and for providing me with the support of family and friends to encourage me along the way.

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ABBREVIATIONS

ECR-R	Experiences in Close Relationship – Revised Scale
HLR	Hierarchical Linear Regression
IOS	Inclusion of Other in the Self Scale
KMS	Kansas Marital Scale
PANAS	Positive and Negative Affect Schedule

ABSTRACT OF THE DISSERTATION

Relational Savoring among Intimate Partners of Cancer Patients

by

Adrianna Elyse Holness

Doctor of Philosophy, Graduate Program in Clinical Psychology
Loma Linda University, September 2017
Dr. Jessica Borelli, Chairperson

Research suggests that intimate partners of cancer patients experience similar, if not higher, levels of distress and depression than the patient with regards to the cancer diagnosis. This stress can impact the quality of the relationship and the subsequent care and attention given to cancer patients. As such, identifying factors that can enhance marital relationships during times of illness is key. This project was created in order to assess the efficacy of a brief, portable intervention for improving relational quality among the intimate partners of cancer patients. In this project, we examine the effects of relational savoring, relative to two control conditions, on emotion and post-stressor relationship satisfaction among intimate partners of cancer patients. Participants were primarily recruited from Jerry L. Pettis VA, City of Hope Hospital, local cancer support groups, and oncology clinics. Participants completed pre- and post-intervention measures of relational and emotional well-being. The final sample consisted of 62 partners of cancer patients. We found no main effects of the intervention. The lack of main effects is not in line with previous research, which may be due to our small sample size. Some hypotheses were partly supported, with significant interactions between attachment and post-task relationship satisfaction and feelings of emotional closeness. Overall, these

results suggest that the intervention, while not effective for all participants, benefited those who entered the study with low attachment avoidance and low attachment anxiety with regard to affective states. Additionally, while those with high attachment avoidance reported lower positive affect, but also reported higher relational satisfaction and greater feelings of closeness after engaging in the relational intervention. These findings suggest that individuals high in avoidance can experience gains in relational benefits, despite reporting that they feel worse. Within the context of clinical application, a brief intervention may serve as an alternative therapeutic approach for individuals low in attachment anxiety, and for those high in attachment avoidance who struggle to engage in traditional treatments. Future studies should assess attachment styles at the outset of the intervention to target individuals most likely to experience emotional and relational benefits.

CHAPTER ONE

INTRODUCTION

While cancer has become a household name in the United States, the struggles of cancer patients and their intimate partners remain a private fight that affect their marriage, physical health, and emotional well-being. According to the American Cancer Society, approximately 1,688,780 new cases of invasive cancers will be diagnosed in 2017 (Cancer Facts, 2017). It is projected that of these individuals, one in four Americans, or 600,920 patients will lose their battle to cancer this year (Cancer Facts, 2017). While the impact of a cancer diagnosis on the patient is well represented in cancer literature (Massie, 2004; Osborn, Demoncada, & Feurerstein, 2006; Pinquart & Duberstein, 2010; Tatrow & Montgomery, 2006), there has been less of a focus on the impact of cancer on their intimate partners. Furthermore, while extant literature addresses potential interventions for cancer patients, there is currently a paucity of literature addressing effective interventions specifically designed for their partners.

Studies suggest that couples battling cancer do not experience higher rates of divorce than those in the general population. (Kirchoff, Yi, Wright, Warner, & Smith, 2012; Langer, Yi, Storer, & Syrjala, 2009; Carlson, Dalton, Frederikson, Diderichson, & Johansen, 2007), with the exception of younger couples and those faced with testicular or cervical cancer (Brown, Kilpatrick, & Dorval, 2000; Twombly, 2001; Syse & Kravdal, 2007). However, couples dealing with cancer do experience significant changes in marital roles and marital satisfaction that impact their well-being and mental health on a daily basis (Berg & Upchurch, 2007; Bruan, Mikulincer, Rydall, Walsh, & Rodin, 2007; Butler, Field, Busch, & Seplaki, 2005; Brosseau, McDonald, & Stephen, 2011). Unlike

other chronic illnesses, the onset and progression of cancer is rapid, and does not allot an adequate amount of time for the patient and his or her partner to prepare for the impending changes in their lives (Berg & Upchurch, 2007; Kim & Carver, 2007). Within a short period of time, patients are faced with the prospect of pain, surgery, financial burdens, and possibly death (Burwell, Brucker, & Shields, 2006; Grunfeld, Coyle, Whelan, et al., 2004; Robbins, Mehl, Smith, & Weihs, 2013).

Although only one member of the couple endures the physical burden of cancer, both patients and their partners experience stress in response to the diagnosis (Berg & Upchurch, 2007; Butler, Field, Busch, & Seplaki, 2005; Fergus & Grey, 2009), and current research suggests that caregiving partners may even experience higher levels of distress and depression than their patient-partners (Braun, Mikulincer, Rydall, Walsh, & Rodin, 2007; Grunfeld, Coyle, Whelan, et al., 2004). As Americans enjoy longer life spans, there has been a shift from the utilization of professional services (e.g. live-in nurses, assisted living facilities) towards a reliance on informal caregivers (Berg & Upchurch, 2007; Braun, Mikulincer, Rydall, Walsh, & Rodin, 2007; D'Ardene, 2004), a role most often filled by patients' spouses (Braun, Mikulincer, Rydall, Walsh, & Rodin, 2007; Li, Mak, & Yoke, 2013). Over the course of cancer treatment, caregiving partners are relied on not only for emotional support, (Coyne, 2001; Fekete, Stephens, Mickelson, & Druley, 2007; Fergus & Gray, 2009; Li, Mak, & Yoke, 2013) but also for the financial, occupational, and household burdens of the family (Grunfeld, Coyle, Whelan, et al., 2004; Kim & Carver, 2007).

CHAPTER TWO

LITERATURE REVIEW

Spousal Stress

Research suggests that as partners struggle to fill the role of caregiver, they are susceptible to experiencing clinical levels of depression and anxiety (Burwell, Brucker, & Shields. 2009; Drabe, 2013; Hurley & Kwon, 2011; Li, Mak, & Yoke, 2013), as well as compromised immunity and fatigue (Badr, & Taylor, 2008; Mortimer, Sephton, Kimerling, Butler, Bernstein, & Spiegel, 2005). In a recent study, caregiving partners' subjective cancer related stress was associated with an increase in biological markers for stress (Wells-Di Gregorio, Carpenter, Dorfman, Yang, Simonelli, & Carson, 2012), which suggests that the effects of cancer on caregiving partners are not only emotionally, but also physically, taxing. In addition to managing the finances; researching hospitals, physicians, and treatment options; and renegotiating household responsibilities (Berg & Upchurch, 2007; D'Ardenne, 2004; Fergus & Gray, 2009; Li, Mak, & Yoke, 2013); spousal caregivers may be faced with feelings of incompetence, loss of control, and fears of anticipatory loss (Butler, Field, Busch, & Seplaki, 2005; Fergus & Gray, 2009). At a time where caregivers most need support and reassurance from their partner, the security of their relationship and the safety of their partnership are endangered (Butler, Field, Busch, Seplaki, Hastings, & Spiegel, 2005; Kim & Carver, 2007).

Attachment Theory Applied to Anticipatory Loss

Over the past two decades, attachment theory has been the lens most frequently used in interpreting adult romantic relationships (Mikulincer & Shaver, 2007; Selcuz,

Zayas, & Hazan, 2010). According to attachment theory (Ainsworth, 1967; Bowlby, 1988;Weinfield et al., 2008), the quality of early interactions between an infant and his or her caregiver form the basis for the development of a cognitive affective schema about close relationships, known as an internal working model (IWM). According to Bowlby, the infant's IWM is comprised of a set of schemas addressing the view of "self" and "other" within relationships. When infants' distress cues elicit consistent and sensitive responses from their caregivers, the infant learns that their attachment needs will be met, and develops a secure IWM (Bowlby, 1988). In comparison, when caregivers respond to infants' attachment cues in an inconsistent or insensitive manner, the infant develops an insecure IWM. Such infants expect that their needs will not be met and do not feel safe exhibiting these needs to the caregiver. Ultimately, infants with insecure attachments believe that their need for "other" will be rejected, and subsequently inhibit the desire for comfort (Bowlby, 1969/1982; Mikulincer & Shaver, 2007). According to attachment theory, the two categories of insecure attachment styles are avoidance and anxiety, which are rooted in IWM theories. Across the lifespan, an individual's attachment style and IWM are generalized beyond the infant-caregiver dyad and extend past early life to impact the course of adult romantic relationships (Sbarra & Hazan, 2008; Selcuk, Zayas, & Hazan, 2010).

Within romantic relationships, variability in attachment manifests in individual differences in everyday interactions of the couple (Sbarra & Hazan, 2008; Waters, Merick, Treboux, Crowell, & Albersheim, 2000). Moreover, in these relationships, an individual's partner replaces the parent as the primary attachment figure (Selcuk, Zayas, & Hazan, 2010; Zeifman & Hazan, 2008) and serves to provide their spouse with a sense

of felt security through proximity, open communication, and empathy (Burwell, Brucker, & Shields, 2006; Sbarra & Hazan, 2008; Selcuk, Zayas, & Hazan, 2010). The adult attachment bond, much like the bond between the infant and caregiver, provides the individual with a secure base from which they can safely take risks and can seek support during times of distress (Burwell, Brucker & Shields; 2006; Maunder & Hunter, 2001). Within the context of adult romantic relationships, however, there is an expected and necessary reciprocity for each member to serve as a secure base (Mikulincer & Shaver, 2007), without which the dyad is at risk for low relationship satisfaction, feelings of isolation, and frequent expression of negative affect (Simpson, Rholes, & Nelligan, 1992; Vicary & Fraley, 2007). Furthermore, when faced with situations representing loss or isolation, which ultimately threaten the security of the relationship, partners' ability to sere as a secure base could be compromised (Bruan, Mikulincer, Rydall, Walsh, & Rodin, 2007; Burwell, Brucker, & Shields, 2006; Kim & Carver, 2007).

According to attachment theory, individuals' attachment IWMs affect their reactions and abilities to respond to the needs of others (Mikulincer, Gillath, Halevy, Avihou, Avidan, & Eshkoli, 2001). When faced with the prospect of loss or abandonment, individuals who are high in attachment avoidance respond by engaging in deactivating behaviors aimed at minimizing emotion-based thoughts or memories, which include avoidance of threatening cues, withdrawal from one's attachment figure, and rigid self-reliance (Cassidy & Shaver, 2008; Mikulincer & Shaver, 2007; Vormbrock, 1993). In contrast, individuals who are high in anxious attachment engage in hyperactivating strategies to generate and maintain proximity to their partner through means such as controlling, coercive behaviors and relentless proximity seeking (Gilad

Mikulincer, Rydall, & Rodin, 2011; Mikulincer & Shaver, 2007; Selcuk, Zayas, & Hazan, 2010). Conversely, individuals who exhibit a secure attachment style expect that they will receive support when needed, and thus are able to regulate their emotional response when faced with stressful or ambiguous stimuli in their environments (Fonagy, Gergely, Jurist, & Target, 2002; Shaver & Clark, 1994). Rather than utilizing hyperactivating or deactivating strategies when distressed, individuals with secure attachment styles are able to seek appropriate comfort and can self-regulate emotions through proximity to their adult attachment figure (Mikulincer & Shaver, 2007).

For most couples, a cancer diagnosis constitutes a threat of loss and isolation (Burwell, Brucker, & Shields, 2006; Braun, Mikulincer, Rydall, Walsh, & Rodin, 2007; Fergus & Gray, 2009) that triggers attachment-related behaviors for both members of the dyad. Within the context of a cancer diagnosis, the couple must navigate a new set of roles, where one partner steps into a more supportive role as an informal or official caregiver and the other, the patient (Porter, Keefe, Davis, Rumble, Scipio, & Garst, 2012). Within the caregiver-spousal dyad, threats to attachment security directly impact the caregiving behavioral system (Mikulincer, Gillath, Halevy, Avihou Avidan, & Eshkoli, 2001) and can impair the caregivers' ability to provide their spouse with emotional support. Within the context of a cancer diagnosis partners with insecure attachments experience higher rates of subjective caregiving burden, lower quality of life, lower marital quality, and higher rates of depression than do those with a secure attachment style (Burwell, Brucker, & Shields, 2006; Braun, Mikulincer, Rydall, Walsh, & Rodin, 2007; Porter, Keefe, Davis, Rumble, Scipio, & Garst, 2012).

We posit that within the context of a cancer diagnosis, two patterns of caregiving emerge for individuals with insecure attachment styles. In response to a cancer diagnosis, caregiving partners who are high in attachment avoidance engage in deactivating behaviors that allow them to remove themselves from the salience of their partners' illness. This deactivation may take the form of underestimating or disregarding the severity of their partners' illness (Braun, Hales, Gilad, Mikulincer, Rydall, & Rodin, 2012; Porter, Keefe, Davis, Rumbple, Scipio, & Garst, 2012), which could lead to the subsequent provision of less sensitivity and responsiveness to the needs of their partner (McLean, Walton Matthew, & Jones, 2011; Mikulincer & Shaver, 2007; Kayser, Watson, Andrade, 2007). For partners who are high in anxious attachment, hyperactivating strategies include self-focused worry and high levels of stress, which can manifest in a pattern of controlling and coercive caregiving behaviors (Braun, Hales, Gilad, Mikulincer, Rydall, & Rodin, 2011; Mikulincer & Shaver, 2007). In sum, caregivers high in either avoidance or anxiety respond in maladaptive ways to the threat of the cancer diagnosis, which ultimately results in both poorer quality care provision for the patient and poorer marital relationship quality.

Given that attachment-related behaviors, provision of emotional sensitivity, and marital quality impact patients' recovery rates (Coyne et al., 2001; Rentscher, Rohrbaugh, Shoham, & Mehl, 2013; Rohrbaugh et al., 2008; Rohrbaugh, Shoham, & Coyne, 2006), it is imperative to identify factors that can enhance marital relationships during times of illness. In light of the myriad of stressors that partners of cancer patients are faced with, we posit there is a need for efficacious relational interventions that are both brief and cost effective.

We will now turn our attention to a recently developed, brief relational intervention grounded in attachment theory. Relational savoring is an emerging interventional strategy that yields decreases in negative emotion and benefits in relational satisfaction for couples in long term relationships (LDRs) (Borelli, Rasmussen, Burkhart, & Sbarra, 2014), military wives during their spouse's deployment (Borelli et al., 2014), and parents of toddlers (Burkhart, Borelli, Rasmussen, & Sbarra, 2015).

Relational Savoring

Savoring is the act of mindfully attending to, heightening, and prolonging positive emotions associated with specific experiences (Bryant & Veroff, 2007). Individuals can savor memories of past events (retrospective savoring), can focus on events as they experience them (concurrent savoring), and can even anticipate potential future experiences (prospective savoring) (Bryant & Veroff, 2007; Hurley & Kown, 2011). While the research on savoring is predominantly theoretical, recent studies suggest that savoring serves as an emotion regulation tool that has positive benefits for well-being, including improvements in both negative mood and depression (Hurley & Kwon, 2011; McMakin, Siegle, & Shirk, 2011; Tugade & Frederickson, 2006; Quoidbach et al., 2010; Quoidbach, Wood, and Hansenne, 2009).

Extant work on savoring has largely focused on individual personal memories (*personal savoring*) and there has been less of an emphasis placed on savoring the memory of a relationship with another individual (*relational savoring*). According to Borelli and colleagues (2014), relational savoring involves an intentional focus on moments of felt security with another person as a means of enhancing the positive

emotion associated with those experiences. Personal savoring differs from relational savoring in that it involves focusing on a positive individual or personal experience and does not place an emphasis on a shared experience. When engaging in relational savoring, the focus is placed on bringing to mind a moment in which one felt secure with one's partner, for instance, when one felt "especially cherished, protected, or accepted by the other" (Borelli, Rasmussen, Burkhart, Sbarra, 2014a; Borelli et al., 2014b). One goal of the current study is to examine relational savoring of retrospective experiences of caretaking partners.

For the purposes of the current study, we define relational savoring as savoring a memory of a moment of intense positive connection with one's partner. Borelli and her colleagues utilized this approach to examine the relational aspects of partners in long-term relationships and among non-deployed military spouses (Borelli, Rasmussen, Burkhart, Sbarra, 2014a; Borelli et al., 2014b). Among partners in LDRs, savoring increased positive emotion for participants who had higher baseline relationship satisfaction. In the military study, the results suggest that for non-deployed spouses who were low in attachment avoidance, relational savoring reduced negative emotion during deployment. With regard to the current study, these results imply that caretaking partners with secure attachment styles will experience the most affective gains after engaging in a savoring intervention. For partners with insecure attachment styles, a cancer diagnosis might be viewed as commensurate with a loss of security and may lead to feelings of anticipatory loss. Moreover, these individuals may be less prepared to engage in attachment-related thoughts and feelings while engaging in an attachment-related task as they may be primed to think of impending loss or death (Borelli, et al., 2013).

Extant literature addressing the impact of relational savoring for individuals with insecure attachment styles is variable. In Borelli's (Borelli et al, 2014b) study including non-deployed military spouses, those individuals high in attachment avoidance reported increased negative affect after engaging in the interventional task, and were "at risk for declines in relationship satisfaction." Conversely, Burkhart and her colleagues (Burkhart, Borelli, Rasmussen, and Sbarra, 2015) found that parents with high attachment avoidance reported a decrease in negative affect and an increase in relationship satisfaction and feelings of emotional closeness both post-task and two years after the delivery of the intervention. In light of these mixed findings, we will add to the literature through exploration of the impact of the intervention for individuals with insecure attachment styles (i.e., high anxiety, high avoidance).

CHAPTER THREE

METHODOLOGY

Examining Adult Attachment and Life Stressors

Given that caretaking partners are faced with significant life stressors (Berg & Upchurch, 2007; D'Ardenne, 2004; Fergus & Gray, 2009; Li, Mak, & Yoke, 2013), they are at risk for depression, anxiety, and changes in marital satisfaction (Burwell, Brucker, & Shields. 2009; Drabe, 2013; Hurley & Kwon, 2011; Li, Mak, & Yoke, 2013). To our knowledge, this project constitutes the first use of relational savoring with partners of cancer patients. One previous correlational study suggests that for breast cancer patients, sharing a positive daily event rather than a negative daily event with their partners was associated with enhanced relational well-being and feelings of intimacy (Otto, Laurenceau, Siegel, & Belcher, 2014). As there is a paucity of research regarding the efficacy of relational savoring in the context of a cancer diagnosis, the current study will serve to expand the literature by examining whether a brief, theory-driven intervention can positively impact emotional and relational well-being, and determine whether attachment serves as a moderator of changes across the intervention with regard to affective and relational gains. By identifying the benefits of attachment in adulthood, we aim to generate a more clear depiction of attachment as a protective factor for relational health. More specifically, we examined how attachment impacts Relational Savoring (RS), a brief-portable intervention grounded in attachment theory that has been established as efficacious in improving mood and relationship quality (Borelli, Rasmussen, Burkhart, Sbarra, 2014a; Borelli et al., 2014b).

Relational Savoring vs. Control Conditions

We investigated whether the intervention would elicit change in participants' emotional states when compared to those in the control condition. We predicted that participants who completed a relational savoring task would report higher positive affect (Hypothesis 1) and lower negative affect (Hypothesis 2) subsequent to completing the intervention as compared to those completing a personal savoring or a neutral control condition task. We also expected that participants in the relational savoring condition would report higher levels of relationship satisfaction (Hypothesis 3) and feelings of closeness (Hypothesis 4) with their partners after the task, when compared to those in the control condition. Confirmation of this hypothesis would lend further support to recent research suggesting that brief, theory-driven interventions can positively impact individual and relational well-being (Finkel et al., 2013; Layous et al., 2013; Lyubomirsky & Layous, 2013; Sin & Lyubomirsky, 2009). Given that caregiving partners are faced with a myriad of stressors on a daily basis (Berg & Upchurch, 2007; D'Ardenne, 2004; Fergus & Gray, 2009; Li, Mak, & Yoke, 2013), an intervention that can elicit meaningful changes in emotional states is critical for individuals whose physical and mental health have been traditionally overlooked within interventional literature.

Attachment as a Moderator

We expected that attachment security would moderate the association between condition and post-task positive affect (Hypothesis 5) and post-task negative affect (Hypothesis 6). Specifically, we predicted that those reporting low attachment anxiety

would benefit most from the intervention. We also predicted that the positive effect of the intervention on perception of the relationship would be more evident for those with low attachment anxiety, such that individuals with high attachment anxiety would experience fewer post-task gains in relationship quality (Hypothesis 7) and feelings of closeness (Hypothesis 8). Given the presence of mixed findings in extant literature specifically pertaining to relational benefits for individuals high in attachment avoidance, we did not have a priori directional hypotheses about the impact of relational savoring.

Method

Intimate partners of patients diagnosed with cancer were primarily recruited through the Jerry L. Pettis VA, City of Hope Hospital, and local cancer support groups and churches. Additional sources for recruitment included: online cancer support groups and distribution of flyers to local cancer clinics and oncology offices. Information about the study was also posted on the Pomona CARE and University of Irvine THRIVE websites that allowed interested participants to take part in the project.

For the present study, criteria for inclusion were: (1) One member of the couple had cancer, (2) the cancer-free member of the couple was involved in the care of their partner, (3) the couple had been in a romantic relationship for a minimum of one year, and (d) the participant was 21 years or older. Exclusion criteria restricted the sample to participants who were proficient in reading English. Of the participants who elected to engage in the study (n = 103), 62 were determined to be eligible. Forty-one participants were excluded from analyses, as they elected to discontinue the study without completing the intervention or post-intervention measures.

Of the 62 participants, 20 completed the relational savoring group, 20 were in the personal savoring group, and 22 were in the neutral control. See Table 1 for additional demographic information. For the purposes of analysis, the two different control groups were collapsed, as they did not differ significantly on any demographic variables, baseline (T1) measures, or outcome (T2) measures. Combining the two groups resulted in a total of 42 participants in the control group and 20 in the experimental group. The intervention and resulting control group did not significantly differ on any pre-test measure of study variables, nor on demographic variables including race, education, marital status, or income, all $p > .05$. While there was a significant difference for sex ($\chi^2 = 4.340$, $p = .037$), after applying the Bonferroni correction due to multiple analyses (.05/8 = .00625), this different was no longer significant.

Table 1. Demographic Variables for Sample

Variable	*N*	%	Variable	*N*	%
Gender			**Cancer Type**		
Female	27	43.5	Breast	12	19.4
Male	28	45.2	Prostate	6	9.7
Not speficied	7	11.3	Lung	4	6.5
			Colorectal	3	4.8
			Gynecological	5	8.1
Education			Urinary/Bladder	1	1.6
Some High School	5	8.1	Renal/Pelvis	1	1.6
Community College	10	16.1	Leukemia	4	6.5
Some College	16	25.8	Pancreatic	3	4.8
Bachelor's	12	19.4	Other	26	25.8
Graduate Degree	13	21.0	Not Specified	7	11.3
Race/Ethnicity			**Cancer Stage**		
White (non-Hispanic)	37	59.7	Stage I	9	14.5
Hispanic	12	21.0	Stage II	7	11.3
Black (non-Hispanic)	1	1.6	Stage III	9	14.5
Asian	3	4.8	Stage IV	18	29.0
Other	2	3.2	Not disclosed	7	11.3
Not specified	6	9.7			
First Nations	0	0.0			

Process of Consent

Interested participants followed the link to the Qualtrics website. Participants who met the inclusion criteria were prompted to review a consent form (Appendix B). As the experiment was conducted through an online survey host, participants were notified that their continuation in the study indicated their consent. As such, no written documentation of consent was collected. Participants who continued past the consent page provided their consent through continuation.

Data collection, Storage, and Confidentiality

Participant names were not collected, and as such will never be made available on any records of the study. Strict confidentiality of all information provided to us by the participants was upheld. Similarly, in all records of the study, participant identification number alone identifies individuals. Protocols were given via the online survey program, Qualtrics. These electronic files are only accessible via login ID and password and only key study personnel are permitted access to these files. No identifying information or names of participants will be used in any scientific reports of this study. Due to difficulty recruiting participants, changes to the IRB were made in June 2016, in order to allow for monetary compensation for participation.

Procedure

In order to determine the efficacy of relational savoring in improving relationship quality and mood states, Qualtrics randomly assigned participants to one of three conditions: 1) neutral control, 2) personal savoring, and 3) relational savoring. The first experimental condition (neutral control) was designed to evoke a neutral emotional response and to serve as a control, with regards to both emotional experience and relational content. The second control task (personal savoring) served as a control for positive emotional activation.

In the neutral control condition, participants were asked to think about the their morning routine and were allotted one minute to give focus to it before answering a series of questions regarding the content of the experience. Once participants answered the questions, they were prompted to spend two minutes mentally replaying the experience.

The neutral control lasted the same amount of time as the relational savoring condition and involved a period of reflection followed by question-answering.

In the personal savoring condition, participants were asked to focus on a positive personal experience, which could range from simple and mundane to detailed and meaningful. Participants were asked to focus on one memory, spend one minute reflecting on it, and engage in a series of questions that prompted them to describe aspects of their sensory experience (e.g., *What were you wearing, What was the air like?*) in addition to their thoughts or feelings. Once they completed the writing task, participants were asked to mentally replay the experience for two minutes. The personal savoring control lasted the same amount of time as the relational savoring condition and involved a period of reflection followed by the participant answering the same questions that were posed to participants in the relational savoring condition, though the type of positive emotional memory to be savored differed across the two conditions.

In the relational savoring condition, participants were asked to "think about a positive experience (they) had with (their) partner." Participants were instructed to select any experience, whether minor or major "when you took joy in being there for your partner, or in your partner being there for you, a time when either you or your partner felt especially cherished, protected or accepted by the other" (Borelli et al., 2013; Borelli et al., 2010). As within the personal savoring condition, participants were asked to describe specific details of the event in addition to their thoughts and feelings. They were then asked to spend two minutes mentally reliving the event.

This study consisted of three components, 1) presentation of measures assessing for current levels of attachment and mental health 2) engagement in one of the three

reflection conditions, and 3) completion of post-intervention measures of relational and emotional states. Participants within each reflection condition were presented with the same measures, which will be enumerated below. See Appendix C for information on measures and the sequence of data collection.

Scales of Measurement

Demographic Information

Participants were asked for demographic information, including gender, length of relationship, cancer type and stage, race/ethnicity, and education. See Table 1.

Relationship Satisfaction

The Kansas Marital Satisfaction Scale (KMS; Schumm, Nichols, Schectman, & Grinsby, 1983) is a brief, 3-item measure of marital satisfaction. The KMS (Appendix E) has a strong internal consistency and concurrent validity and is highly correlated with the Dyadic Adjustment Scale (DAS) and the Quality of Marriage Index (Schumm et al. 1986). This measure focuses on the satisfaction that individuals gain from the quality of their marriage. Moreover, this measure has successfully been used with married and unmarried partners (Paap & Gardner, 2011), and has been shown to be reliable regardless of marital status (Graham, Diebels, & Barnow, 2011; Rochlen & Mahalik, 2004). In light of these studies, we have followed the protocol from previous research and have adapted the scale for the purposes of this project by replacing "spouse" with "partner" and "marriage" with "relationship." Participants rated on a seven-point Likert scale, with

scores ranging from 1 (*extremely dissatisfied*) to 7 (*extremely satisfied).* Cronbach's alphas in this sample were the following at each time point: Time 1 (.936), Time 2 (.957).

Attachment Style

The Experiences in Close Relationships – Revised Adult Attachment Questionnaire (ECR-R; Fraley, Waller, and Brennan, 2000) is a 36-item measure designed to assess individual differences in attachment-related anxiety and avoidance. Participants rated each item on a seven-point Likert scale, with scores ranging from 1 (*strongly disagree*) to 7 (*strongly agree).* The attachment avoidance scale measures discomfort with emotional intimacy and included questions such as, "I am nervous when partners get too close to me." The anxiety scale indexes thoughts and feelings about the responsiveness and availability of their partner by asking questions such as, "I worry my romantic partners won't care about me as much as I care about them." The ECR-R was created after factor-analyzing the non-redundant items from current attachment questionnaire scales (Adult Attachment Questionnaire, Attachment Scale, and Attachment Style Questionnaire), and is currently considered the most accurate measure of attachment dimensions (Fraley, Waller, & Brennan, 2000). See Appendix F. Cronbach's alphas in this sample were (.908) for avoidance and (.927) for anxiety.

Closeness with Partner

The Inclusion of Other in the Self-Scale (IOS; Aron & Smollan, 1992) is a single-item pictorial measure designed to assess the closeness that participant's feel to their intimate partner. The measure (Appendix G) prompts participants to select a visual

representation of their perceived relational closeness. This measure has demonstrated test-retest and alternate form reliability, and has convergent validity with the Relationship Closeness Inventory (Bernscheid et al., 1989). Additionally, the measure has demonstrated good predictive validity for whether a relationship will be intact three months later (Aron & Smollan, 1992). Cronbach's alpha could not be calculated, as the IOS is a one-item scale.

Emotional State

The Positive and Negative Affect Schedule (PANAS; Watson et al., 1988) is a 20-item measure consisting of two scales, one of which assesses Positive Affect (PA) and the other, which assesses Negative Affect (NA). The PANAS measure (Appendix H) was utilized as a measure of emotional state and was be presented immediately following the experimental reflection task. Participants were asked to indicate on a 5-point scale (1 = *very slightly or not at all*, 2 = *a little*, 3 = *moderately*, 4 = *quite a bit*, 5 = *extremely*), the extent to which they experienced 20 different emotions in that moment. Negative affective items included words such (e.g., irritable, distressed, upset, guilty, ashamed, scared), whereas the following emotion words (e.g., inspired, enthusiastic, interested, excited, determined, attentive) denoted positive affect Cronbach's alpha in this sample was the following at each time point for PA, Time 1: (.912), Time 2: (.919) and NA: Time 1 (.928), Time 2 (.946).

Reflection Tasks

We designed the mental reflection task for the purpose of the current

investigation; the structure and design of both the personal and relational savoring tasks have been adapted from previous work (Borelli et al., 2013, Borelli, McMakin, & Sbarra, 2010; Borelli, Rasmussen, Burkhart, & Sbarra, 2014). Participants were assigned to one of three conditions, with each requiring written responses to a series of questions.

Control Condition. The neutral control condition consisted of seven questions about the participants' morning routine after intentionally focusing on this memory for two minutes. Participants were asked to provide as much detail as possible in responding to questions such as, "What is your room/apartment like in the morning," "What do you wear," and "What do you eat." See Appendix I for control condition.

*Personal Savoring Condition.*The personal control condition consisted of seven questions about the participants' morning routine after intentionally focusing on the memory of a positive personal experience. Participants were asked to provide as much detail as possible in responding to questions such as, "What did you feel at the time," "What thoughts did you have at the time," and "What thoughts are you having now." See Appendix J for personal control condition.

Relational Savoring Condition.

The intervention consisted of seven questions about the participants' morning routine after intentionally focusing on the memory of a positive memory shared with their romantic partner. Participants were asked to provide as much detail as possible in responding to questions such as, "What did you feel at the time," "What thoughts did you have at the time," and "What thoughts are you having now." See Appendix K for interventional condition.

Data Analytic Plan and Data Reduction

Prior to conducting analyses, data were screened for outliers and violations of the assumptions of ANCOVA, including normality. While some outliers were found (i.e., *z*-score +/- 3), they were not extreme and were left intact to preserve the integrity of the data. Data were found to be normally distributed, with no extreme values of skewness or kurtosis. Preliminary analyses using *t*-tests were conducted for condition to ensure no significant differences in study variables. No group differences were found, all $p > .05$.

We next evaluated the main effect of the experimental conditions on participants' post-task emotional states. Analyses were performed using SPSS Version 21. A series of two-way factorial mixed methods ANCOVAs were conducted in order to examine the efficacy of the intervention and to determine whether the intervention improved participant positive and negative affect and relationship satisfaction. A one-way ANCOVA was conducted to determine the effect of the intervention on feelings of closeness to one's partner. Participant sex and age were entered as covariates for all analyses. See for ANCOVA analyses.

Table 2. Method of Analyses

Analysis #	Independent Variables		Dependent Variable	Covariates
	Between-Groups	Within-Groups		
1	Relational Savoring Control	Pre/Post-test	Positive Affect	Sex Age
2	Relational Savoring Control	Pre/Post-test	Negative Affect	Sex Age
3	Relational Savoring Control	Pre/Post-test	Relationship Satisfaction	Sex Age
4	Relational Savoring Control	n/a	Emotional Closeness	Sex Age

When evaluating the moderation hypotheses, we conducted hierarchical linear regression (HLR) through PROCESS macro for SPSS (Hayes, 2012). Evaluating moderation involves assessing whether the relationship between the independent (*X*) and dependent variable (*Y*) is dependent on a third variable (*M*). PROCESS tests the interaction effect through bootstrapping.

Statistical Power

Statistical power is dependent on the sample design, sample size, and the statistical analysis. According to power calculations (using G*Power, Faul, Erdfelder, Bychner & Lang, 2009), in order to have an 80% chance of detecting an effect, a sample

size of 77 was needed to detect a moderate effect size ($f^2 = .15$). The full sample size for the analyses was 62, indicating a power of .785.

CHAPTER FOUR

RESULTS

Hypothesis 1

A two-way mixed method factorial ANCOVA was conducted to examine the hypothesis that participants in the relational savoring intervention group would show a greater increase in positive affect from pre-test to post-test when compared to those in the control group, after controlling for sex and age. Results indicated that there is no main effect of the intervention on positive affect ($p > .05$). There was also no effect of time of measurement on positive affect, with no significant differences between pre-test and post-test scores overall ($p > .05$). In addition, neither sex nor age significantly predicted positive affect, and the intervention group did not influence the way positive affect changed over time (all $p > .05$).

Hypothesis 2

A two-way mixed method factorial ANCOVA was conducted to examine the hypothesis that participants in the relational savoring intervention group would show a greater decrease in negative affect from pre-test to post-test when compared to those in the control group, after controlling for sex and age. Results suggest that there was no main effect of the intervention on negative affect ($p > .05$). There was also no effect of time of measurement on negative affect, with no significant differences between pre-test and post-test scores overall. In addition, neither sex nor age significantly predicted negative affect, and intervention group did not affect the change in negative affect over time (all $p > .05$).

Hypothesis 3

A two-way mixed method factorial ANCOVA was conducted to examine the hypothesis that participants in the relational savoring intervention group would show a greater increase in relationship satisfaction from pre-test to post-test when compared to those in the control group, after controlling for sex and age. Results suggested that there was no main effect of the intervention on relationship satisfaction ($p > .05$). There was also no effect of time of measurement on relationship satisfaction, with no significant differences between pre-test and post-test scores overall. Additionally, sex and age did not significantly predict relationship satisfaction, and the intervention group did not influence how relationship satisfaction changed over time (all $p > .05$).

Hypothesis 4

A one-way ANCOVA was conducted to examine the hypothesis that participants in the relational savoring intervention group would report greater feelings of closeness than those in the control group, after controlling for sex and age. Results suggest that there is no main effect of the intervention on feelings of closeness ($p > .05$). Additionally, neither sex nor age significantly predicted feelings of closeness (all $p > .05$).

Hypothesis 5

We hypothesized that attachment security would moderate the association between condition and post-savoring positive affect. We expected that, while the intervention would increase positive affect for all participants, this increase would be greater for participants low in attachment avoidance and attachment anxiety. Two HLRs

were conducted. For each, the independent variable was condition and the dependent variable was post-test positive affect, with sex, age, and positive affect pre-test scores as covariates. The first model examined attachment avoidance as a moderator and the second examined attachment anxiety as a moderator. The hypothesis was partly supported.

The model examining attachment avoidance as a moderator was significant, $F(7,46) = 14.231$, $p < .0001$, $R^2 = .684$. Specifically, while attachment avoidance and condition did not predict post-test positive affect independently (both $p > .05$) there was a significant interaction between the two ($b = -4.260$, $t = 2.283$, $p < .03$). Simple slopes analysis indicated that among individuals with low attachment avoidance, those who were in the intervention had higher positive affect post-test than those in the control conditions (See Table 3). However, controlling for pre-intervention positive affect, individuals with high attachment avoidance reported lower post-test positive affect when they took part in the intervention than if they were in the control condition. Note though that the post-intervention positive affect ratings of high avoidance participants did not differ significantly across conditions ($b = 3.756$, $t = 1.059$, $p > .05$). Of the covariates, only pre-test positive affect scores significantly predicted post-test positive affect, $b = 0.885$, $t = 9.013$ $p < .0001$.

The model examining attachment anxiety as a moderator was not significant, with no main effect for either condition type or attachment avoidance and no significant interaction, all $p > .05$.

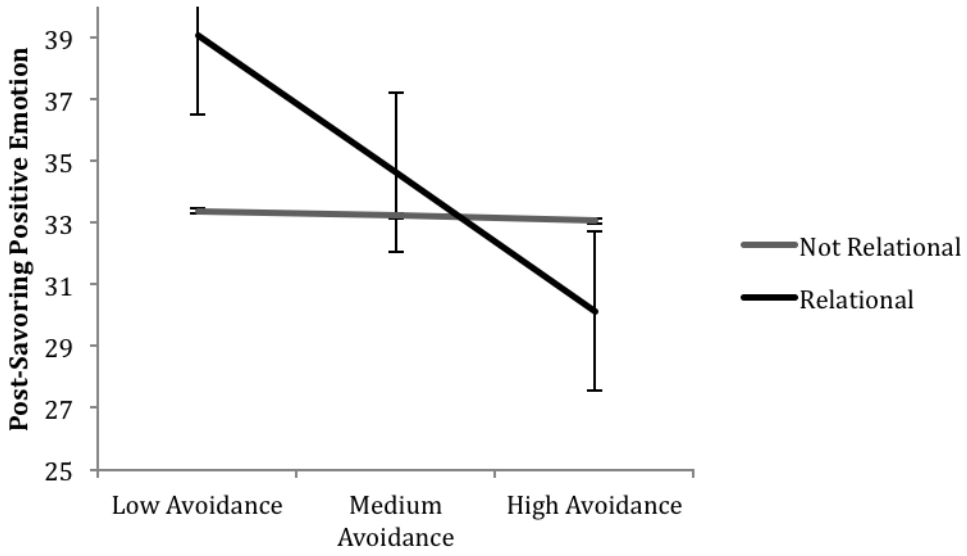

Figure 1. Interaction between attachment and intervention on post-task positive affect

Table 3. Summary of the interaction between attachment avoidance and condition predicting positive affect

		Positive Affect		
	DR^2	*b*	*SE*	95%CI
Step 1 R^2	.648			
Avoidance		-.149	1.069	[-2.300, 2.002]
Condition		13.078*	5.169	[2.674, .23.483]
Age		.086	.063	[-.041, .214]
Sex		-2.308	1.854	[-6.039, 1.423]
Anxiety		.095	.817	[-1.550, 1.740]
PA (T1)		.885***	.098	[.688, 1.083]
Step 2 DR^2	.036*			
Condition x Avoidance		-4.260*	1.866	[-8.106, -.504]

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

Hypothesis 6

We hypothesized that attachment security would moderate the association between condition and post-savoring negative emotion. We expected that, while the intervention would decrease negative emotion for all participants, this decrease would be greater for participants low in attachment avoidance and attachment anxiety. Two HLRs were conducted. For each, the independent variable was condition and the dependent variable was post-test negative affect, with sex, age, and negative affect pre-test scores as covariates. The first model examined attachment avoidance as a moderator and the second examined attachment anxiety as a moderator. The hypothesis was partly supported.

The model examining attachment avoidance as a moderator was not significant, with no main effect for either condition type or attachment avoidance and no significant interaction, all $p > .05$. However, the model examining attachment anxiety as a moderator was significant, F (8,44) = 17.648, $p < .0001$, $R^2 = .762$. Specifically, while independently attachment anxiety and condition did not predict post-test negative affect (both $p > .05$), there was a significant interaction ($b = -2.511$, $t = 2.191$, $p < .04$). Simple slope analysis indicated that individuals with low attachment anxiety who were in the relational condition had lower post-test negative affect than those in the control condition (See Table 4). However, individuals with high attachment anxiety showed higher post-test negative affect when they took part in the intervention than if they were in the control condition. Of the covariates, only pre-test negative affect scores significantly predicted post-test negative affect, $b = 0.574$, $t = 6.202$, $p < .0001$.

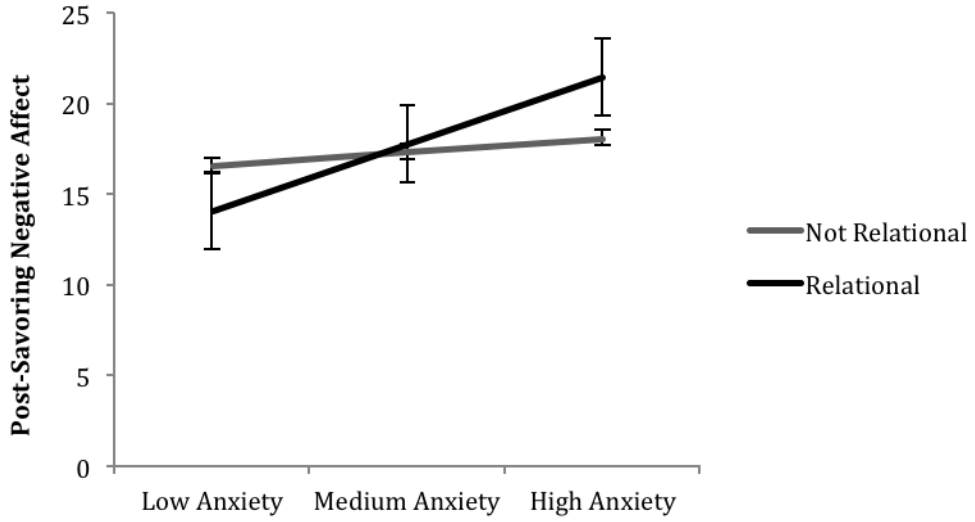

Figure 2. Interaction between attachment and intervention on post-task negative affect

Table 4. *Summary of the interaction between attachment avoidance and condition predicting negative affect*

		Negative Affect		
	ΔR^2	*b*	*SE*	95%CI
Step 1 R^2	.722			
Anxious		.783	.939	[-1.109, 2.676]
Condition		-5.928	3.372	[-12.723, .867]
Age		-.003	1.420	[-.010, .093]
Sex		.630	1.420	[-2.233, 3.492]
Anxiety		.783	.939	[-1.109, 2.676]
NA (T1)		.574***	.092	[-.099, .093]
Step 2 ΔR^2	.040*			
Condition x Avoidance		-2.511*	1.146	[.2011, 4.821]

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

Hypothesis 7

We hypothesized that attachment insecurity would moderate the association between condition and post-task relationship satisfaction. We expected that, while the intervention would increase relationship satisfaction for all participants, this effect would be greater for participants low in attachment avoidance and low in attachment anxiety. An HLR was conducted to examine attachment avoidance as a moderator of the relationship between interaction group and relationship satisfaction; it examined sex, age, attachment anxiety, and KMS pre-test scores as covariates. The hypothesis was partly supported.

Overall, the model was significant, F (7,48) = 65.180, $p < .001$, $R^2 = .951$. However, independently attachment avoidance and condition did not predict post-test relationship satisfaction (both $p > .05$), although there was a significant interaction (b = .336, t = 2.205, $p < .04$). Simple slope analysis indicated that individuals with low attachment avoidance who were in the control condition had higher post-test relationship satisfaction than those who took part in the intervention. However, individuals with high attachment avoidance showed higher post-test relationship satisfaction if they took part in the intervention than if they were in the control condition. Of the covariates, pre-test relationship satisfaction scores (b = .9232, t = 14.593 $p < .0001$) and attachment anxiety (b = -.208, t = 3.143 $p < .003$) significantly predicted post-test relationship satisfaction, with higher pre-test scores and lower attachment anxiety predicting higher post-test relationship satisfaction scores (see Table 5).

An HLR was conducted to examine attachment anxiety as a moderator of the relationship between interaction group and relationship satisfaction; it examined sex, age, attachment avoidance, and relationship satisfaction pre-test scores as covariates.

Overall, the model was significant, F (7,48) = 58.211, $p < .0001$, $R^2 = .897$. While attachment anxiety (b = -.191, t = 2.791, $p < .008$) but not condition ($p > .05$) predicted post-test relationship satisfaction, there was not a significant interaction (b = .108, t = 1.033, $p > .05$). No covariates predicted post-test relationship satisfaction scores (all $p > .05$) (See Table 6).

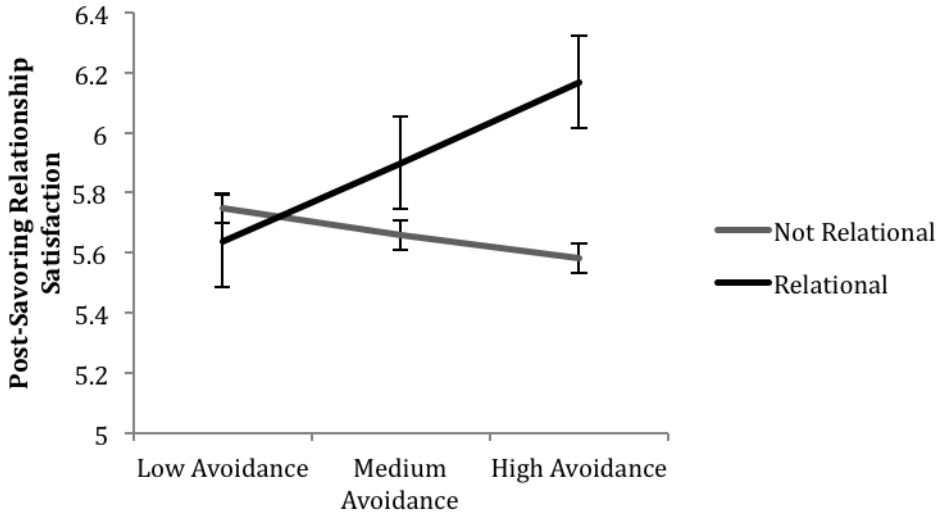

Figure 3. Interaction between attachment and intervention on post-task relationship satisfaction

Table 5. Summary of the interaction between attachment avoidance and condition predicting relationship satisfaction

		Relationship Satisfaction		
	DR^2	*B*	*SE*	95%CI
Step 1 R^2	.895			
Avoidance		-.081***	.092	[- .267, .105]
Condition		-.666	.412	[-1.495, .163]
Age		.005	.005	[-.005, .014]
Sex		.120	.140	[-.161, .401]
Anxiety		-.208**	.066	[-.341, -.075]
RS (T1)		.923***	.063	[.796, 1.050]
Step 2 DR^2	.009			
Condition x Avoidance		.336*	.152	[.030, .643]

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

Table 6. Summary of the interaction between attachment anxiety and condition predicting relationship satisfaction

		Relationship Satisfaction		
	DR^2	*B*	*SE*	95%CI
Step 1 R^2	.894			
Anxiety		-.081**	.068	[- .977, 1.229]
Condition		.197	.148	[-.101, .494]
Age		.005	.005	[-.006, .016]
Sex		.079	.158	[-.240, .397]
Avoidance		-.208	.066	[-.341, -.075]
RS (T1)		.943	.066	[.811, 1.075]
Step 2 DR^2	.002			
Condition x Anxiety		.108	.105	[-.103, .319]

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

Hypothesis 8

We hypothesized that attachment insecurity would moderate the association between condition and post-savoring emotional closeness. We expected that, while the intervention would increase emotional closeness for all participants, this effect would be greater for participants low in attachment avoidance; we also predicted that higher attachment anxiety, entered as a covariate, would predict lower emotional closeness. An HLR was conducted to examine attachment avoidance as a moderator of the relationship between interaction group and post-test emotional closeness; it also examined sex, age, and attachment anxiety as covariates. The hypothesis was partly supported.

Overall, the model examining attachment avoidance as a moderator was significant, F (6,49) =3.109 $p < .02$, $R^2 = .276$. Specifically, although the intervention did not have a direct effect on post-task emotional closeness scores ($p > .05$), independently attachment avoidance predicted post-test emotional closeness ($b = -1.004$, $t = 3.469$, $p < .002$), with higher attachment avoidance predicting lower emotional closeness (See Table 7). There was also a significant interaction ($b = 1.197$, $t = 2.354$, $p < .03$). Simple slope analysis indicated that individuals with low attachment avoidance who were in the control condition had higher post-test scores of emotional closeness than those who took part in the intervention. However, individuals with high attachment avoidance showed higher post-task emotional closeness when they took part in the intervention than if they were in the control condition. No covariates, including attachment anxiety, significantly predicted post-task emotional closeness (all $p > .05$).

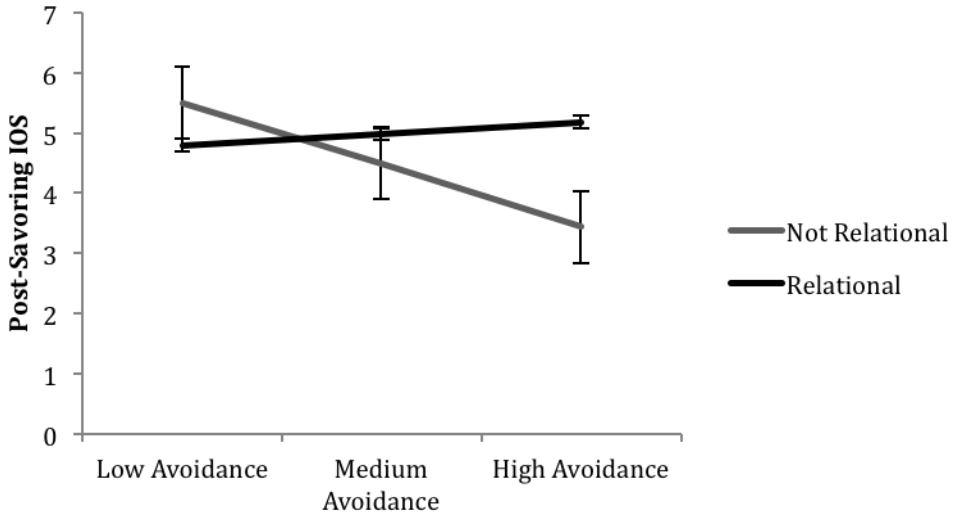

Figure 4. Interaction between attachment and intervention on post-task emotional closeness

Table 7. Summary of the interaction between attachment avoidance and condition predicting emotional closeness

		Emotional Closeness		
	DR^2	*b*	*SE*	95%CI
Step 1 R^2	.194			
Avoidance		-1.004***	.289	[-1.586, -.422]
Condition		-2.704	1.393	[-5.504, .095]
Age		.0121	.0160	[-.020, .044]
Sex		.352	.482	[-.617, 1.321]
Anxiety		.098	.224	[-.353, .549]
Step 2 DR^2	.082			
Condition x Avoidance		1.197*	.508	[.175, 2.218]

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

CHAPTER FIVE

DISCUSSION

Summary of Findings

This study constitutes one of the first experimental examinations of relational savoring for partners faced with a life-threatening health-stressor. The project examined the efficacy of a brief, portable intervention on partners of cancer patients. We expected that participants in the interventional group would experience greater increases in positive affect, relationship satisfaction, feelings of closeness, and greater decreases in negative affect when compared to those in the control group. The results suggest that the intervention was not effective for every participant. However, while individuals high in attachment avoidance reported lower positive affect after engaging in the intervention, they also reported higher post-intervention relational satisfaction and feelings of closeness. Additionally, individuals with low attachment anxiety reported lower post-intervention negative affect when compared to their counterparts in the control condition, whereas those with high attachment anxiety reported increased negative affect after engaging in the relational intervention.

Impact of Relational Savoring on Affective Variables

We hypothesized that participants in the relational intervention group would self-report a greater increase in positive emotion (Hypothesis 1) and a greater decrease in negative emotion (Hypothesis 2) than those individuals in the control group. Neither hypothesis was supported; there were no main effects of the intervention or time of measurement on positive or negative affect from pre- to post-interventional task. There

was also no significant interaction, with intervention not predicting changes in positive or negative affect across time. These results differ from previous findings within relational savoring literature (Borelli, Rasmussen, Burkhart, & Sbarra, 2015), in which participants in the relational intervention had greater positive and lower negative affect than those in the control condition. There may be several reasons for this difference.

In contrast to previous studies, which examined partners in long distance relationships (LDRs), non-deployed military spouses, and parents of toddlers, the current project examined the efficacy of the relational intervention for participants faced with a chronic, life-threatening illness. Given that we did not have a control group consisting of partners without health concerns, we are limited in our understanding of potential differences between how these groups engage in relational savoring. However, we speculate that perhaps partners faced with impending loss naturally attempt to think on more positive times in order to bolster them through the difficulty of impending doctor appointments, surgeries, and treatments. Conversely, it may be that a brief internet-based intervention is not effective for individuals faced with a large health stressor. Finally, the power of the analyses was limited by our small sample size, making it difficult to determine whether the lack of significant findings was due to low power or the ineffectiveness of the intervention for this population.

Impact of Relational Savoring on Relational Variables

We hypothesized that participants in the relational intervention group would self-report greater increases in relationship satisfaction (Hypothesis 3) and feelings of closeness (Hypothesis 4) from pre- to post-intervention than those individuals in the

control group. Neither hypothesis was supported; there were no main effects of the intervention or time of measurement on relationship satisfaction or feelings of closeness. There was also no significant interaction between intervention and time of measurement. As with the previous findings, it may be that individuals in this given population engage differently with a relational savoring intervention or that these are more stable constructs within this population. Furthermore, they may require a more intensive or altogether different approach for enhancing relational quality.

Attachment as a Moderator of Post-task Positive Affective State

We predicted that individuals in the intervention group would experience higher positive affect post-intervention than those in the control group, and this effect would be strongest for those low in attachment avoidance and attachment anxiety (Hypothesis 5). The hypothesis was partially supported, as attachment avoidance significantly moderated the association between intervention and positive affect. While there was no interaction for attachment anxiety, results suggest that individuals low in attachment avoidance who participated in the relational condition reported more positive affect than their counterparts in the control condition. Results also suggest participants high in attachment avoidance reported less positive affect if they engaged in the relational intervention than if they engaged in the control condition. It should be noted there were no significant difference in post-task positive affect for high avoidant individuals in the control and relational intervention conditions. As such, we cannot interpret the results as an indication that the intervention harmed these individuals, but perhaps rather that the intervention was simply not effective in eliciting positive affect.

As with the previous findings (Borelli, et al., 2014b), it is likely that individuals with avoidant attachment styles report less positive affect when actively engaging in a task requiring that they focus on a positive relational memory, particularly if they see a contrast between positive memories and current, less pleasant circumstances with an ill partner. Given that these individuals tend to engage in deactivating strategies (withdrawal, avoidance of threatening cues) we would expect that they report less positive affect or that they receive no affective gains when confronted with a task they likely perceive to be stressful.

Attachment as a Moderator of Post-task Negative Affective State

We hypothesized that individuals low in attachment avoidance and attachment anxiety would report lower negative affect following the intervention than participants with high attachment avoidance and attachment anxiety, and that this effect would be strongest for those in the intervention group versus the control group (Hypothesis 6). The hypothesis was partially supported, as there was a significant interaction between attachment anxiety and the intervention on post-task negative affect.

Results suggest that individuals low in attachment anxiety who participated in the control condition reported more negative affect than those with low attachment anxiety who participated in the relational intervention. Conversely, of those participants high in attachment anxiety, individuals participating in the relational intervention reported more negative affect post-task than those in the control condition. Overall, these results suggest that the intervention benefited those who entered the study with low attachment anxiety by decreasing negative mood, while having the opposite effect for those high in

attachment anxiety. These findings are in line with extant literature addressing the tendency of those with anxious attachment styles to seek proximity to their romantic partner through expressions of negative affect, which include a tendency to exaggerate vulnerability and to catastrophize negative aspects of the relationship. They seek to attain closeness by placing an emphasis on negative relational outcomes and through self-defeating appraisals (Mikulincer & Shaver, 2007; Simpson, Rholes, & Nelligan, 1992; Vicary & Fraley 2007). We would expect then, that these responses are due to a disruption of their regulatory strategies, as they would want to focus on the more negatively salient aspects of their romantic relationship. Thus, it is not surprising that individuals high in attachment anxiety report more negative affect following a task requiring that they intentionally focus on the positive aspects of the relationship, as this is counterintuitive to their traditional means of seeking closeness with their romantic partner.

Attachment as a Moderator of Post-task Relationship Satisfaction

We hypothesized that individuals low in attachment anxiety and avoidance would experience the most interventional gains in post-task relationship satisfaction (Hypothesis 7). Results suggest there was not a significant interaction between attachment anxiety and the intervention. However, there was a significant interaction between attachment avoidance and the intervention. The results indicate that the intervention was not effective for individuals with low attachment avoidance, as those in the control condition reported higher post-task relationship satisfaction when compared to those in the relational intervention.

Results suggest participants high in attachment avoidance benefited from the intervention, as they reported higher post-task relationship satisfaction than those in the control. These results are in line with findings from previous relational savoring research (Burkhart et al., 2015), in which marked gains were noted for individuals high in attachment avoidance.

Of note, given that these findings control for pre-test scores of relational satisfaction, additional analyses revealed that individuals high in attachment avoidance reported significantly lower relational satisfaction than those with low avoidance at the outset of the intervention. As such, it appears that the intervention served to eliminate the impact of avoidance, by equalizing the two groups (i.e., high avoidance, low avoidance). Thus, if the intervention is only effective for those low in relationship satisfaction, then those with low avoidance may enter the task with less room for change (i.e., ceiling effect).

The benefits for those high in attachment avoidance may result from engaging individuals in a task that is in direct contrast to deactivating strategies (i.e., avoidance of threatening cues) by encouraging them to devote their attention to a positive relational memory and to intentionally document this event. Moreover, in doing so, this may enable individuals to confront their avoidance and subsequently experience positive gains in relationship satisfaction.

Attachment as a Moderator of Post-task Emotional Closeness

We hypothesized that individuals low in attachment avoidance and anxiety would experience the most interventional gains in post-task emotional closeness (Hypothesis 8).

This hypothesis was partially supported, as there was a significant interaction between attachment avoidance and the intervention. Results indicated that individuals low in attachment avoidance who participated in the control condition reported more emotional closeness than their counterparts in the relational intervention. Results also suggest that those individuals high in attachment avoidance reported more emotional closeness after participating in the relational intervention as compared to the control condition.

When interpreting these findings, it is essential to focus on the lack of efficacy of the intervention for certain groups, rather than postulating that the intervention was harmful. When assessing the impact of the intervention on emotional closeness for participants with low avoidance, it appears that the impact of the intervention serves to reduce the difference in emotional closeness between individuals with high and low attachment avoidance. This may suggest perhaps that those high in attachment avoidance had more room to change given that those low in the construct reported high levels of closeness regardless of conditional group.

As the current study was the first in the series to analyze post-task emotional closeness for romantic partners, we cannot make comparisons to previous results. However, as Burkhart and her colleagues (2015) found that parents high in attachment avoidance reported increased relational satisfaction and feelings of closeness both post-task and at a two-year follow up, our findings lend further support to extant research addressing the relational benefits for those high in attachment avoidance.

Interpretation of Exploratory Analyses: Attachment Avoidance

While the intervention may not have been efficacious with regard to improving

emotional affect, participants high in attachment avoidance experienced relational gains. With regard to change in emotional affect, we posit that the intervention served as a disruption to highly avoidant participants' regulatory strategies. As such, we would expect that they experience affective discomfort (Borelli et al., 2013; Mikulincer & Shaver, 2003), when faced with positive memories, especially if this activates the attachment system and primes individuals to focus more on potential loss, or to make comparisons between the positive memory and current ongoing stressor of the cancer diagnosis.

While the study by Burkhart and her colleagues (2015) yielded a decrease in negative affect for parents, we may expect that the population of our sample differs based on the presence of a large health stressor. Given that highly avoidant individuals spend less time focusing on threats to the attachment relationship (Cassidy & Shaver, 2008; Mikulincer & Shaver, 2007), we would expect that intentionally attending to a memory in which one feels cared for or gives care to one's partner would negatively impact mood if it evokes thoughts of loss and low mood.

Summary of Null Findings: Attachment Anxiety

The results suggest that attachment anxiety did not moderate the association between the condition and the relational variables. Given that those high in attachment anxiety experienced an increase in negative affect after engaging in the intervention, perhaps they were more likely to engage in the intervention differently as a result of their regulatory strategies (i.e., hyperactivating). As such, further research will be beneficial in understanding whether the intervention was not beneficial for this group, or if they

approached the task in a manner that rendered it ineffective.

Limitations and Strengths

The findings of the current study must be considered within the context of several limitations. We regard to the largest limitation to be the fairly small sample size (n = 62). Given a larger sample size, we would have been able to detect smaller effect sizes. Palliative care literature is replete with descriptions of the difficulty of recruiting participants and caregivers. (Afflek, 2005; Steinhauser, et al., 2006; White, Gilshenan, & Hardy, 2008). As a way to increase recruitment for the current study, changes were made to the original IRB documents in order to increase monetary compensation. While these adjustments did garner more attention for the study, participants continued to withdraw prior to completing post-task measures.

An additional limitation of the current study is that we did not include a control group of participants without health concerns. As such, we are unable to determine whether individuals faced with a life-threatening illness engage in the study in a different manner than a healthy control group, who are unencumbered by perceived threats to the attachment system.

The design of our study was generated to imitate the traditional approach of therapy, which relies on self-report both in session and through weekly self-administered questionnaires. However, for the purposes of interventional research, additional measures analyzing physical changes (i.e., biomarkers) or through behavioral observation would lend more support to the efficacy of a brief, portable approach.

An additional limitation pertains to the efficacy of the intervention over time. For the current study, we assessed the post-task items 15-20 minutes after the delivery of the intervention, thereby limiting our ability to assess the longevity of changes in the affective and relational variables. Building from current findings, future research should determine the long-term effects of the intervention, through a one-week follow-up.

Given that a relational intervention is intended to positively impact both members of the romantic dyad, a future direction for study should include both the partner and patient. By engaging each member of the couple in the intervention both individually and conjointly, we will gain a better understanding of how changes might affect each partner over time. Palliative care literature suggests partners' attachment styles impact the recovery rates and care given to cancer patient partners. As such, it would be beneficial to gather evaluative feedback from the cancer patient, thus providing us with real-world data regarding relational and affective change in the partner.

Last, as the field of research on relational savoring is new and largely unexplored, the results of the current study will need to be replicated with both a larger sample, a healthy control group for comparison, and additional moderators (i.e., illness severity, caregiver's health).

Conclusions

The aim of this project was to examine the impact of a brief, portable intervention on relational and affective states when compared to a control group. Our study will add to palliative care literature and interventional research, as we provide a first look at the efficacy of relational savoring with a traditionally underrepresented population. Given

that the attachment and emotional states of partners impact the trajectory of recovery and care provided to cancer patients, identifying factors that can enhance marital relationships is essential.

While there were no main effects, some hypotheses were partly supported. Specifically, individuals low in attachment avoidance experienced increased positive affect, while those low in attachment anxiety reported decreased negative affect after participating in the intervention. Those high in attachment anxiety, on the other hand, experienced more negative affect after participating in the intervention, which suggests that the process of relational savoring may be potentially distressing for certain individuals, as they engage their regulatory processes. Of note, while individuals high in attachment avoidance did not experience emotional benefits, they did report increased relationship satisfaction and feelings of emotional closeness.

Clinical Implications and Future Directions

The results of the study suggest that overall the intervention was most effective for individuals high in attachment avoidance with regard to relational quality. Additionally, while there was a noted decrease in negative affect for those low in attachment anxiety, the intervention may have been potentially unhelpful for those with high attachment anxiety. From a clinical perspective, the relational savoring task may serve to disrupt attachment-based mechanisms that allow those high in attachment anxiety to feel secure in their relationships. Perhaps they felt more threatened when asked to focus on the positive, if it led them to fear the loss of future positive events, thus leading them to feel worse. Given that those with high attachment anxiety reported worse

mood after engaging in the intervention, future studies should assess attachment styles at the outset of the intervention in order to target individuals who are most likely to benefit.

For results pertaining to avoidant attachment, our findings suggest that individuals who are high in avoidance can experience gains in relational benefits despite reporting an increase in negative affect. It is possible that increased feelings of closeness are associated with decreased positive affect, as threat of relational loss is more tangible when the individual feels close to their partner. Placing these findings in the context of a practical application, a brief intervention may serve as an alternative approach for individuals with avoidant attachment who traditionally struggle to develop a therapeutic alliance both in couples and individual therapy (Diener & Monroe, 2011; Mallinckrodt, Porter, & Kivlighan, 2005; Miller et al., 2015).

Considering that emotional sensitivity and quality of care are impacted by the activation of the attachment system, an intervention that can target relationship satisfaction and emotional closeness may serve to counteract avoidant individual's regulatory behaviors (i.e., deactivating). Furthermore, if partners can draw upon these protective factors during times of illness, it is likely that they can more readily serve as a secure base for their patient partner. In doing so, we hope to bolster the positive aspects of the relationship that sustain couples during stressful periods. Given the paucity of interventions directly aimed at partners of cancer patients, it is imperative that future studies continue to address gains that can be made both for individual well being and within the romantic relationship.

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APPENDIX A

FLYER

ARE YOU THE PARTNER OF A CANCER PATIENT?

Sign up for our study to help us learn how individuals cope with their partner's illness.

Your involvement in the study would consist of a one-hour online survey. You can complete the study at your convenience and will be entered into a raffle.

Who is eligible? Anyone over age 21 whose partner is battling cancer. English fluency required.

For more information on the study, call the Pomona CARE Lab at
(909) 607- 3644
or email us at **pomonacaregiverstudy@gmail.com**

APPENDIX B

CONSENT

TITLE OF STUDY: Relationship Savoring Study
PURPOSE:
You are being asked to participate in a survey on relationships in which one partner has cancer. You will fill out multiple questionnaires regarding the way you think about your relationship, your mood, and experiences you have in your relationship.
RIGHT TO REFUSE OR WITHDRAW:
You may refuse to participate in this study. If you decide to participate, you may change your mind about being in the study and quit after the study has started. You may refuse to take any test. You will, however, only be eligible to be entered into the raffle after completing the entire survey.
RISKS/BENEFITS:
It is unlikely that participating in this study will expose you to any significant risks or benefits. However, it is possible that answering questions about relationships will cause minor distress. If you do experience distress and would like to talk to a mental health professional about it, please contact the PI (Jessica.borelli@pomona.edu). It is also possible that as a result of participating in the study, you will gain a clearer understanding of your attitude toward and your behavior in your relationship.
COMPENSATION:
Please note that after completing the study you will be entered into a raffle and will be eligible to win one of 10 gift cards. At the end of the survey, you will be given a code and instructions for how to submit this code for compensation.
CONFIDENTIALITY:
Your individual privacy will be maintained in all publications or presentations resulting from this study. No identifying information will be collected during the study and all information collected will be used for the sole purpose of data analysis and not shared with anyone outside of the research team. Once collected, the data will be imported and stored on a locked computer with only access grated to the Primary Investigator and her research team.
QUESTIONS:
If you have any questions, please contact Dr. Jessica Borelli at 909-607-3757 or Jessica.borelli@pomona.edu.

By beginning the survey, you acknowledge that you have read this information and agree to participate in this research, with the knowledge that you are free to withdraw your participation at any time without penalty.

APPENDIX C

MEASURES AND DATA COLLECTION

Measures for Pomona Caregiver Study

Measure	Pre-Treatment	Part 2: Mental Reflection Task	Part 3: Post-Reflection
Baseline Characteristics			
Demographics	*X*		
ECR-R	*X*		
KMS	*X*		*X*
PANAS	*X*		*X*
IOS			*X*
Experimental Phase		X	
Neutral Control		X	
Personal Savoring		X	
Relational Savoring		X	

APPENDIX D

DEMOGRAPHIC QUESTIONS

1. Age: _____
2. Sex: M or F
3. Race (check one)
   a. White (Non-Hispanic) b. Hispanic
   c. African American d. Asian
   e. Native American f. Other
4. What is your marital status?
   a. Single b. Married/Domestic Partner
   c. Widowed d. Prefer not to answer
   If married, for how many years? _____
5. Where is your primary residence?
   a. Within the US If US, what state? _____
   c. Outside the US
6. What is the highest level of education that you have completed?
   a. High School b. Some College
   c. Community College d. Bachelor's Degree
   e. Graduate Degree f. None of the Above: _____
7. What is your current employment status (check all that apply)
   a. Full-time b. Part-time
   c. Full-time College/University Student d. Self-Employed
   e. Unemployed f. Retired
   g. Other:_____
8. Do you work outside the home?
   a. No
   b. Yes
9. What is your total household income? PLEASE CHECK ONLY ONE:
   a. less than $40,0000 b. $41,000 to $60,000 c. $61,000 to $80,000
   d. $81,000 to $100,000 e. $100,000 to $120,000 f. greater than $120,000
10. Are you a member of the military (active duty, reservist, National Guard)?
    a. No
    b. Yes

11. Is your partner a member of the military (active duty, reservist, National Guard)?
    a. No
    b. Yes

12. Do you (or your partner) have children? _____
    If so, please answer the following questions.
    How many children do you and your partner provide primary care for (list details below)?

List Children	Child is biologically related to: 1 = Self only 2 = Partner only 3 = Both Self & Partner 4 = Neither Self nor Partner	Child's Age	Child's Sex 1 = male 2 = female	Does child primarily live in your house? 1 = yes 2 = no

13. How many hours per week do you use childcare? _____

14. Who takes care of your children when you are at work or not home?
    a. Spouse/Partner
    b. Family member
    c. Babysitter/Nanny
    d. Not Applicable
    e. Daycare
    f. None of the Above: _____

BASELINE MEASURES

1. Partner's Age: _____
2. Partner's Sex: M or F
3. Partner's Race (check one)
   a. White (Non-Hispanic) b. Hispanic
   c. African American d. Asian
   e. Native American f. Other

4. Where is your partner's primary residence?
   a. Within the US If US, what state? _____
   c. Outside the US

5. What is the highest level of education that your partner has completed?
   a. High School b. Some College
   c. Community College d. Bachelor's Degree
   e. Graduate Degree f. None of the Above: _____

7. What is your partner's current employment status (check all that apply)
   a. Full-time b. Part-time
   c. Full-time College/University Student d. Self-Employed
   e. Unemployed f. Retired
   g. Other:_____

8. How long have you and your partner known each other?
   a. 6 months or less b. 1 year or less
   c. 2 years or less d. 3 years or less
   e. 4 years or less f. 5 years or less
   g. over 5 years

9. How long have you and your partner been in a romantic relationship?
   a. 6 months or less b. 1 year or less
   c. 2 years or less d. 3 years or less
   e. 4 years or less f. 5 years or less
   g. over 5 years

10. How often do you and your partner see each other?
    a. More than once a week
    b. Once a week
    c. More than once every two weeks
    d. Once every two weeks
    e. Once a month
    f. More than once a month
    g. Less than once a month

11. Do you and your partner co-habitate? If yes, for how long?
    a. 1 month or less b. 3 months or less
    c. 6 months or less d. 9 months or less
    e. 1 years or less

    12. Have you and your partner ever broken up?
    a. Yes
        i. If Yes, how many times?
    b. No

A**ssessment of Health Variables**

1. How long ago was your partner diagnosed with cancer?
   a. Under 1 month b. Between 1 and 3 months
   c. Between 3 and 6 months d. Between 6 and 9 months
   e. Between 9 and 12 months f. Between 1 and 2 years
   g. Between 2 and 3 years h. Between 3 and 4 years
   i. Between 4 and 5 years j. Between 5 and 10 years

2. What type of cancer does your partner have?
   a. Breast b. Prostate
   c. Lung d. Colorectal
   e. Urinary bladder f. Kidney and Renal pelvis
   g. Brain h. Leukemias
   i. Pancreatic j. Oral
   k. Gynecologic l. Melanomas of the skin
   m. Other

3. If your partner has battled cancer before, what type did she/he have at that time?
   a. Breast b. Prostate
   c. Lung d. Colorectal
   e. Urinary bladder f. Kidney and Renal pelvis
   g. Brain h. Leukemias
   i. Pancreatic j. Oral
   k. Gynecologic l. Melanomas of the skin
   m. Other

4. What stage is your partner's cancer?
   a. Stage I b. Stage II
   c. Stage III d. Stage IV

5. The rate of growth of your partner's cancer is:
   a. Very slow b. Slow
   c. Average d. Fast growing
   e. Very fast growing

6. What types of cancer treatment is your partner currently receiving?
   a. None b. Chemotherapy
   c. Radiation therapy d. Surgery
   e. Hormone therapy f. Cryotherapy
   g. Vaccine treatment h. Bone directed treatment
   i. Other j. Experimental

7. If your partner has battled cancer before, what types of treatment did they receive?
   a. None b. Chemotherapy

c. Radiation therapy d. Surgery
e. Hormone therapy f. Cryotherapy
g. Vaccine treatment h. Bone directed treatment
i. Other j. Experimental

8. How frequently do you worry about your partner dying?
a. Several times a day b. Once a day
c. A few times a week d. Once a week
e. Once a month f. Less than once a month
g. Once a year f. Never

9. How frequently do you discuss these worries with your partner?
a. Several times a day b. Once a day
c. Once a week d. A few times a week
e. Once a month f. Less than once a month
g. Never

10. How frequently do you and your spouse venture out of your home (for non-health related reasons)?
a. Several times a day b. Once a day
c. Once a week d. A few times a week
e. Once a month f. Less than once a month
g. Never

11. Does your partner require assistance with their hygiene (e.g. showering, brushing their teeth, getting dressed)?
a. Always b. Frequently
c. Sometimes d. Rarely
e. Never

12. Is your partner currently independently mobile?
a. yes b. no

13. Are you afraid to leave your partner by themselves?
a. Always b. Frequently
c. Sometimes d. Rarely
e. Never

14. How often do you attend your partner's medical appointments?
a. Always b. Frequently
c. Sometimes d. Rarely
e. Never

15. Do you have help caring for your partner? If yes, how often?
a. Several times a day b. Once a day
c. Once a week d. A few times a week

e. Once a month f. Less than once a month
g. Never

16. Do you have family living close by?
a. yes b. no

17. Are you currently employed?
a. yes b. no

18. Do you currently have a cancer diagnosis?
a. yes b. no

19. Have you battled cancer before? If yes, how long ago?
a. 6 months or less b. 1 year or less
c. 2 years or less d. 3 years or less
e. 4 years or less f. 5 years or less
g. over 5 years

20. Are you currently receiving mental health services?
a. More than once a week b. Once a week
c. Every other week d. Once a month
e Less than once a month f. Never

21. Do you know other people who are caring for a loved one with cancer?
a. yes b. no

APPENDIX E

KMS (ADAPTED FOR ALL PARTNER RELATIONSHIPS)

	Extremely Dissatisfied	Very Dissatisfied	Somewhat Dissatisfied	Mixed	Somewhat Satisfied	Very Satisfied	Extremely Satisfied
How satisfied are you with you relationship?							
How satisfied are you with your partner as a partner?							
How satisfied are you with your relationship with your partner							

APPENDIX F

ECR-R

The statements below concern how you feel in emotionally intimate relationships. We are interested in how you *generally* experience relationships, not just in what is happening in a current relationship. Respond to each statement by circling the number that indicates how much you agree or disagree with the statement.

1. I prefer not to show a partner how I feel deep down.
   Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

2. I often worry that my partner will not want to stay with me.
   Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

3. I find it difficult to allow myself to depend on romantic partners.
   Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

4. I worry that romantic partners won't care about me as much as I care about them.
   Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

5. I don't feel comfortable opening up to romantic partners.
   Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

6. I worry a lot about my relationships.
   Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

7. I get uncomfortable when a romantic partner wants to be very close.
   Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

8. When I show my feelings for romantic partners, I'm afraid they will not feel the same about me.
   Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

9. It's not difficult for me to get close to my partner.
   Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

10. My romantic partner makes me doubt myself.
    Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

11. It helps to turn to my romantic partner in times of need.
    Strongly Disagree 1– 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

12. I find that my partner(s) don't want to get as close as I would like.

Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

13. I talk things over with my partner.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

14. My desire to be very close sometimes scares people away.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

15. I feel comfortable depending on romantic partners.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

16. It makes me mad that I don't get the affection and support I need from my partner.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

17. It's easy for me to be affectionate with my partner.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

18. My partner only seems to notice me when I'm angry.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

19. I'm afraid that I will lose my partner's love.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

20. I feel comfortable sharing my private thoughts and feelings with my partner.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

21. I often worry that my partner doesn't really love me.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

22. I am very comfortable being close to romantic partners.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

23. I often wish that my partner's feelings for me were as strong as my feelings for him or her.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

24. I prefer not to be too close to romantic partners.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

25. When my partner is out of sight, I worry that he or she might become interested in someone else.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

26. I find it relatively easy to get close to my partner.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

27. I rarely worry about my partner leaving me.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

28. I usually discuss my problems and concerns with my partner.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

29. I do not often worry about being abandoned.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

30. I tell my partner just about everything.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

31. Sometimes romantic partners change their feelings about me for no apparent reason.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

32. I am nervous when partners get too close to me.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

33. I'm afraid that once a romantic partner gets to know me, he or she won't like who I really am.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

34. I find it easy to depend on romantic partners.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

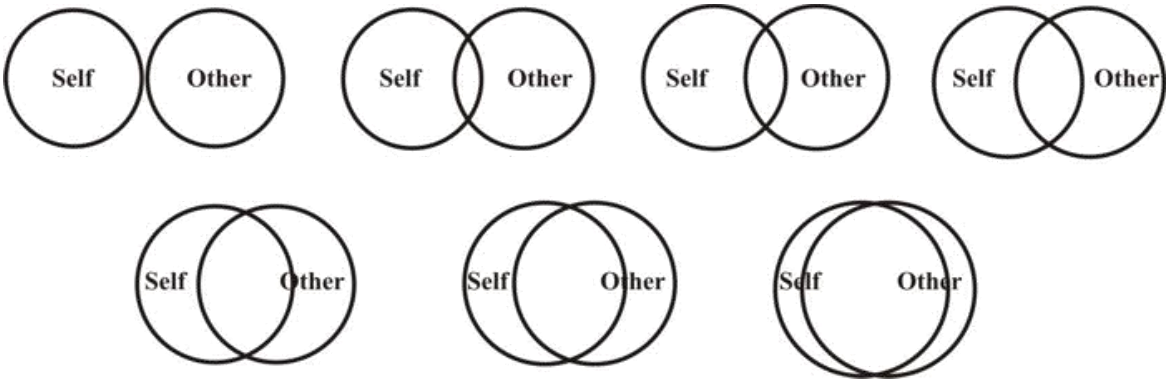
35. I worry that I won't measure up to other people.
Strongly Disagree 1 – 2 – 3 – 4 – 5 – 6 – 7 Strongly Agree

36. My partner really understands me and my needs.

APPENDIX G

IOS

Instructions: Please circle the picture that best describes your current relationship with your romantic partner.



APPENDIX H

PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel this way right now, that is, at the present moment. Use the following scale to record your answers.

1	2	3	4	5
Very slightly or not at all	A little	Moderately	Quite a bit	Extremely

___ Interested
___ Distressed
___ Interested
___ Excited
___ Upset
___ Strong
___ Guilty
___ Scared
___ Hostile
___ Enthusiastic
___ Proud

_____ Irritable
_____ Alert
_____ Irritable
_____ Ashamed
_____ Inspired
_____ Nervous
_____ Determined
_____ Attentive
_____ Jittery
_____ Active
_____ Afraid

APPENDIX I

NEUTRAL CONTROL

Control Condition: Non-Savoring Task

In this exercise, we would like to you take the time to pause and to reflect deeply about your morning routine. Please think about your morning routine from the time you wake up until the time you leave for work/school.

Please spend one minute focusing on this routine. You will be asked some questions about the details of this event in the following section.
Using as much detail as possible, describe what normally happens during your morning routine.

What is your room/apartment like in the morning?

What time of day do you normally start your morning?

What do you wear?

What do you eat?

How do you normally feel in the mornings?

What do you think about during your morning routine?

What thoughts are you having now about your morning routine?

Please take 2 minutes to focus on your morning routine and try replaying it in your mind.

APPENDIX J

PERSONAL

Emotional Control: Personal Savoring Task

Treatment Condition 1: Personal Savoring Task
Caregivers often tell us that they have little time to themselves -- few moments to stop and to reflect. In this exercise, we would like you to take the time to pause and to reflect deeply about a positive personal experience you have had (i.e., an experience that *did not* involve your partner). This could be something as simple as enjoying a good meal or taking a nice walk, or it could be something as major as getting a promotion or accomplishing a big task. Try to focus on a single memory of a time you experienced on your own and things seemed at their best for you.

Please spend one minute focusing on this memory. You will be asked some questions about the details of this event in the following section.

Using as much detail as possible, describe what happened at this time.

What was the air like? What was the weather like?

What time of day did the moment occur?

What were you wearing?

How did you feel at the time? (excited, proud, calm, relaxed etc.)

What thoughts did you have at the time?

What thoughts are you having now?

Please take 2 minutes to focus on the feelings you were having at the time and try to relive that moment.

APPENDIX K

INTERVENTION

Interventional Condition: Relational Savoring Task

Caregivers often tell us that they have little time to stop and reflect on the positive parts of their relationship with their partner. In this exercise, we would like you to take the time to pause and to reflect deeply on a positive memory you've had with your partner, one in which you felt close and connected to him/her. This could be something as simple as enjoying time together, or it could be something as major as being there for one another during a life milestone. Try to focus on a single memory of a time when you took joy in being there for your partner, or in your partner being there for you, a time when either you or your partner felt especially cherished, protected or accepted by the other.

What time of day did the moment occur?

What were you wearing?

What was your partner wearing?

How did you feel at the time? (excited, giddy, calm, relaxed etc.)

What thoughts did you have at the time? About your partner? About your relationship?

What thoughts are you having now about your partner and about your relationship?

Please take 2 minutes to focus on the feelings you were having at the time and try to relive that moment.