A terror management theory based intervention for anxiety in spouses of cancer patients: a multiple-baseline study

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A TERROR MANAGEMENT THEORY BASED INTERVENTION FOR ANXIETY IN SPOUSES OF CANCER PATIENTS: A MULTIPLE-BASELINE STUDY

by

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A thesis submitted in partial fulfillment of the requirements for the Doctor of Philosophy degree in Psychological and Quantitative Foundations (Counseling Psychology) in the Graduate College of The University of Iowa

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Dedicated to the memory of my grandfather, Doyle Bachman. To my parents and teachers.
Self-ratings are overgeneralizations that are impossible to validate…If you do, however, choose to rate yourself…why not rate it in terms of your aliveness and your enjoyment?

– Albert Ellis
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ABSTRACT

As the U.S. population ages the number of family caregivers is expected to rise. Family caregivers are a valuable source of informal healthcare services for patients and the public, in terms of reducing healthcare costs. However, research suggests family caregiving is not only financially costly for individuals, but associated with a number of medical and mental health risks, with spouses at higher risk for negative outcomes compared to other family members. Traditional evidence-based therapies for stress in family caregivers have been shown to be minimally efficacious with spouses. No therapies take into account the existential nature of spouse caregiver stress, including the potential nonconscious role of loss of life meaning/purpose and death anxiety. This study of multiple baseline design preliminarily explored the effects of a novel 8-week Terror Management Theory integrated existential psychotherapy (TIE) on stress and nonconscious mechanisms believed to function as buffers for existential anxiety, in five women with spouses receiving cancer treatment. Methods included ecological momentary assessment (EMA) of anxiety and self-esteem states via text message sent three times daily – and intermittent assessment of death anxiety, self-compassion, meaning in life, and quality of life at baseline, intervention, immediate post, and 1-month follow-up. Visual and statistical analyses indicated significant between-phase trend changes in anxiety and self-esteem within participants, although direction of changes varied across participants. Additionally, changes in death anxiety, self-compassion, meaning in life, and quality of life between phases varied across participants in directions inconsistent with intervention aims and participants’ subjective impressions of intervention-related changes. Mixed findings point to the complexity of spouse caregiver
psychology and highlight the need for more effective therapies with this population. Results may also guide future research and development of existentially-informed therapies.
Caring for a loved one with a serious disease is stressful. Spouse caregivers tend to report higher levels of stress and anxiety compared to other family members. Research suggests many widely used psychotherapies are less effective with spouse caregivers compared to non-caregivers. This study explored the effects of a new psychotherapy designed to reduce caregiver stress by helping them develop healthier strategies for coping with reminders of death. Six women with spouses receiving cancer treatment participated in this study. Results suggested the therapy had inconsistent effects on participants’ self-esteem, anxiety, and other psychological variables. The strengths and limitations of this study may guide future development of this or new therapies that consider how a person’s strategies for coping with death might affect how they cope with everyday problems.
# TABLE OF CONTENTS

LIST OF TABLES........................................................................................................... x
LIST OF FIGURES.......................................................................................................... xi
CHAPTER 1: INTRODUCTION.......................................................................................... 1
  The Effectiveness of Current Caregiver Interventions ............................................. 3
  The Implications of Terror Management Theory for Caregiver Anxiety ................ 4
  The Present Study ...................................................................................................... 6
CHAPTER 2: LITERATURE REVIEW .............................................................................. 7
  Death Anxiety ............................................................................................................ 7
  Definitions ............................................................................................................... 9
  Evolutionary Perspective .......................................................................................... 11
  Development of Mortality Awareness and Self-Esteem ........................................ 13
  Parallel Development of Self-Esteem ...................................................................... 18
  Death Avoidance and Daily Living ......................................................................... 20
  Death Confrontation and Positive Growth ............................................................. 25
  Hallucinogen-Induced Confrontations with Death .................................................. 27
  Psychotherapy for Death Anxiety .......................................................................... 30
  Self-Compassion and Self-Esteem Interventions .................................................... 35
  The Current Study .................................................................................................. 37
  Research Questions ................................................................................................. 46
CHAPTER 3: METHODS ............................................................................................... 48
  Participants and Recruitment ................................................................................... 48
  Procedure and Measures ....................................................................................... 50
  Intervention ............................................................................................................ 54
  Measures ................................................................................................................ 60
  Ecological Momentary Assessment ....................................................................... 63
  Outcome Measures ................................................................................................. 64
  Data Analysis .......................................................................................................... 67
CHAPTER 4: RESULTS ................................................................................................ 69
  Demographic and Psychosocial Characteristics at Baseline .................................... 69
  Study Attrition and Treatment Withdrawals .......................................................... 70
  Therapist-Client Variables ..................................................................................... 74
  Daily Self-Esteem and Anxiety .............................................................................. 80
  Visual Analysis ...................................................................................................... 82
  Relevance of Findings to the Research Questions .................................................. 90
CHAPTER 5: DISCUSSION .......................................................................................... 93
  Possible Explanations for Results ........................................................................ 94
  Study Strengths and Limitations ........................................................................... 98
  Future Directions .................................................................................................... 99
  Summary ................................................................................................................ 103
APPENDIX A: RECRUITMENT MATERIALS ............................................................. 105
APPENDIX B: STUDY INFORMED CONSENT ......................................................... 106
APPENDIX C: SINGLE-ITEM SELF-ESTEEM SCALE ............................................. 114
APPENDIX D: STATE TRAIT ANXIETY INVENTORY-6 IN FULL FORMAT AND
  TEXT-MESSAGE ABBREVIATION ........................................................................ 115
LIST OF TABLES

Table 1: Psychopathology and its Existential Dreads........................................................34
Table 2: Demographic Characteristics of Participants.....................................................71
Table 3: Caregivers’ Ratings of Spouse’s Medical and Functional Status at Baseline....72
Table 4: Raw Scores on Selected Psychological Screening Measures............................74
Table 5: Therapist and Participant Real Relationship Inventory Ratings.........................75
Table 6: Participants’ Ratings and Qualitative Impressions of TIE...................................76
Table 7: Reported Meditation and Homework Practice Frequency During Intervention and Follow-Up Phases...........................................................................................................81
Table 8: EMA Compliance.................................................................................................81
Table 9: Phase Mean Self-Esteem and State Anxiety.........................................................84
Table 10. Scores on Outcome Measures at Intermittent Time Points.................................84
Table 11: Phase Trend Changes in Daily Self-Esteem and Anxiety Across Phases........89
Table 12. Estimated Effect Sizes for Phase Changes in Self-Esteem and Anxiety.........89
LIST OF FIGURES

Figure 1: Activation of the Terror Management Cognitive Structures..........................22
Figure 2: Two Overlap-Based Methods for Calculating Effect Size..............................45
Figure 3: Participants’ Baseline Quality of Life Compared to a Sample of Caregivers with Spouses of Similar Functional Status.................................................................73
Figure 4: Average Daily Self-Esteem and Anxiety and Self-Compassion, Death Anxiety, and Meaning in Life at Intermittent Time Points.........................................................83
Figure 5: Autocorrelation..............................................................................................86
CHAPTER 1: INTRODUCTION

There are an unprecedented number of older adults or persons over the age of 65 living in the United States. Factors contributing to this include the number of aging baby boomers, advances in medicine, and the success of public health interventions for reducing the incidence of preventable diseases (Centers for Disease Control and Prevention [CDC], 2007). Approximately 80% of older adults have one or more serious chronic diseases, or diseases with long course, slow progression, and high mortality rates (World Health Organization, 2013). Cancer, heart disease, and stroke are among the most common chronic diseases in the U.S. and were the leading causes of death and disability in 2007 for all ages (CDC, 2007).

In conjunction with the growing population of older adults is the rise in demand for informal health caregivers, which include the patient’s family members and friends (Langa et al., 2001). Family caregivers are the primary source of in-home healthcare for older adults in the U.S. and are extremely valuable from a national health care standpoint. For example, it is estimated family caregivers save the federal government hundreds of billions of dollars’ worth of formal healthcare services annually (Arno, Levine, & Memmott, 1999; Langa et al., 2001; Schulz & Sherwood, 2008). From an economic standpoint, family caregivers provide healthcare services at no direct costs to taxpayers. However, research suggests caregiving is often costly to individual families, both financially and in terms of associated negative impact on physical and mental health.

Family caregiving is associated with significantly higher incidences of chronic disease, anxiety, depression, and mortality compared to non-caregivers (Currier, Neimeyer, & Berman, 2008; Fredman, Cauley, Hochberg, Ensrud, & Doros, 2010;
Kamel, Bond, & Froelicher, 2012; Roepke et al., 2012; Schulz, Boerner, Shear, Zhang, & Gitlin, 2006; Vitaliano, Zhang, & Scanlan, 2003). The estimated incidence of anxiety and depressive disorders among caregivers is 40% and 39% respectively (Braun et al., 2007; Janda et al., 2007). Researchers have noted that family caregivers often experience significantly more anxiety, depression, and distress than the patient family member (Braun et al., 2007; Mathews, 2003; Mellon, Northouse, & Weiss, 2006).

In the U.S., spouses and intimate partners\(^1\) are typically the first of the patient’s family members to assume caregiving responsibilities (Pinquart & Sorensen, 2011). Like other family caregivers, many spouses report feeling underprepared for the mental and physical demands associated with caregiving (National Alliance for Caregiving and AARP, 2009; Pinquart & Sorensen, 2011). Further, spouse caregivers often report they receive little or no formal (e.g. help from in-home nurses) or informal (e.g. help from other family members) forms of support (Drentea, Clay, Roth, & Mittelman, 2006).

Research suggests spouses are at significantly higher risk for negative medical and mental health outcomes compared to other family caregivers. For example, Pinquart and Sorensen (2011) conducted a meta-analysis of 84 empirical articles on the topic of distress in family caregivers of dementia patients. They found spouse caregivers reported significantly lower levels of subjective well-being and significantly higher levels of depression and financial and physical burdens than adult children and children-in-law caregivers (Pinquart & Sorenson, 2011). Further, spouse caregivers had significantly higher scores on self-report measures of social isolation and sleep deprivation than other caregiver family members (Pinquart & Sorensen, 2011). The researchers speculated that

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\(^1\) For the purposes of this paper, *spouse* refers to all people in committed co-habiting relationships.
cohabitation may account for negative outcomes observed in spouses but not other family members (Pinquart and Sorensen, 2011).

**The Effectiveness of Current Caregiver Interventions**

Despite the need for effective psychosocial interventions for distress in spouse caregivers, the most widely used interventions were shown to be minimally effective (Adelman, Tmanova, Delgado, Dion, & Lachs, 2014; Northhouse et al., 2010). For example, Northhouse and colleagues (2010) conducted a meta-analysis of 29 randomized clinical trials of mainly psychoeducational coping-strategies interventions for family caregivers of cancer patients and found effect sizes ranging from .20 to .29 on distress and anxiety outcome measures (Northhouse et al., 2010). In a systematic review of psychosocial and pharmacological interventions for dementia caregivers, Schulz and colleagues (2002) found most interventions had small to modest effects on depressive symptoms (.75% to 10.5%). A recent review of psychosocial interventions for family caregivers of patients with dementia published in the *Journal of the American Medical Association* also found mild to modest effects associated with psychosocial interventions for dementia caregivers (effect sizes ranging from .09 to .23; Adelman et al., 2014). The majority of individual and group behavioral strategies-based caregiver interventions were not associated with significant reductions in caregivers’ depressive symptoms (Selwood et al., 2007).

To summarize, a number of evidence-based psychotherapies for anxiety and depression have not been shown to be as effective when used with spouse caregivers. It may be that traditional therapies are not targeting relevant aspects of suffering unique to this population. New approaches may need to be based on a more nuanced theoretical
framework that better accounts for anxiety spouse caregivers experience and their means of coping. Developers of novel interventions may need to consider caregiver anxiety might be in response to more than a lack of disease knowledge, inexperience providing healthcare services, or a global deficit in their ability to handle stress.

The Implications of Terror Management Theory for Caregiver Anxiety

The author recently proposed the concept of a Terror Management Theory Integrated Existential Intervention (TIE) which is a psychosocial intervention derived from empirically-supported aspects of Terror Management Theory (TMT) and clinical theory-based principles of existential therapy (Lewis, 2014). TMT posits human awareness that one eventually dies is inherently terrifying, and that a broad range of motivation and behavior serve to suppress thoughts of death and its attending anxiety (Greenberg, Pyszczynski, & Solomon, 1986). Existential therapy represents a diverse array of psychotherapy practices generally aimed at cultivating a client’s capacity to choose and act authentically in the face of the universals of existence, such as death, isolation, freedom, and meaninglessness, and non-existential limitations, such as limitations imposed by one’s biology, culture, and sense of self (Schneider & Krug, 2010; Yalom, 1980).

Over 300 empirical articles have been published testing hypotheses derived from TMT (Burke, Martens, & Faucher, 2010; Cox & Arndt, 2008). Studies consistently support the notion that people manage thoughts of death both consciously, through proximal situation-specific coping behaviors; and nonconsciously, through abstract schematic frameworks in the domains of one’s cultural worldview, self-esteem, and intimate relationships (Cox et al., 2008; Greenberg & Arndt 2012; Greenberg, Arndt,
Simon, Pyszczynski, & Solomon, 2000). Mortality salience (MS) is a term used to describe the state of awareness of one’s death. MS is elicited in research participants when they complete following items prior to completing self-report measures of the dependent variables of interest: 1) “Please briefly describe the emotions that the thought of your own death arouses in you,” and 2) “Jot down, as specifically as you can, what you think will happen to you as you physically die” (Crowson, Debacker, & Thoma, 2006; Greenberg et al., 2000).

Sources of MS in daily living can be explicit or implicit. Explicit sources of MS are directly-relevant to the concept of death and consciously perceived as such, such as images of death and violence as portrayed in the news or attending a funeral (Greenberg et al., 2000). Implicit sources of MS are either directly-relevant to death but presented out of awareness (e.g. focusing on another task while tuning out a radio news story on the topic of death) or have symbolic relevance to death. Examples of implicit symbolic sources of MS include the word “coffin” or in the wake of losses not directly-related to the concept of death, such as the ending of a relationship, termination from a job, and loss of a favored sports team (Dechesne, Greenberg, Arndt, & Schimel, 2000; Mikulincer, Florian, & Hirschberger, 2003).

In terms of its relevance to anxiety in caregivers, health psychology applications of TMT suggest reminders of diseases, such as reminding people of the importance of preventive screening for cancer, are an implicit source of MS or nonconscious triggers of death anxiety (Goldenberg et al., 2000; Goldenberg & Arndt, 2008). If this is the case, caregivers who cohabitate with patients with visible illness signs (e.g. hair loss from chemotherapy) may be in more frequent contact with an implicit source of MS compared
to other family caregivers. Indeed, leading figures in TMT recently offered a TMT perspective on the role of death-related anxiety in psychological dysfunction (Maxfield, John, & Pyszczynski, 2014). However, this perspective has yet to be studied or applied by clinical and counseling psychologists.

The author hypothesizes that TMT may be useful for both conceptualizing and treating anxiety in spouse caregivers. From a TMT, a spouse’s conscious anxiety may be in response to frequent contact with implicit reminders of their own death, as well as deficits in terror management (e.g. low self-esteem). The primary aim of TIE is to foster the caregiver’s conscious and nonconscious terror management strategies in order to reduce self-reported symptoms of anxiety and quality of life.

The Present Study

This purpose of this multiple baseline study is to examine the therapeutic mechanisms of eight, 1.5-hour weekly sessions of TIE administered to five women with spouses experiencing visible side effects from cancer treatment. Outcome variables of interest and measures used to assess them are as follows: self-esteem (Single-Item Self-Esteem Scale [SISES] Robins, Hendin, & Trzesniewski, 2001), state and trait anxiety (State-Trait Anxiety Inventory-6 [STAI-6]; Marteau & Bekker, 1992), quality of life (Quality of Life in Life Threatening Illness—Family Carers [QOLLTI-F]; Cohen, Leis, Kuhl, Charbonneau, Ritvo, & Ashbury, 2006), death avoidance (Death Attitude Profile-Revised: Avoidance subscale [DAP-R]; Wong, Reker, and Gesser, 1994), and meaning in life (Meaning in Life Questionnaire [MLQ]; Steger, Frazier, Oishi, & Kaler, 2006).
CHAPTER 2: LITERATURE REVIEW

In this chapter the author provides research and theoretical rationale for the intervention and description of the study design. First, the author includes a brief history of the psychological study of death anxiety and defines related constructs. Next the author explores perspectives on death anxiety from evolutionary and sociocultural theory-based perspectives. Then the author provides developmental and cognitive theory-based accounts of mortality awareness across the lifespan. Further, the author reviews social and health psychology research on TMT, near death experiences, and research on psychedelic therapies, explaining the relevance of these topics for non-pharmacological treatment of death-related anxiety. Additionally, the author includes an overview of intervention aims, its theorized mechanisms of change, and compares its theorized processes to those of other caregiver interventions. Finally, the author justifies the use of single-case research methodology as a means for systematically addressing the study’s hypotheses.

Death Anxiety

Sigmund Freud was one of the first psychology theorists to describe the concept of death anxiety in his writings. In his essay Reflections on War and Death, written at the onset of World War I, Freud (1918) stated:

We have shown an unmistakable tendency to put death aside, to eliminate it from life...[A]t bottom no one believes in his own death, which amounts to saying: in the unconscious every one of us is convinced of his immortality...[W]e regularly lay stress upon the unexpected causes of death, we speak of the accident, the infection, or advanced age, and thus...debase death from a necessity to an
accident (p. 2-3).

While Freud believed fear of death was a source of unconscious anxiety, and a potential motivator for conscious behavior, he considered it secondary to other unconscious drives (Freud & Strachey, 1964). Freud (1918) stated, “The fear of death, which controls us more frequently than we are aware, is comparatively secondary and is usually the outcome of the consciousness of guilt” (p. 25). Freud later speculated that death-anxiety was a function of imbalance between unconscious life and death instincts. He referred to these opposing drives as Eros – or the drive to live, procreate and creativity – and Thanatos, the drive to kill, destroy, and inflict pain (Freud & Strachey, 1964).

World War I was the context of early research on death anxiety, with veterans participating in the first studies on death attitudes (Feifel 1956, 1959 as cited by Neimeyer, Wittkowski, & Moser, 2010). Through qualitative interviews, Feifel (1956) found World War I veterans were nearly equally divided in terms of viewing of death in pleasant or unpleasant terms; that is, viewing death as a doorway to an afterlife or “the end.” ² (as cited by Neimeyer et al., 2010). Since the 1950s, numerous psychological measures of conscious death-related attitudes and anxiety have been developed and psychometrically validated across samples of diverse genders, ages, races, and nationalities (Fortner, & Neimeyer, 1999; Missler et al., 2011; Pollak, 1979; Neimeyer, 1994).

² The remaining proportion (20%) of veterans in Feifel’s (1956) study considered death a release from pain or were uncertain of its meaning.
Definitions

Death. Regardless of one’s age, race, health and economic status, all humans eventually die. Barring unforeseen leaps in medical science, death is as certain for a child born today as it was for early humans (Bauman, 1992; Rhyu, 1995). For the purpose of this paper, death is defined in strictly biomedical terms, as a state in which all brain, circulatory, and respiratory functioning irreversibly cease (Wijdicks, Varelas, Gronseth, & Greer, 2010). As follows, it is assumed that all psychological phenomena – including one’s memories, emotions, personality, and subjective experience – are a function of brain activity, which ceases at time of death. This perspective is congruent with one espoused by philosopher William James, whose theories are the basis for American psychology:

The spiritualist and the associationist must both be ‘cerebralists,’ to the extent at least of admitting that certain peculiarities in the way of working of their own favorite principles are explicable only by the fact that the brain laws are a codeterminant of the result... brain-physiology must be presupposed or included in psychology (James, 1890 p. 4-5).

Anxiety. Like death, anxiety is universal to the human experience, and believed to be the result of our evolved capacity for future-oriented thinking. For example, anxiety has been described as “a reaction to threat…usually directed toward the future” (Noyes & Hoen-Saric, 1998, p. 1). Diagnostically, anxiety refers to an emotional state usually marked by psychological distress and physiological arousal (Noyes & Hoen-Saric, 1998; Spielberger, 2010). Physiological or somatic manifestations of anxiety include muscle tension, rapid heartbeat, sweating, and dry mouth (Gros et al., 2007; Spielberger, 2007).
In addition to being an emotional state, anxiety has also been described as a personality trait, or an enduring tendency to experience state anxiety across diverse situations (Endler & Kocovski, 2001; Spielberger, 2010). From a phenomenological standpoint, anxiety involve conscious distress in response to an immediate or future threat that may be specific or vague (Neimeyer, 1994). In this paper, the author distinguishes anxiety, or distress involving a conscious trigger, from death anxiety, which is usually triggered unconsciously.

**Death anxiety.** While there is no agreed upon use of the term, researchers often use the term to refer to negative emotions and attitudes associated with the anticipation, and fear toward death (Lehto, & Stein, 2009; Neimeyer, Wittkowski, & Moser, 2004). The author’s definition is based on Lehto and Stein’s (2009) content analysis of researchers’ operationalization of the term in studies conducted between 1980 and 2007. Based on their findings, Lehto and Stein (2009) defined death anxiety as a “multidimensional construct related to fear of and anxiety related to the anticipation and awareness of the reality of dying and death…not necessarily consciously manifested”(p. 31-32). In addition, Lehto and Stein (2009) noted that death anxiety consist of “cognitive and motivational components that vary by developmental stage and sociocultural life” (p. 32). Finally, based on research it is assumed death anxiety may be triggered by explicit encounters with death, subtle exposure to death-related symbols and concepts, and exposure to non-death related losses (e.g. loss of work) and in the wake of major life events (Pyszczynski et al., 1999; Greenberg et al., 2003).
Evolutionary Perspective

Evolutionary theorists believe anxiety is the product of natural and sexual selection (Bracha, 2004; Laland & Brown, 2011; Marks & Nesse, 1994). Researchers in other disciplines have noted the functional advantages of anxiety in terms of promoting a vigilant response to immediate and future survival-based threats (Greenberg, Pyszczynski, & Solomon, 1986; Landau, Solomon, & Pyszczynski, 2007; Solomon, Greenberg, Pyszczynski, 1991). In terms promoting one’s genetic chances of survival, anxiety might have played a role in facilitating sexual behavior, increasing their chances of producing offspring (Marks & Nesse, 1994). This assumption is based on research suggesting mild to moderate levels of anxiety precede sexual arousal, the effect of sexual behavior on reducing anxiety (Beck, 1995; Bracha, 2004; Palace & Gorzalka, 1990). Further, people who engage in compulsive sexual behavior frequently report symptoms of anxiety disorders (Raymond, Coleman, & Miner, 2003). This is congruent with Terror Management theorists assumption that death anxiety stems from humans’ inherent motivation for biological self-preservation.

Shift in conscious experience. Death likely played a larger role in the conscious experience of our ancestors than it does for most humans today. For example, when planning for the next meal, early humans needed to consider ways to avoid being killed by an animal or another hunter; a drink of water meant one faced higher risk of death by drowning or parasite. By contrast, humans have a less dangerous conscious subjective life. For example, public speaking is one of the most commonly feared situations reported today, with several studies even suggesting people fear humiliation more than death (Edwards, Martin, & Dozois, 2010; Dwyer & Davidson 2012; Wittchen, Stein, &
Kessler, 1999). While people today still have close encounters with death, sources of stress for our ancestors were almost always matters of life or death.

As societies advanced, humans became less vulnerable to the threat of death from natural elements. Some scholars argue the function of anxiety shifted from promoting individual survival to promoting one’s ability to survive in a cultural society (Baumeister & Tice, 1990; Bus, 1990; Kurzban & Leary, 2001). Baumeister and Leary (1995) posit humans are social animals with a fundamental need to belong and subjective anxiety is primarily based in fear of social alienation and stigmatization. Social psychologists define stigma as an “attribute or characteristic that conveys a social identity that is devalued in a particular social context” (Crocker, Major, & Steele, 1998; p. 505). Stigma has also been described as a cultural construction that “exist[s] primarily in the minds of stigmatizers and stigmatized individuals as cultural social constructions, rather than as universally stigmatized features” (Stangor & Crandall, 2000, p.63). Nevertheless, a wide variety of cultures have been shown to stigmatize individuals who exhibit qualities that connote disease, homosexuality, incest, and murder (Mihalik, 1991; Oaten, Stevenson, & Case, 2009).

Anxiety-related to stigmatization and alienation promotes the avoidance of acts that threaten society as a whole. For example, it benefits a society when acts of murder are stigmatized and when people who murder are cut-off from society. Social exclusion of a person with apparent symptoms of a highly contagious infection lessens the likelihood of an epidemic that might lead to the death of many people. Fear of alienation and stigmatization also motivates people to act in a ways that jeopardize their access to a society’s protection and resources. Indeed, stigmatized individuals often have difficulties
in terms of ensuring their basic needs are fulfilled (Maslow, 1968; Kurzban & Leary, 2001). People who are perceived as members of stigmatized groups are less likely to be hired or earn enough income to pay for food and housing (Hebl, & Kleck, 2002; Tschopp, Perkins, Hart-Katuin, Born, & Holt, 2007; Waldo, 1999).

Social stigma and exclusion also increases one’s vulnerability to death. American society has a history of culturally-sanctioned exclusion of African Americans, from their past enslavement and restriction on voting rights to disproportional rates of incarceration (Haris, 1999). At present, Black men and women in the U.S. continue to have significantly shorter life expectancies than their White counterparts, a disparity often attributed to sociological factors (i.e. racial inequality; Meara, Richards, & Cutler, 2008; Kurzban & Leary 2001). Other disparities in life expectancies have been observed in other stigmatized groups, including persons with developmental disabilities (HaCercamp, Scandlin, & Roth, 2004), people of low social class (Wilkinson & Pickett, 2006), and lesbian, gay, bisexual, and transgender people (Conron, Mimiaga, & Landers, 2010).

In the following section, the author moves beyond describing how non-death situations are capable of eliciting existential stress to understanding the role of higher-order cognitive processes in the development of mortality awareness and the implications of self-esteem for coping with death anxiety.

**Development of Mortality Awareness and Self-Esteem**

For centuries death has been the topic of creative and scholarly works by philosophers, theologians, and artists (Feifel, 1959; Grof, 2010; Malpas & Solomon, 2002; Vermeule, 1979). Myths of death and rebirth were the basis for ancient religious and spiritual practices (Grof, 2010). The role of death in ancient societies is reflected in
the construction of monuments that prevail today, such as the Mayan Temples, the Egyptian pyramids, and the Parthenon. These monuments are examples of the human capacity for abstract thinking and learning related to the concept of death, and perhaps the extreme measures people (or those in power) take to avoid it. In this section the author reviews literature on the cognitive-developmental basis for death conceptualization as a background for understanding the effect of mortality awareness on human consciousness, and the pivotal role of self-esteem for coping with death anxiety.

**Early Socialization to Death**

The concept of death is a social construction. In Western societies, death is often construed as the opposite of life, irreversible, and limited by biology. Death studies researcher, Stanislav Grof (2010) writes, “Much of [Westerners’] encounter with death comes in a sanitized form, where a team of professionals mitigates its immediate impact” (p.26). Like other socially constructed concepts, customs, and ideologies, children may acquire the concept of death through socialization (Slaughter & Griffiths, 2007). Socialization refers to the process in which learners internalize implicit and explicit cultural mores through interactions with their environment and their developmental capacity (Berns 2012; Ochs & Schieffelin, 2011). Researchers suggest children have the cognitive ability to comprehend death as permanent and irreversible between the ages of 5 and 7 (Barrett & Behne, 2005; Hunter, & Smith; 2008; Schonfeld, 1993). However, some theorists suggest children already have an implicit preverbal understanding of death as anxiety provoking. Eminent scholar on existential psychotherapy, Irvin Yalom (1980) writes:

[An adult] may consider death dispassionately and intellectually. Yet this adult
perception is by no means the same as the dread of death that resides in the unconscious, a dread that is formed early in life at a time prior to the development of precise conceptual formulation…a dread that exists outside of language and image (p. 189).

Psychologists who study the development of death comprehension in children often assume Bronfenbrenner’s (1979, 1986) theory of human ecological systems (Hunter & Smith, 2008). Ecological systems theory posits learning is influenced by one’s interactions with individuals or groups in their immediate environment, and is affected by the exchange of information between distal and proximal environmental systems of impact (Bronfenbrenner 1986 as cited by Hunter & Smith, 2008). Using ecological systems theory, researchers speculate children’s understanding of death is most affected by their interactions with people or groups in their immediate environment, usually their parents (Hunter & Smith, 2008). Therefore, it is assumed parents’ direct and indirect attitudes and communication about death play a substantial role in how children learn to fear death.

Parents in Western cultures often report anxiety around discussing death with their children (Corr, 2010; Grollman, 1991; Skeen & Webster, 2004). Many parents avoid discussing the topic, some of whom report a motivation to protect their child from feelings of distress (Jerman & Constantine, 2010). Numerous studies suggest a parent’s motivation to protect their child from experiencing distress may have the opposite effect. Indeed, overprotective parent behaviors have been identified as central to the formation and course of anxiety disorders in children (Clarke, Cooper, & Creswell, 2013; McLeod et al., 2007; Wood, McLeod, Sigman, & Hwang, 2003). Examples of overprotective
parent behaviors include excessive physical or social contact with the child and excessive concern for the child’s well-being, taking into account the child’s stage of development (Holmbeck et al., 2002; McLeod et al., 2007). According to researchers, overprotective parents convey to the child the world is inherently dangerous, which reinforces the child’s avoidance of new situations, and limits their opportunities to develop new skills, and gain confidence in coping with challenges (Clarke, Cooper, & Cresswell, 2013).

While some anxiety related to discussing death with children is common among parents in Western cultures, and not necessarily harmful, parents’ way of bringing up the concept of death may play a role in the concept’s negative emotional valence in adults. Earl A. Grollman (2011), a death educator and pioneer author of books aimed at helping parents teach children about death, notes:

The question is not whether children should receive death education, but whether the education they are receiving is helpful and reliable. Understanding is a life-long process that continues from childhood through old age. Death education begins when life begins (p. 3).

**Death-related learning and cognition.** Death concept acquisition and its role on future learning has been studied from the perspective of cognitive learning theories. This perspective is congruent with research on common childhood fears that suggest death comprehension is a function of cognitive development (Florian & Mikulincer, 1998). For example, the most common fear during the time when children begin to understand the irreversibility of death is fear of separation from parents (5 to 7 years; Goldsmith & Lemery, 2000; Vasey & Dadds, 2001). Prior to these ages, children appear to lack cognitive ability to fully comprehend the irreversibility of death. Prior to ages 5 and 7,
children may understand death that can be avoided if one is clever enough (Mikulincer, Florian, & Hirschberger, 2002).

The following cognitive theory-based assumptions are important for understanding death concept acquisition in children and the role of prior learning-related to death in adult cognitive strategies for coping with threatening situations:

1. The brain is a web of semantically related knowledge structures, or schemas.

2. Learning is the process by which an external source of information activates relevant previously acquired knowledge in the learner, heightening the related schema’s availability in working memory and enhancing processing of new information (Greenberg, Koole, & Pyszczynski, 2013).


There is evidence suggesting children acquire the concept of life prior to comprehending the irreversibility of death (Slaughter, Jaakkola, & Carey, 1999; Slaughter & Lyons, 2003). For example, Slaughter, Jaakola, and Carey (1999) found Australian children between the ages of 4 and 6 often spontaneously refer to “life” as the purpose of the human body. Children who attributed “life” as the function of bodily functions were more likely to comprehend death as universal, irreversible, and as cessation of bodily functioning. Slaughter, Jaakola, and Carey’s (1999) findings replicate a study of Japanese children who acquired the concept of “ki” or life prior to comprehending the concept of death and other biological phenomena such as growth and
illness (Inagaki & Hatano, 1993). Similar findings were observed in a sample of American children (Opfer & Gelman, 2001).

Researchers also speculate when children first comprehend death, they relate it to their attachment figures, which are central to the child’s concept of life. From birth, children instinctually rely on adult attachment figures for survival and emotional security (Bowlby, 2005). Infants associate the caregiver’s presence with feelings of comfort and the caregiver’s absence with feelings of distress. Numerous studies on attachment processes in adolescence and adults have demonstrated that people seek the proximity, support, and affection of attachment figures in response to threats-related to death, illness, and failure (Cassidy & Shaver, 1999; Mikulincer, Florian, Birnbaum, & Malishkevich, 2002; Florian, Mikulincer, & Hirschberger 2002). Children learn ways of coping with a caregiver’s absence through crying, their ability to form bonds with their caregivers, and pleasing the parent (Hart, Shaver, & Goldenberg, 2005). In the next section, the author reviews literature on the development of self-esteem which suggests children develop self-esteem as a measure of their parents’ approval, and as a means to feel secure in their parents’ absence.

**Parallel Development of Self-Esteem**

Self-esteem has long been implicated as important for coping with stress. Self-esteem is a widely studied construct often defined as one’s global appraisal of their success in living up to internalized cultural standards of value (Crocker, Luhtanen, Cooper, & Bouvrette, 2003; Pyszczynski et al. 2004). Researchers also distinguish trait self-esteem, or one’s global self-worth over time, and state self-esteem, or “how good one
feels about oneself at a particular moment in time based on temporarily meeting external, evaluative standards or conditions of worth” (Bernard, 2013, p.15; Deci & Ryan, 2010).

In children, self-esteem has been described as the child’s gauge for how “good” they are in the eyes of their parents (Cheng & Furnham, 2004). For example, children may learn to associate “good” behavior with external praise from parents and internal feelings of security. As children develop autonomy from their parents they learn to derive a sense of security through their sense of being a “good” citizen, student, or a “good” member when lives up to the standards or a norms of a cultural group (e.g. feeling like a “good” Catholic when one abstains from eating meat during Lent; Greenberg et al., 2000).

Conventional wisdom and some research suggests high self-esteem is associated with greater happiness, and low self-esteem is a feature of many psychological disorders (Baumeister, Campbell, Krueger, and Vohs, 2003; Trzesniewski et al., 2006). However, research also suggests there are negative aspects of self-esteem, which many in the general public fail to acknowledge. For example, there is an abundance of social programs targeting an alleged self-esteem deficit in American society, despite evidence of the contrary (Baumeister et al., 2003). Baumesiter and his colleagues (2003) note:

The fact that most [Americans] score toward the high end of self-esteem measures casts serious doubt on the notion that American society is suffering from widespread low self-esteem. If anything, self-esteem in America is high. The average person regards himself or herself as above average (p.4).

High self-esteem has been shown to be associated with several negative qualities, including narcissism, defensiveness, academic misconduct and even bullying
Baumeister and colleagues’ (2003) description of self-esteem further challenges common misperceptions about the desirability of self-esteem: “Self-esteem is literally defined by how much value people place on themselves...[it] does not carry any definitional requirement of accuracy whatsoever” (p.2). Psychologist Albert Ellis also notes, “Self-esteem is the greatest sickness known to man or woman because it’s conditional” (cited in Baumester et al., 2003, p. 3). Ellis’ remedy for low self-esteem involved cultivating unconditional self-acceptance, a related concept that will be discussed in a later section.

**Death Avoidance and Daily Living**

Terror Management Theory (TMT) is a social psychological theory of human motivation and behavior based on the writings of cultural anthropologist Ernest Becker and psychoanalytic theory. Becker (1973) argued culture functions as a way for people to cope with the awareness they will die through its rules and standards for living, as well as explanations for an afterlife. According to Becker (1973), one achieves a sense of meaning and significance when they live up to their cultural values (Becker, 1973). TMT theorists also incorporate psychoanalytic notions that people are irrationally motivated to avoid threats to self-preservation (Goldenberg, Pyszczynski, Greenberg, & Solomon, 2000). In psychoanalytic theory, conscious motives are shaped by dynamic unconscious processes in order to compromise between one’s animal drives (e.g. to procreate/ avoid death) and the restraints placed on the ego by culture and its agents (e.g. parents; Freud, 1961/1930; Goldenberg, Pyszczynski, Greenberg, & Solomon, 2000).
TMT posits that people are driven to manage thoughts of death in response to explicit and subliminal reminders of their mortality on a daily basis. *Mortality salience* (MS) refers to the state of awareness of one’s eventual death, which research suggests is a state of increased death thought accessibility (Hayes, Schimel, Arndt, & Faucher, 2010). Examples of potential sources of MS include images of violence in the media, news of the death of an acquaintance, and driving past the remains of an animal. Studies also suggest people cope with MS through a cognitive-behavioral coping process that serves to remove thoughts of death from focal attention (Greenberg, Arndt, Simon, Pyszczynski, & Solomon, 2000; Goldenberg & Arndt, 2008).

This coping process involves conscious meaning making intended to reduce death anxiety associated with the MS eliciting source, resulting in a change in attitudes and behaviors relevant to the source (Bargh, 1996; Goldenberg & Arndt, 2008). According to the research, however, a deeper level of cognitive activation is required to suppress thoughts of death over time (Goldenberg & Arndt, 2008; Wegner & Smart, 1997). Research suggests that this level of processing occurs nonconsciously and involves the activation of abstract meaning frameworks unrelated to the problem of death in the domains of one’s self-esteem, cultural worldview, and intimate relationships (Goldenberg & Arndt, 2008).

Researchers consistently find that when people are explicitly asked to think about their deaths, they respond with increased worldview defense and self-esteem striving after a delay, and immediately following a subliminal source of MS (McGregor et al., 1998; Pyszczynski, Greenberg, Solomon, Arndt, & Schimel, 2004; Schimel, Hayes, Williams, & Jahrig, 2007). Researchers also observe individuals made aware of their
death report more desire for emotionally intimate relationships (Florian, Mikulincer, & Hirschberger, 2002; Mikulincer, Florian, & Hirschberger, 2003). Figure 1 consists of visual summary of terror management cognitive processes.

**Figure 1: Activation of the Terror Management Cognitive Structures**

![Diagram of terror management cognitive processes](image)

Effect size of mortality salience. A meta-analysis of over 164 published studies on TMT found priming participants to think about their death in one sitting has a mean effect size of $r = .35$ on dependent measures of self-esteem and worldview defense (Burke, Martens, & Faucher, 2010). While this is generally considered a moderate effect size, it is comparable to the mean effect size of antidepressants in the treatment of anxiety and depression ($r = .31$), as reported in a meta-analysis of published and unpublished clinical trials of various U.S. Food and Drug Administration approved antidepressant

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4 Effect size ($r$) in Burke, Martens, & Faucher, 2010’s review was defined as the magnitude of the correlation between the independent variable (mortality salience) and the dependent variable (e.g. scores on self-report measures of self-esteem and worldview defense).
medications between 1987 and 2004 (Turner, Matthews, Linardatos, Tell, & Rosentahl, 2008). From another perspective, the median effect size reported for 18 randomized controlled trials of cognitive and behavioral psychotherapies for the treatment of anxiety and depression was $r = .75$ (Lipsey & Wilson, 1993).

**Terror management theory and psychopathology.** While TMT is derived from clinical theory, there is limited research relating the theory to psychopathology. Only recently have researchers speculated its potential utility for conceptualizing and treating psychopathology (Lewis, 2014; Maxfield, John, Pyszczynski, 2014). Specifically, Maxfield, John, and Pyszczynski (2014) suggest psychopathology stem from one or a combination of the following: a) difficulties maintaining meaning, self-esteem, and interpersonal connections; b) a sudden disruption of the capacity of the terror management cognitive architecture brought on by trauma or severe stress; c) or gradual loss of meaning, self-esteem, relatedness due to disconfirmations of the sources of meaning and value. Lewis (2014) suggested eliciting MS in session as exposure therapy for death anxiety, and as an aid for assessing deficits in terror management domains.

**Terror management in late life.** Most of what is known about TMT is derived from research on college student or young adult samples. The question of how older adults respond to mortality salience has only recently been empirically addressed (Maxfield et al., 2007). Maxfield and colleagues (2007) noted that older adults are especially vulnerable to reminders of mortality because they are in closer proximity to death, experience more health problems, and are more likely than younger adults to experience the death of friends and family. The researchers also noted that older adults may have more difficulty than younger adults in maintaining self-esteem and faith in
worldviews (Maxfield et al., 2007). For example, many Americans rely on their work identities as a source of self-esteem, which older adults in retirement may lose (Maxfield et al., 2007). Further, the worldviews of older adults may seem increasingly at odds with prevailing cultural attitudes and norms, challenging many older adults’ faith in what they may internalize as an outdated worldview (Maxfield et al., 2007). Nevertheless, Maxfield and colleagues’ (2007) found older adults did not respond to morality salience with significantly higher worldview defensiveness (e.g. endorsing more punishments for moral transgressions) as is consistently found with younger adults. These findings suggest a more life-expansive shift in existential coping, possibly related to the increased salience of death in later life.

Researchers who have studied self-reported death anxiety across the lifespan found that older adults report significantly less death anxiety than younger adults (Thorson & Powell, 1992). Nevertheless, women across age groups reported more death anxiety than men (Thorson & Powell, 1992). Researchers studying the effects of age, gender, and living circumstances on older adults in India found that both older Indian women and men and women of all ages who lived with family, reported significantly higher death anxiety than younger persons and persons living alone (Madnawat & Kachhawa, 2007). Russac and colleagues (2007) found that death anxiety peaked for both American men and women during their 20s and significantly declined afterward. However, women, but not men, reported a significant spike in death anxiety in their 50s (Russac et al., 2007).
Death Confrontation and Positive Growth

Up until this point, the role of death is portrayed as having a negative effect on human existence. However, more recently the positive implications of death from a TMT framework were explored, with a focus on the prosocial, creative, health, and personal growth facilitating ways people respond to MS (Vail et al., 2012). Additionally, Yalom (1980; 2009) writes extensively on the potential benefits of thinking about one’s death for living fully. Others have characterized near-death experiences (NDEs) in terms of rebirth and greater appreciation for one’s life (Noyes, 1983; Noyes, Fenwick, & Holden, 2009; Noyes 2012).

Positive terror management. Vail and colleagues (2012) found preliminary evidence on the benefits of MS in reducing intergroup bias typically observed in the TMT research. Researchers found MS was associated with increased positive attitudes toward Blacks, in non-Blacks, when participants were primed of the benefits of egalitarianism before the manipulation (Gailliot, Sillman, Schmeichel, Maner, & Plant, 2008, as cited by Vail et al., [2012]). Similar results were observed in a study on attitudes of non-Muslims toward Muslims (Vail, Rampy, Arndt, Pope, & Pinel 2011, as cited by Vail et al., [2012]). Further, motivations to health screenings were increased after explicit MS for individuals who exhibited high levels of health optimism, adaptive coping, and response efficacy (Arndt, Routledge, & Goldenberg, 2006, as cited by Vail et al. [2012]). The results from positive terror management research suggest MS might be beneficial provided people are reminded of their values prior to the exposure.
Near death experiences. A near death experience (NDE) refers to one’s subjective response to life-threatening danger (Grof, 2010; Noyes, 2012). Although no two NDEs are identical, several common themes were identified, including detachment and heightened arousal, out-of-body experiences, depersonalization, life review, and death acceptance (Greyson, 2000; Grof, 2010; Noyes, 2012). For example, Noyes (1972, 2012) interviewed and administered surveys to 205 people who had survived life-threatening danger through falls, drowning, motor vehicle accidents, and serious illnesses. Through factor analysis of participants’ responses to survey items, Noyes (2012) identified the following dimensions of NDEs: heightened arousal, depersonalization, and a mystical/spiritual dimension (Noyes, 2012). Noyes (2012) noted that NDEs appear to involve a temporal progression through the following phases: resistance, review, and transcendence.

NDEs have been reported to the same degree of frequency among people across ages, genders, socioeconomic groups, spiritual beliefs, and religious affiliations (Fenwick & Fenwick, 1997; Grof, 2010; Holden, Greyson, & James, 2009). Most people describe their NDE as extremely positive; their accounts include visions of nature, gardens, bright lights, and the sound of birds and music (Grof 2010). The following is one woman’s account of an NDE:

I experienced a brush with death about twenty-five years ago. I was riding in the back seat of an automobile at night on a mountain road in Colorado. Suddenly, I saw our car bearing down on a truck directly ahead of us. Our driver had fallen asleep, and we were practically on top of the truck when I screamed. The driver’s braking caused the car to spin on the narrow road over an abyss. I don’t know
how we failed to go over the cliff, but during those few brief moments, I recall becoming very calm and alert, I said to myself, ‘This is the end. This is it. This is what it is like to die. Goodbye, sweet world!’ (Noyes, 2012, p. 22).

Following a NDE, many people report loss of the fear of death, increased zest for life, less time ruminating, and living more fully in the present (Grof, 2010; Sutherland, 1992). However, not all accounts are positive with some individuals reporting post-traumatic stress symptoms such as flashbacks, nightmares, numbing and social withdrawal (Noyes, 2012).

**Hallucinogen-Induced Confrontations with Death**

Researchers identified similarities of NDEs with the subjective effects of hallucinogenic substances, particularly psilocybin, mescaline, N-dimethyltryptamine (DMT) and lysergic acid diethylamide (LSD; Grof, 2010; Morse, Venecia, & Milstein, 189; Noyes, 1972; Saavedra-Aguilar & Gomez-Jeria, 1989). Historians have documented a wide range of indigenous cultural practices involving use of natural sources containing similar psychoactive agents to promote healing and spiritual growth (Grof, 2010). Western cultural use of hallucinogenic substances for research and recreational purposes is recent. Following chemist Albert Hoffman’s synthesis and accidental discovery of the psychological effects of LSD in 1943, Sandoz Laboratories distributed the drug to psychiatric researchers in 1960s and early 1970s. A number of studies suggested potential benefits of therapeutic use of LSD as an adjunct to psychotherapy in the treatment of anxiety and alcohol use disorders (Pahnke, Kurland, Unger, Savage, & Grof, 1970; McGlothlin, & Arnold, 1971).
More recently, research on the hallucinogenic-aided psychotherapies has resumed, particularly for treating anxiety-related to terminal illness (Gasser et al., 2014; National Institute of Health, 2013). Gasser and colleagues (2014) examined the effects of LSD or a placebo administered in two out of eight psychotherapy sessions on dependent measures of state and trait anxiety. Participants who received LSD reported significant reductions in state anxiety compared to the placebo group, with an effect size of 1.1. Their findings were consistent with previous research (Pahnke, Kurland, Unger, Savage, & Grof., 1970). Another study, published in *Archives of General Psychiatry*, reported preliminary evidence for the use of psilocybin for treating anxiety in patients diagnosed with advanced-stage cancer (Grob et al., 2011).

Grof (1980) speculated that the primary mechanism of change for LSD-assisted psychotherapy was not pharmacological5, but rather, “a profound transformation of [the patient’s] concept of death and attitude toward the situation they were facing” (p. 292, Grof [2010]). The aim of LSD-assisted psychotherapy was to promote a dynamic shift in what Grof (1980) referred to as condensed experiences (COEX), or “psychological structures that influence how [individuals] perceive [themselves], other people, and the word” (p. 129). Grof’s description of COEX is conceptually similar to the terror management cognitive framework (self-esteem, close relationships, and cultural worldview). Indeed, Grof noted that COEX consists of “all major memories that have damaged the patient’s self-image and self-esteem” (p. 129). Thus, it is believed that non-pharmacological techniques described by Grof are relevant to this study, as they pertain to optimizing strategies for managing existential anxiety.

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5 According to Grof (1980), “the therapeutic outcome of [LSD-assisted therapy] depends critically on factors of a non-pharmacological nature (p. 28).
Grof and other researchers developed and tested nonpharmacological strategies, such as use of breath work and music, for eliciting existential exposures (Holmes, Morris, Clance, & Putney, 1996). Researchers developed an “existential” intervention incorporating Grof’s breath work, found it was associated with significant reductions in death anxiety and increases self-esteem for individuals with anxiety symptoms (Holmes, Morris, Clance, & Putney, 1996). Nevertheless, Grof’s techniques were described as not indicated for persons with hypertension, stroke, and heart problems (Kasprow & Scotton, 1999).

There is preliminary evidence suggesting a regular meditation practice may be a protective factor for death anxiety. In his dissertation research, Garfield (1974) examined differences in fear of death (as measured by Templer’s [1970] Death Anxiety Scale) among 150 graduate students in psychology and religion, psychedelic drug users, Zen meditators, and Tibetan Buddhists. He found that psychedelic drug users, Zen meditators, and Tibetan Buddhists reported significantly lower levels of death anxiety compared to psychology and religion graduate students. Garfield (1974) theorized that one’s experience of “ego death,” achieved through long-periods of meditation and/or during a drug-induced state of consciousness, may be an important factor accounting for reductions in death anxiety.

Indeed, recent and more rigorous research found evidence of meditation having profound effects on the brain in ways comparable to medications. For example, Goyal et al (2014)’s meta-analysis of 47 randomized controlled studies of mindfulness meditation for anxiety and depression found eight weeks of regular mindfulness practice was
associated with effect size reductions in anxiety comparable to SSRIs, benzodiazepines, cognitive-behavioral therapy, and exercise.

**Psychotherapy for Death Anxiety**

Existential psychotherapy is one of the few therapy approaches concerned with the effects of mortality awareness on non-bereaving clients. Yalom (1980) was among the first psychotherapists to elaborate on the potential role of death anxiety in a variety of client presenting concerns:

All individuals are confronted with death anxiety; most develop adaptive coping modes…that consist of denial-based strategies such as belief in personal omnipotence, acceptance of socially sanctioned religious beliefs that ‘detoxify’ death, or personal efforts to overcome death through a wide variety of strategies that aim at achieving symbolic immortality (p. 111).

According to Yalom (1980), insufficient strategies for coping with fear of death play a fundamental role in the development of psychopathology:

Either because of extraordinary stress or because of inadequacy of available defensive strategies, [the therapy client] has found insufficient universal modes of dealing with fear of death and has been driven to extreme modes of defense. These defensive maneuvers, often clumsy modes of dealing with terror, constitute the presenting clinical picture (p. 111).

Nevertheless, Yalom (1980) was reluctant to propose specific therapeutic techniques for directly targeting death anxiety due to his belief that such a technique might be “demeaning because it juxtaposes the deepest human concerns with mechanistic techniques” (Yalom, 1980, p. 211). However, Yalom (1980) also stated:
It seems that, with repeated contact, one can get used to anything – even dying. The therapist may help the patient deal with death terror in ways similar to the techniques he uses to conquer any other form of dread. He exposes the patient over and over to the fear in attenuated doses...[which] helps the patient handle the dreaded object (p.211).

**Contemporary existential-humanistic therapies.** In the past, EH therapy has been based on a diverse set of theories, often lacking coherence and/or accessible only to more experienced clinicians. Addressing the need for a coherent theoretical framework, Norcross (1987) performed a content analysis of over 80 publications on existential therapy, in addition to surveying the practices existential therapists. He found that eight themes emerged consistently in the existential literature: ontology, intentionality, freedom, choice/responsibility, phenomenology, individuality, authenticity, and potentiality (Norcross, 1987). Norcross (1987) also found that existential therapists’ reported in-session behaviors were congruent with these themes, and were significantly different from those endorsed by behavioral and psychodynamic therapists.

Schneider’s (2008) theory of existential-integrative (EI) therapy is based on Western philosophy notions of freedom and limitation. It was also inspired by Maslow’s (1971) assertion that humans fear their potential for greatness as much as they fear their smallness. According to Schneider (2008), *Constriction* refers to the act of restricting, isolating, retreating, or reducing one’s mind-body capacities; *expansion* refers to one’s act of advancing, ascending, enlarging, or increasing one’s mind-body capacities. One of the aims of Schneider’s (2008) approach to EI therapy is to facilitate client centering, or the capacity to be aware of and direct one’s constrictive or expansive capacities. At the
extremes of human experience is greatness/chaos (expansion) and insignificance/death (constriction; Schneider, 2008). It is theorized these extremes are inherently anxiety provoking, and individuals counter react to them through expansive or constrictive behavior.

According to Schneider (2008), dysfunction occurs when one tends to hyper expand or hyper constrict in response to their fear of greatness or insignificance. For example, a person whose dread is greatness (ultimate expansion) might dysfunctionally engage in hyperconstrictive coping strategies such as withdrawal, feelings of guilt, and rigidity (Schneider, 2008). By contrast, a person whose dread is of death or insignificance (ultimate constriction) might hyperexpand by having a grandiose view of self, impulsive behaviors, and interpersonal dependency (Schneider, 2008). These concepts compliment TMT, as they provide a clinical framework for understanding dysfunctional terror management strategies. Table 1 summarizes Schneider’s existential-integrative understanding of psychopathology.

**Brief existential therapy.** James Mann’s concept of time-limited psychodynamic psychotherapy is most congruent with existential therapy assumptions of humans’ inherent tendency to avoid existential fears (Mann 1973; Winston & Winston 2002). Ingram (1979) stated the following in an article entitled “Time and Timekeeping in Psychoanalysis and Psychotherapy”:

Time limits are fearful, because they show up the idealized image for what it is – pure imagination. This may not only produce a taboo against any future aspirations, but it may lead to a wish to avoid awareness of all time limitations
Winston & Winston (2002) summarize concepts underlying Mann’s (1973) theory of short-term therapy:

1. Time is intimately connected to mortality. The individual’s earliest sense of time is connected to the idea that the child is omnipotent and fused with his or her mother with a sense of timelessness and immortality, or *child time*.

2. The developmental task of the individual is to recognize and come to accept that time is finite and that reality and death must be accepted. Mann called the recognition and acceptance of reality and death *adult time* (p.6).

In brief therapy the work of the therapist and client is largely shaped by their mutual awareness of time limits (Budman & Guman, 2002). For many clients, the awareness of the ending of therapy can trigger feelings of anxiety and abandonment, especially if therapists do not acknowledge their own anxiety pertaining to termination (Boyer & Hoffman, 1993). Feelings of loss have also been observed in clients terminating therapy (Baum 2005; Quintana, 1993). In this sense, the effects of awareness of the inevitable termination, on both therapist and client, is congruent with TMT assumptions about the effects of mortality awareness. Similar to the thought of death, the thought of termination may elicit anxiety, but it can also be transformative. Psychologists recommended therapist also consider termination as an opportunity for growth and transformation as opposed to exclusively focusing on its potential to harm (Quintana, 1993; Vasquez, Rosie, & Barnett, 2008).
<table>
<thead>
<tr>
<th>Disorder</th>
<th>Dread of Ultimate Expansion (Greatness, Chaos)</th>
<th>Symptom manifestation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>Fear of assertion, stimulation, ambition, standing out, possibility</td>
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<tr>
<td>Dependent personality traits</td>
<td>Fear of autonomy, independence, unmanageable responsibility</td>
<td></td>
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<tr>
<td>Agoraphobia</td>
<td>Fear of open places, conflict, confusion</td>
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<tr>
<td>Obsessive-Compulsive Disorder</td>
<td>Fear of spontaneity, surprise, confusion, ambiguity, recklessness</td>
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<tr>
<td>Paranoid personality traits</td>
<td>Fear of trusting, reaching out, ambiguity in relationships</td>
<td></td>
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<tr>
<td>Substance Use Disorder (depressants)</td>
<td>Fear of assertion, standing out, ambiguity in relationships, unmanageable responsibility</td>
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<td>Disorder (stimulants)</td>
<td>Combined Dread of Expansion and Constriction</td>
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<tr>
<td>Bipolar Disorder</td>
<td>Fear of confinement, limitation, delay combined with fear of assertion, stimulation, and ambition</td>
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<tr>
<td>Borderline Personality Disorder</td>
<td>Fear of belittlement, fear of insignificance combined with fear of own rage</td>
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</tr>
<tr>
<td>Schizophrenia</td>
<td>Combined extreme fears of obliteration and chaos</td>
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van Deurzen and Adams (2011) summarize how a brief therapy model is congruent with the existential therapy, in terms of its implications for fostering freedom in client’s lives:

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Brief existential work reflects the human condition because awareness of death is present in therapy by the ending of the contract. The end is in sight as soon as we have started and this itself can be effective in helping people to wake up and take charge of their lives and on occasions it may be enough...[therapists] need to be mindful from the start of how we are going to end the relationships (p. 135).

**Self-Compassion and Self-Esteem Interventions**

The concept of self-compassion, or self-acceptance, is rooted in principles of Buddhism and existential-humanistic philosophy. While the notion of self is a distinctly Western construction, Westerns have applied the Buddhist concept of acceptance to the context of one’s self. In Buddhist philosophy, acceptance implies “purposeful nonjudgmental awareness of moment-to-moment experience and the ability to allow experiences and cravings to come and go without clinging and attachment or aversion and resistance” (David, Lynn, & Das, 2013; p.23) From a Western cultural perspective, self-acceptance has been described as the “capacity to hold with kindness painful or intense experiences that are arising within us” (p.24).

Although Carl Rogers discussed the importance of therapists unconditionally prizing their clients, behaviorist Albert Ellis (whose directive, confrontational, and sometimes abrasive therapy style starkly contrasted Rogers’) was the first to conceptualize unconditional self-acceptance in order to treat self-esteem (Ellis & Robb, 1994; Rogers, 1953). While Ellis’ Rational Emotive Therapy (RET) is not often regarded as an existential therapy, counseling theorists describe it as an amalgam learning theory and existential-humanistic philosophy (Neukrug, 2010). Ellis (1993) himself compared
his approach to fostering unconditional self-acceptance to existential-humanistic approaches:

Unlike Carl Rogers and other existential therapists, who believe that unconditional positive regard can be given by the therapist’s modeling it and accepting clients unconditionally. RET practitioners try to give this kind of acceptance to all clients but also teach them how to give to themselves. In this way, RET is both humanistic-existential and didactic and active-directive (p. 200).

According to Ellis, *unconditional self-acceptance* (USA) refers to when “the individual fully and unconditionally accepts himself whether or not he behaves intelligently, correctly, or competently and whether or not other people approve, respect, or love him” (Ellis, 1977, p. 101, as cited by David et al., 2003). In cultivating USA, Ellis worked to foster acceptance of the self unconditionally as opposed to evaluating the self. He considered a global evaluation of the self as an irrational belief based on overgeneralization. Studies on the use of Ellis’ Rational Emotive Therapy to foster USA found it lead to a reduction in anxiety and narcissism after imaginary exposure to negative activating events (Chamberlain & Haaga, 2001a, 2001b).

Kristin Neff (2003) proposed the concept of self-compassion, which she argued is less individually focused than Ellis’ concept of USA, and actually more congruent with existential-humanistic psychology and Buddhist principles. “Self-compassion…fosters a sense of social connectedness, and should therefore encourage rather than undermine feelings of responsibility to others” (Neff, 2003, p. 91). Neff’s definition of self-compassion consists of the following components: a) self-kindness – extending kindness
and understanding to oneself rather than harsh judgment and self-criticism, b) common humanity – seeing one’s experiences as part of the larger human experience rather than seeing them as separating and isolating, and c) mindfulness – holding one’s painful thoughts and feelings in balanced awareness rather than over-identifying with them.

Both self-compassion and self-esteem have been shown to be moderately correlated although construct validity was established on the basis of narcissism (Neff, 2003a; Neff, 2005). Self-compassion has been shown to be more strongly negatively correlated than self-esteem on social comparison, anger, need for closure, public self-consciousness, self-rumination, and unstable self-worth (Neff, 2005). Researchers also found self-compassion was associated with more emotional stability than self-esteem when participants received unflattering feedback, or were asked to remember negative life events (Leary et al., 2006 as cited in Neff, 2005).

Due to the pervasiveness of the use of self-esteem measures in TMT, and the correlation of self-esteem with self-compassion, the author will include measures of both constructs. The author makes the distinction between self-esteem as a defense mechanism and self-compassion as a more healthy state of psychological being. It is assumed that self-compassion serves a similar death anxiety buffering function as self-esteem.

**The Current Study**

Among applied psychologists, randomized controlled trials (RCTs) are widely considered the gold standard method for assessing the validity of psychotherapies. Nevertheless, a number of researchers and clinicians have been critical of the external validity of RCTs for real-world clinical settings and work with diverse individuals (Kazdin, 2008; Morgan & Morgan 2009; Westen, Novotny, & Thompson-Brenner,
2004). In their well cited critique of the dominance of RCTs in psychotherapy research, Westen and colleagues (2004) wrote:

[Naturalistic studies] provide a window to phenomena not readily observed in the laboratory and can be particularly useful both for hypothesis generation and for providing a context within which to interpret data from RCTs, particularly data bearing on external validity (p. 647).

The American Psychological Association (APA) Presidential Task Force on EBPs also identified alternative viable methods for psychotherapy process and outcome research, including single-case methodologies, which they described as “particularly useful for establishing causal relationships in the context of an individual.” (APA, 2006). In an article in American Psychologist, Borckardt and colleagues (2008) wrote:

Though almost entirely neglected by contemporary investigators, single-subject research…has a luminous and storied lineage in experimental and clinical psychology. By harnessing time-series designs alongside group experimental methodologies, psychologists will accelerate the progress we are making in understanding the structure and mechanism of therapeutic change (p.92).

There seems to be renewed interest in the use of single-case research in applied psychology disciplines, as evident by recent studies published in Psychotherapy (Hendricks et al., 2013), Neuropsychology (Schaadt et al., 2013), Journal of Anxiety Disorders (Sukhodolsky et al., 2013), Applied Cognitive Psychology (Blackwell & Holmes, 2010), and Clinical Psychology & Psychotherapy (Broomfield et al., 2011).

Single-case research refers to a variety of experimental methods for determining whether a functional relationship exists between a manipulated independent variable and
changes in a dependent variable for a particular case (Kratochwill et al., 2010). Case refers to a single unit of analysis consisting of one or multiple participants, setting(s), or construct(s) of interest (Kratochwill et al., 2010; Morgan & Morgan, 2009). Single case designs often allow researchers to examine the effects of interventions on individuals over time that might be obscured when data are aggregated into group means (Horner et al., 2005). Research questions in single-case research are usually idiographic as opposed to nomothetic. For example, a single case researcher’s research question might be “Does the intervention produce or lead to change in this person or individuals?” (Kazdin, 2011; Kratochwill et al., 2010). Single-case designs usually consist of the following design elements: (a) repeated administration of multiple dependent measures over time and across different intervention phases or conditions (e.g. baseline, intervention); (b) the case serves as its own control for the purposes of comparison; and, (c) the researcher takes steps to rule out the possibility of rival or alternative explanations for changes in dependent variables not due to the intervention (Kazdin, 2011; Morgan & Morgan 2009).

**Multiple baseline designs.** Prior to developing Acceptance and Commitment Therapy (ACT), Steven Hayes was a proponent of the use of single case research by clinicians. In his practitioner-aimed paper reviewing several single-case methodologies, Hayes (1981) wrote: “the multiple baseline...is probably one of the clearest examples of natural design elements that arise in clinical practice...a multiple baseline across subjects...can provide evidence of the effectiveness of treatment” (p. 206-207). A multiple-baseline design is a type of single-case design in which the researcher demonstrates that baseline to intervention changes occurred across more than one participant, distinct behaviors, or settings (Morgan & Morgan, 2009). The length of
baseline phases is staggered for each case, which controls for fluctuations in behavior that might occur if the intervention had not been applied (Kazdin, 2011).

**Drawing valid inferences.** Similar to traditional group designs, single-case designs attempt to reduce or eliminate major threats to experimental validity (Kratochwill & Levin, 2010). Single-case researchers largely rely on replication, as opposed to randomization, for controlling for threats to internal validity (Kratochwill & Levin, 2010; Kazdin, 2011). According to criteria established by Horner and colleagues (2005), experimental control in single-case research is achieved when a study demonstrates experimental effects at three different points in time with a single participant (within-subject replication) or across different participants (inter-subject replication). Given the importance of replication for establishing experimental control in single-case research, the use of reliable and valid measures is one of the most important aspects, in addition to the researcher’s steps to control for other factors that might explain the results, such as the effects of maturation, repeated testing, and reversion of scores toward the mean (Kazdin, 2011; Kratochwill & Levin, 2010).

While single-case methodologies have advantages over large group designs because they rely on smaller samples and are more easily conducted in clinical and real-world settings, single-case researchers must also address threats to the external validity of findings. Threats to consider include whether results can be generalized across participants, measurements, settings, time, treatments, reactive assessment, and multiple treatment interference (Kazdin, 2011). Additionally, single-case researchers must consider threats to data-evaluation validity due to excessive variability in the data, unreliability of measures, and insufficient data. Finally, single-case researchers also
consider threats to construct validity or the basis for the causal relationship. Construct validity refers to what explains why the intervention worked and how it achieved its effects. Threats to construct validity include aspects associated with the delivery of the intervention (e.g. inherent to the setting or therapist) or personal contact with study staff or therapist that might be accounting for the results (Kazdin, 2011).

Use of self-report measures. Single-case methodologies were initially developed by early behavioral researchers and they continue to remain in widespread use in the field of applied behavioral analysis. Until recently, most of what had been published on single case methodologies almost exclusively pertained to the study of observable behavior. However, as the field of measurement advanced, the application of single-case research expanded to the study of private events. Alan Kazdin, an influential child psychologist and researcher who specializes on the use of single-case research methods writes, “In light of advances, self-report ought not to be ruled out…Real and perceived changes are relevant, and self-report that taps either one of these, especially when supplemented by other measures, can be valuable (Kazdin, 2011; p.87).” Kazdin (2011) suggests single-case researchers select measures based on the following criteria: (a) the measure can be administered consistently and repeatedly over time; (b) measures have the capacity to reflect change; (c) scales are dimensional as opposed to binary; (d) measure is relevant to the phenomena of interest; (e) measures are socially valid, or relevant to phenomena as they occur in clinical or naturalistic settings.

Use of randomization. In order to address concerns about the scientific credibility of single-case research, some researchers suggest incorporating randomization into single case research designs (Kratochwill & Levin, 2010). For multiple-baseline
designs, Kratochwill and Levin (2010) recommend randomly determining the order in which participants receive the intervention. This is in contrast to the traditional approach which involves monitoring baseline data and applying the intervention based on the order participants establish a stable baseline (Kazdin, 2011). Nevertheless, Kazdin (2011) notes that “in a multiple-baseline design, both the when and to whom…can also be randomly decided” (p.378). Kazdin (2011) also suggests that randomization strengthens a study’s conclusions, augments the credibility of single-case designs, and increases the range of statistical tests that can be implemented in single-case research.

**Visual analysis.** In single-case research the predominant method of data evaluation is qualitative visual analysis of graphed data (Kazdin, 2011). Visual analysis usually consists of examining the following aspects of the graphed data: (a) changes in means across phases; (b) changes in level – or the shift of performance from the end of one phase to the beginning of the next phase; (c) changes in trend or slope across phases; (d) latency of change – or the period between the onset of one condition and changes in performance; and (e) nonoverlapping data across phases (Kazdin, 2011; Morgan & Morgan, 2009). The advantage of visual analysis is that it helps researchers identify interventions that produce only the largest effects (Kazdin, 2011). Researchers assert that visual analysis is less sensitive to weak effects, and researchers are more likely to conclude that an intervention did not produce an effect when, in fact, it did, reducing the probability of Type I error (concluding that the intervention produced an effect when, in fact, the results are due to chance; Kazdin, 2011). However, others have argued to the opposite effect for continuous streams of data (Borkardt et al., 2008).
**Quantitative analysis.** Quantitative methods for analyzing single-case research data include the use of descriptive statistics, time-series analysis, nonparametric statistical tests (e.g. Mann Whitney U), and percentage of nonoverlapping data (PND) statistic (Kazdin, 2011; Todman & Dugard, 2001). Kazdin (2011) noted:

Two summary points ought to be emphasized in relation to the use of statistical tests. First, such tests represent an alternative to or a complementary method of evaluating the results of a single-case experiment. Second, statistical evaluation can permit accumulation of knowledge from many different investigations, even if they do not all use the same statistical tests (p. 407).

Since its inception, the PND is among the most commonly used statistical adjunct to visual analysis in single-case research (Scruggs and Casto, 1987). The PND is defined as the “percentage of Phase B data exceeding the single highest Phase A data point” (Parker, Vannest, & Davis, 2011, p. 310). In single-case research, the PND is used as an indicator of effect size, with the following ranges as interpretation guidelines: PND>70 effective, 50-70 questionable effectiveness, and <50 no observed effect (Scruggs & Casto, 1987; Parker & Vannest, 2008). While the PND may offer additional evidence supporting visual analysis, researchers have expressed concerns regarding its lack of a known underlying distribution, weak relationship with other established effect sizes (e.g. $R^2$, Cohen’s $d$), poor ability to discriminate among published studies, and low statistical power (Parker & Vannest, 2009). Addressing the limitations of the PND, Parker and Vannest (2009) suggested calculating nonoverlap of all pairs (NAP) or the percentage of all pairwise comparisons across Phases A and B that show improvement across phases.

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7 If the aim is to decrease scores, then this is the percent of intervention phase data points that are less than the lowest baseline data point (Scruggs & Casto, 1987).
Put simply, the NAP is the “percentage of data which improve across phases” (Parker, Vannest, & Davis, 2011).

Nonoverlap of all pairs (NAP). Researchers found NAP was superior to PND and several other indices of data overlap in precision of results, power efficiency (91-94% that of linear regression for ‘conforming data’), and correlation with $R^2$ (Spearman’s Rho value for NAP=.92 compared to PND= .86; Parker & Vannest, 2009). While hand-calculation of the NAP is more complicated than the PND, the NAP can derived from a Mann-Whitney U test using most statistical software or by using a free web based application available from singlecaseresearch.org (Vannest, Parker, & Gonen, 2011). Parker, Vannest, and Davis (2011) offer these instructions for calculating the NAP using statistical software: (1) Enter data from both phases and run Mann-Whitney U; (2) Examine the output of “U” values for each phase, or the number of times observations in one sample precede observations in the other sample in ranking”; (3) Identify the larger U value for phase B ($U_L$); (4) $\text{NAP} = \frac{U_L}{(N_A \times N_B)}$. The following are suggested effect size interpretations for NAP: $0-.65$ (weak effects); $.66-.92$ (medium effects); $.93-1.0$ (strong effects; Parker & Davis, 2009). Figure 3 on the next page illustrates how the PND and NAP are calculated.

**Autocorrelation.** Serial dependence of continuous time series data, or autocorrelation, precludes the conventional application of statistical techniques (Borckardt et al., 2008; Kazdin, 2011). Because both EMA and the use of statistical analysis in single case research is recent, there is no established convention for detecting autocorrelation as it might pertain to this study (Kazdin, 2011). Kazdin (2011) noted other disciplines (e.g. economics, environmental sciences) have more established methods for detecting autocorrelation due the typical nature of the phenomena they study. Indeed, this researcher’s review of academic articles on methods for detecting autocorrelation in time-series data yielded numerous research papers in the fields of geology and paleontology. Several studies reported using PAST software to generate Davis (1986)’s autocorrelation, which is a visual model in which: “lag times \( \tau \) up to \( n/2 \), where \( n \) is the number of values in the vector, are shown along the x axis (positive lag times only - the autocorrelation function is symmetrical around zero). A predominantly

**Ecological momentary assessment.** Ecological momentary assessment (EMA) refers to the repeated assessment of participants in real-time, in real-world settings, across time and settings (Shiffman, Stone, & Hufford, 2008). EMA is not confined to single-case research and encompasses a range of methods and methodologies (Shiffman et al., 2008). Nevertheless, EMA is very much congruent single-case researchers’ use of repeated measurement of clinically and socially relevant phenomena. EMA has been embraced by quantitative researchers in order to minimize recall bias associated with traditional self-report measures, increase the ecological validity of findings, and to investigate “microprocesses that influence behavior in real-world” settings (Shiffman et al., 2008, p. 4). There is some evidence suggesting that compared to recall measures, EMA “may capture the target constructs with less noise and greater sensitivity.” (Shiffman et al., 2008, p. 12). The timing and frequency of EMAs depends on the study aims and participant burden. One method that seemed to yield high compliance (89%) in a sample of college student marijuana users was a stratified random sampling approach via short message service (SMS) texting (Phillips et al., 2014). This involved sending a series of questions in the form of a text message three times daily, randomly within three time blocks (8:00 a.m. – 12:00 p.m., 12:30 p.m. – 4:30 p.m., and 5:00 p.m. – 10:00 p.m.).

**Research Questions**

This study of multiple-baseline across participants design serves as a preliminary investigation into the potential therapeutic processes of a novel terror management theory-based intervention (TIE) for anxiety in spouse caregivers of patients with cancer.
The following questions were explored: (1) Does TIE affect daily trends in anxiety and self-esteem states? (2) Are trends in daily state anxiety and self-esteem associated with between phase trends in self-compassion, death anxiety, meaning in life, and caregiver quality of life?
CHAPTER 3: METHODS

Participants and Recruitment

Women with spouses receiving treatment for cancer were recruited from Iowa City and surrounding communities. Rationale for sole inclusion of women was based on the study design (e.g. a homogeneous sample is optimal for making intragroup comparisons), and theoretical considerations (e.g. the increased number of women caregivers compared to men, higher rates of death anxiety observed in women). Recruitment methods included flyers posted at the Iowa City/Johnson County Senior Center and mass emails sent to University of Iowa students, staff, faculty, and alumni (See Appendix A for examples of recruitment materials used).

Inclusion criteria. Study eligibility criteria were as follows: (a) women between the ages of 18 and 75; (b) married and living with a spouse diagnosed with cancer in the past five years; (c) reports regular involvement in any of the following aspects of informal caregiving: medication or medical device management, medical appointments, meal preparation, managing the patient’s schedule for work or other life domains, health insurance and/or other financial matters, providing emotional and spiritual support; (d) clinically significant symptoms of anxiety as determined by a score of 8 or greater on the anxiety subscale of the Patient Health Questionnaire (PHQ); (e) must own and be able to use a cell phone with text messaging capabilities and understand that standard text messaging rates would apply if they did not have an unlimited texting plan; and (f) have regular access to the Internet.

Exclusion criteria. Study exclusion criteria included: (a) symptoms of cognitive impairment as determined by a score less than 27 on the Saint Louis University Mental
Status Exam (SLUMS); (b) impaired social support as determined by a score of less than 6 on the social interaction subscale of the Duke Social Support Index (DSI); (c) prominent extrinsic religious orientation as determined by a score less than 27 on the intrinsic subscale of the Religious Orientation Scale (RSO) and a score greater than 33 on the extrinsic subscale; (d) meets research criteria for a major depressive syndrome as determined by a score greater than 11 on the depression subscale of the PHQ; (e) high self-esteem as determined by a score greater than 4 on the Single-Item Self-Esteem Scale (SISES); (f) clinically significant symptoms of Post-Traumatic Stress Disorder (PTSD) as determined by a score greater than 2 on the Primary Care PTSD Screen (PC-PTSD); (g) history of receiving diagnosis of PTSD from a clinician; (h) currently receiving psychotherapy; (i) started or changed dosage of psychotropic medication within the past month; (j) history of suicide attempt in the past 10 years; (k) current suicidality as determined by a score of 1 or greater on the suicidality item (1i) on the PHQ; (l) significant discomfort with the topic of death as clinically determined by the participant’s response to the question, “How comfortable are you with discussing the topic of death and dying as it pertains to you, the people you care about, and suffering in the world?”; (m) regularly practices mindfulness-based meditation; (n) death of a close friend or family member in the past three months; (o) history of a near-death experience as indicated by a score of 7 or greater on a modified version of the Greyson NDE Scale (Greyson, 1983); (p) history of chronic hallucinogen use; and (q) any other clinically-relevant aspect of mental health for which psychotherapy may not be appropriate (e.g. psychosis, personality disorder).
Process of determining eligibility. Interested persons contacted the principle investigator (PI) by calling or emailing Google Voice and Gmail accounts created for the purposes of this study, as used in previous research (Gendron, Pelco, & Pryor, Barsness, & Seward, 2013; Huang et al., 2012). The PI provided interested persons a verbal description of the study and administered initial screening questions by phone (persons who emailed were asked call). Persons who screened eligible by phone were asked to complete a face-to-face interview and assessment for final eligibility determination; persons were informed of their eligibility status by end of this appointment. Final eligibility status was revealed after the PI verified each person had sufficient phone and/or technology using capabilities for completing EMAs. Ineligible persons were provided with a list of local and national mental health resources. Participants were considered study enrolled on the date they were informed of their eligibility status.

Procedure and Measures

This research study was reviewed and approved by the University of Iowa Institutional Review Board (IRB). A signed letter of permission was obtained from the Iowa City/Johnson County Senior Center for research recruitment and all face-to-face procedures. Verbal consent was obtained from persons prior to participation in the initial telephone screening; written informed consent to participate in the study was obtained from persons prior to the face-to-face eligibility screening appointment.

Risks and costs to participants. Participants were informed of the following potential risks associated with participation in the study: (a) Emotional discomfort with the topic of death; and (b) Privacy risks associated with the use of the Internet and cellphones to collect data. Participants were also informed of the following costs they
may incur as part of their participation in the study: (a) Travel to and from the Iowa City/Johnson County Senior Center; (b) Parking; and (c) Standard text messaging rates for a total of 588 sent and received text messages (or approximately 168 sent/received messages per month). Additionally, participants were informed that the intervention was new and it was not known if they would benefit from it.

The PI’s efforts to minimize risks included screening out persons who report strong discomfort with the topic of death, histories of severe trauma, suicide attempts or psychiatric hospitalization for suicidal ideations, and certain mental health diagnoses (e.g. Posttraumatic Stress Disorder, personality disorder, neurocognitive impairment). Suicide risk was and general wellness was monitored throughout participants’ study involvement. The PI’s advisor, a licensed psychologist, was available in the event of crisis. The following risk management plan was in place: Participants were instructed to call or email the PI with non-urgent questions or concerns throughout their involvement in the study, and to contact the Crisis Center of Johnson County or 9-11 if they needed immediate mental health assistance at any time. Participants clinically observed to exhibit significant decline in mental health status during involvement in the study would be withdrawn and referred to a mental health provider in the community.

**Privacy and confidentiality.** Face-to-face research activities with participants were conducted a private, reserved room used for exams by visiting nurses at the Iowa City/Johnson County Senior Center. A “do-not-disturb” sign was placed on the door and white noise machine was used during therapy sessions with participants. Participant were each assigned a 3 digit study ID associated with their data on the date of face-to-face screening and were instructed not to include personally-identifiable information about
themselves or their spouses in text message and online assessments. Text message prompts were limited to minimally necessary prompts, which participants replied to using only number responses.

Records containing personally identifiable information were stored electronically on the REDCap data system in compliance with UI IRB Standard Operation Procedures. The REDCap platform is managed by the Institute for Clinical and Translational Science at the University of Iowa. Participants signed paper versions of the informed consent were shredded after they were electronically scanned and uploaded to the REDCap system. Audio recordings of therapy sessions were burned onto password protected, encrypted CDs prior to transport to Department of Psychological and Quantitative Foundations research office for interrater review. CDs of sessions were stored in a locked file and cabinet and destroyed after both raters reviewed them.

Data from online assessments was collected and temporarily stored using the University of Iowa Qualtrics Research Suite. After data collection activities ceased, all data collected was transferred to the REDCap platform for long-term storage. Data from text message assessments was sent to a password protected Gmail (Google) account generated for the purposes of this study where it was temporarily stored and deleted following transfer to the REDCap system.

Compensation. Participants were compensated with a $50 Visa gift card, which was mailed to them following completion of the study. Participants who withdrew from the study received a pro-rated amount based on last online assessment completed. In order to minimize risk of coercion, number of completed EMAs was not tied to the
compensation amount. The following were the pro-rated compensation amounts offered per online assessment completed:

Baseline (T1): $10

Session 4 (T2): $10

Session 8 (T3): $10

1-month follow-up (T3): $20

Random assignment. Based on Kratochwill and Levin (2010)’s recommendations, eligible participants were randomly assigned to receive the intervention at one of three possible staggered times: (a) within one week of date of enrollment; (b) within two weeks of date of enrollment; or (c) within three weeks of date of enrollment. Participants 1, 2, and 3 were randomly assigned to three different conditions on the same date. Following Participant 3’s withdrawal from the study, Participants 4 and 5 were subsequently recruited and enrolled on different dates although they were randomized in the same way.

Timing of assessments. EMA and intermittent outcome assessments commenced on participants’ date of study enrollment. Each EMA consisted of one text message containing two brief measures totaling seven items. Text messages contained abbreviated wordings to fit 160 character limits. Participants receive small laminated cards containing full items and instructions for replying. EMAs were sent to participants’ phones three times daily, at random times within three stratified time blocks: 8:00 a.m. – 12:00 p.m., 12:00 p.m.-5:00 p.m., and 5:00 p.m.-10:00 p.m. The PI sent and received messages from participants’ phones using the study Gmail account by sending emails to their cellphone via an SMS gateway address. The SMS gateway addresses for most cellphone carriers
take on the following generic form: AT&T (mobile-number@txt.att.net), Sprint (mobile-number@messaging.springpc.com), Verizon (mobile-number@vtext.com), T-Mobile (mobile-number@tmomail.net), and U.S. Cellular (mobile-number@email.uscc.net). Text messages were scheduled for future date/time delivery using Boomerang (Baydin, Inc.). EMA responses not received prior to the time of the next scheduled prompt on the same day were counted as missing. The following is an example of the EMA sent as a text message to participants’ phone via Gmail:

   Right now 1.CALM 2.TENSE 3.UPSET 4.RELAXED 5.CONTENT 6.WORRIED 7.HAVE HIGH SELF-ESTEEM [1=Not very true,…,7=Very true]

Participants were asked to reply to prompts with a single text message in a particular format (e.g. only replying with item rating numbers separated by ‘#’s). An example of a hypothetical reply in which all items were rated “Not very true,” would be “1#1#1#1#1#1#1”. EMA response received to the study Gmail account were manually entered into a Qualtrics data entry form.

Participants also completed intermittent online assessments at baseline, session 4, session 8, and 1-month follow-up time points. Links to a Qualtrics survey were emailed to participants at 1-month follow-up. Time at the end of the baseline interview, session 4, and session 8 was allotted for completing these assessments during these visits.

**Intervention**

The intervention consisted of 8, 1.5 hour individual sessions developed and delivered by the PI, whose doctoral trainee status at the time required clinical supervision by his advisor a licensed psychologist. Prior to the first session, participants were mailed a workbook the PI wrote to accompany the therapy and a CD containing various free for
use guided meditations produced by mindfulness certified trainers and/or mindfulness psychologists (e.g. UCLA Mindful Awareness Research Center, Dr. Kristin Neff). See Appendix T for content included in the participant workbook. There was no indication of adverse reactions that could be attributed to the intervention, based on the PI’s observations of participants during therapy sessions. Anecdotal reports of the therapy content were generally positive (see Chapter 4 for more information on participants’ ratings and qualitative impressions of the intervention).

Overview and Aims. Terror Management Theory Integrated Existential Therapy (TIE) is a novel therapeutic approach developed by the author to improve caregiver quality of life by fostering a shift in perspective on life through exposure to the concept of caregivers’ own death through experiential exercises derived from existential, acceptance, and mindfulness-based therapy approaches. It is speculated that caregivers’ experiential engagement with session material may promote growth in cognitive flexibility and meaning-making in related Terror Management domains, and address existential fears tied to conscious anxiety. The structure of the intervention was inspired by James Bugental’s (2008) overview of phases of brief existential therapy:

Module 1: Introduction and assessment (session 1). The main objectives of this module include providing informed consent, establishing a working alliance, and assessing terror management domains. Based on the assessment, which consists of an in-session interview and self-report data completed prior to the first session, the therapist devises a case conceptualization consisting of the following client elements: (a) possible frequently encountered sources of mortality salience, (b) aspects of the client’s cultural worldview and sense of living up to cultural standards, (c) self-esteem and contingencies
of self-worth, and (d) quality of interpersonal relationships. In this module the therapist also provides psychoeducation on meditation and negotiates meditation practice goals with the client.

Module 2: Death anxiety and everyday stress (session 2). In this module the therapist cultivates awareness of the potential role of death anxiety in everyday stress and anxiety. The client is introduced to the term mortality reminder and completes the “Mortality Reminders in My Life” worksheet in session with the therapist. This worksheet asks the client to identify and reflect on potential mortality reminders they encounter in daily life. By the end of the session, the client is encouraged to death anxiety considering its potential role in their daily life.

Module 3: Terror management strategies (sessions 3, 4, 5). In this module the therapist provides psychoeducation on TMT and healthy mortality awareness and works to improve coping in terror management domains.

Session 3: Promoting healthy mortality awareness. The therapist provides the client with a general overview of TMT and the research supporting it. In addition, the client is introduced to the notion of healthy mortality awareness and learns how this differs from preoccupation with death and suicidal ideation. The therapist administers the “My Deathbed” worksheet which asks the client to visualize themselves in their own death bed. The purpose of this worksheet is to cultivate perspective on non-death-related stressors in session and to facilitate future recall in non-death-related stressful situations. In addition, the client is assigned the “My Life-To-Do List” worksheet to complete as homework. The purpose of the worksheet is to build on the client’s understanding of healthy mortality awareness, and to foster perspective on their life priorities. In the
worksheet, clients are asked to create two lists of items they hope to accomplish: (1) by the end of the week, and (2) before their death. Next, clients are asked to provide rankings of items on each list based on their level of importance. Finally, the worksheet instructs clients to write epitaphs about their highest ranked item from each list and reflect on their experience while completing the worksheet.

Session 4: Radical acceptance and self-compassion. In this session, clients are introduced to the concepts of radical acceptance, self-compassion, and assertiveness. Clients are asked to apply their understanding of radical acceptance by completing the “Accepting Life on Life’s Terms” exercise in session. In this exercise, clients are asked to reflect on current difficult aspects of their life and how acceptance of these aspects affects their experience of suffering. To facilitate radical acceptance, the therapist helps the client learn to observe difficult aspects of their life from the perspective of an observer through a breathing exercise. The therapist cultivates self-compassion by going over the “Free to be Me” exercise with the client. In this exercise, clients are asked to list both aspects they like and dislike about themselves and to consider these aspects both with compassion and as part of the human condition. Psychoeducation on assertive communication is integrated with the client’s understanding of radical acceptance and self-compassion. For homework, clients are assigned the “How would you treat a friend?” worksheet and the self-compassion guided meditation track.

Session 5: Choosing what matters. The therapist introduces the concepts of choice and values in order to foster freedom and responsibility. The client practices their understanding of these concepts by completing the “Choosing What Matters” worksheet with the therapist. In this worksheet, clients are instructed to list values in several life
domains (e.g. relationships, work/retirement, health) and identify which, if any, are intrinsic (e.g. “You value this because living out this value makes life better and more meaningful”) and extrinsic (e.g. “You value this because not doing so would make me feel ashamed, guilty, or anxious”).

**Module 4: Living fully (session 6).** In this module clients are introduced to the concept of living fully and tools for coping with life barriers. The main objectives of this module are to foster acceptance of the inevitability of future setbacks and freedom in choosing how to cope with them. In addition, the therapist processes any aspects of resistance that may have emerged during the course of treatment. Clients receive a handout of “Choice to Consider When Dealing with a Difficult Situation and Potential Outcomes” (e.g. do nothing, do what you usually do, do something different) which aims to further cultivate freedom and responsibility. Additionally, clients are challenged to reflect on how they might “fail better” when they do not meet their goals.

**Module 5: Awakening to change (session 7).** This module was developed as the capstone of the therapy and aims to facilitate changes the client may be still be contemplating or in the early phases of enacting. In session 7 the client is asked to complete a 30-minute guided meditation on death and dying while lying down on a yoga mat. The guided meditation used for was previously recorded by Michael Stone, a Toronto-based psychotherapist and meditation instructor (Stone, 2011). The following is a sample of Stone (2011)’s script for the meditation entitled “Savasana: Opening to Death and Dying”:

Exhale, as if this is your last exhale. How would you want to exhale, if this were your last exhale?
As the breath comes and goes imagine your death as a practice of generosity giving it all away.

Usually we think of death as taking away. As taking life.

See if you can feel through your exhaling how death is a giving away.

Following the meditation, clients were asked to silently reflect, write, or draw images while listening to music. Lastly, the therapist verbally processed client’s experience during the meditation and related insights. There were no adverse events following this author’s use of the meditation with several older adult practicum clients receiving supportive therapy for anxiety and stress.

**Module 6: Transitioning to life after treatment (session 8).** The objectives of the last module include processing the client’s feelings associated with the therapy experience, to process termination-related feelings of grief and loss, and to reinforce life-expansive coping strategies that have emerged during the course of treatment. The therapist provides the client with a small transitional object to serve as a reminder of their work in treatment and to promote future search for meaning.

**Treatment integrity.** Prior to starting therapy, one session was randomly selected for audio recording for independent review by two raters. Raters received didactic training on the structure and delivery of the intervention and complete a fidelity checklist developed by the author based on module-specific therapist behaviors. Interrater reliability was established by calculating a percentage agreement based on the number of agreements dived by the total number of therapist fidelity observations (Morgan & Morgan, 2009).
Measures

Demographics. Demographic and other screening information were obtained through a questionnaire developed specifically for the purposes of this study. See Appendix L for a complete list of items.

General cognitive mental status. The Saint Louis University Mental Status (SLUMS) examination is a screening measure for dementia and mild neurocognitive status (Morley & Tumosa, 2002). The measure is administered as an interview consisting of 11-items assessing several cognitive domains including attention, memory, orientation and executive functioning (Tariq et al., 2006). Administration can be done by a lay interviewer in a short amount of time (approximately 7 minutes; Feliciano et al., 2013). The SLUMS was found to be a better predictor of cognitive performance in a sample of older adults than the more widely used Mini-Mental State Examination (MMSE; Feliciano et al., 2013). A score less than 26 suggests mild cognitive impairment in persons with at least high school level education (Tariq et al., 2006). The measure is in the public domain and may be used without permission from the author (Newman & Feldman, 2011).

Depression and anxiety. Depression and anxiety was assessed using the depression and anxiety modules from the Patient Health Questionnaire (PHQ) which is a widely used mental health screening measure in primary care settings (Spitzer, Kroenke, & Williams, 1999). Each module consists of items assessing current severity of clinically significant symptoms of depression and anxiety disorders (e.g. based on Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition [DSM-IV] criteria; American Psychiatric Association, 1994). Participants are given the following instructions: “Over
the last 2 weeks, how often have you been bothered by the following problems?” and endorse items along a frequency continuum (not at all, several days, ..., nearly every day). Psychometrics older adults (Phelan et al., 2010). In this study participants with scores greater than 11 on the depression module or less than 6 on the anxiety module will be excluded. The suicide item on the depression module will be used to assess suicidality (“Thoughts that you would be better off dead or of hurting yourself in some way”). Uebelacker and colleagues (2011) found specificity of the suicide item was .86 when used as a suicide screening item with primary care patients. Further, they defined suicidality as an endorsement of “several days” or more on the item which is exclusion criteria for this study (Uebelacker et al., 2011).

**Social support.** Social support was assessed using the Social Interaction Subscale of the abbreviated Duke Social Support Index (DSSI) which is a standardized measure of social support that has been used in longitudinal studies of older adults with chronic illnesses (Koenig et al., 1993). The Social Interaction Subscale consists of four interview items assessing the extent of social interaction in the past week. Sample items assess aspects that include: (a) number of family members within 1 hour that the participant feels they can depend on; (b) number of times spent talking with friends/relatives on the telephone in the past week; and (c) number of times attended meetings of clubs, religious groups, or other groups that the person belongs to (other than at work) in the past week. Participants for this study will be excluded if their scores are less than two standard deviations of the general population mean (e.g. $M=8.34$, $SD=1.62$; Wardian, Robbins, Wolfersteig, Johnson, & Dustman, 2012).
Religious orientation. The Religious Orientation Scale (RSO; Allport & Ross 1967) is a widely used measure of extrinsic and intrinsic religiosity. The measure consists of 20-items rated on a 5-point Likert scale ranging from 1 (strongly disagree to 5 strongly agree). Items grouped into Intrinsic and Extrinsic independently scored subscales. Sample Intrinsic items include, “The purpose of prayer is to secure a happy and peaceful life” and “I pray chiefly because I have been taught to pray”; Extrinsic items include, “It is important for me to spend periods of time in private religious thought and meditation” and “My religious beliefs are really what lie behind my whole approach to life.” The measure’s internal consistency has been well established across age groups, with Chronbach’s alphas for the Intrinsic scale typically in the mid .80s and in the .70s for the Extrinsic scale (Masters, Hill, Kircher, Lensegrav Benson, & Fallon, 2004). Test-retest reliabilities were found to range from .78 to .84 (Masters & Bergin, 1992; Masters et al., 2004). Donahue (1985) suggested the following scoring criteria for categorizing participants into distinct types: (a) Intrinsic religious orientation: a score of above 27 on the Intrinsic scale and below 33 on the Extrinsic scale; and (b) Extrinsic religious orientation: a score of below 27 on the Intrinsic scale and above 33 on the Extrinsic scale.

Post-traumatic stress. The Primary Care PTSD Screen (PC-PTSD) is a 4-item screening measure for current symptoms of post-traumatic stress disorder in veterans (Prins et al., 2003). Instructions ask participants to consider whether or not they have “ever had any experience that was so frightening, horrible, or upsetting that, in the past month, you” and if so, participants indicate which, if any, of four symptoms they experienced in the past month (e.g. nightmares about the event, being easily startled,
feeling numb or detached from others). Research on the measure suggests that a score of 3 or greater suggests the presence of PTSD (Prins et al., 2003; Prins et al, 2004).

**Near death experience.** The Greyson Near Death Experience Scale was developed for the purpose of screening for NDEs (Greyson, 1983). The measure consists of 16-items assessing aspects of a person’s experience during an encounter with death. Items grouped into four phenomenological domains: Cognitive, Affective, Paranormal, and Transcendental. Sample items include “Did you see, or feel surrounded by, a brilliant light?” and “Did you feel a sense of harmony or unity with the universe?” Possible responses are specific to individual items although they are generally scored as either 0 (absent), 1 (ambiguous), or 2 (present). Greyson (1983) suggested a cutoff score of 7 for identifying an experience as an NDE. The scale was shown to have adequate reliability and internal consistency (Cronbach’s alphas were .92 and .88 respectively; Greyson, 1983). Age, gender, type of death encounter, and time since NDE were not associated with variations in response patterns (Greyson, 1983; Greyson 1990).

**Ecological Momentary Assessment**

**Self-esteem.** The Single-Item Self-Esteem Scale (SISE) was used to assess self-esteem via text message. Participates rate the item (“I see myself as someone who has high self-esteem”) on 7-point Likert scale ranging from 1 (Not very true of me) to 7 (Very true of me). The measure has been described as providing “acceptable balance between [researchers’] practical needs and psychometric concerns” (Robins, Hendin, & Trzesniewski, 2001). In three studies correlation between the SISE and the Rosenberg Self-Esteem Scale was high and ranged from .91 to .99 across gender, race, employment status, and ages (Robins et al., 2001). Since a Chronbach’s coefficient alpha cannot be
computed for a single-item scale, Robins and colleagues (2001) estimated internal consistency reliability by using Heise (1969)’s procedure based on a single-item scale’s pattern of autocorrelations over three points in time. The mean reliability estimate for the SISE was .75 (Robins et al., 2001). The measure was administered to older adults in a large cross-sectional study of age-related differences in self-esteem across the lifespan (Robins et al., 2002).

**State-trait anxiety.** State and trait anxiety was assessed using a 6-item version of the widely used State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). Correlation between the STAI-6 and the full 20-item STAI was .90 and reliability was acceptable ($a = .82$; Marteau & Bekker, 1992). The STAI-6 consists of three “anxiety-absent” items from the original scale found to be the most sensitive to low stressors and three “anxiety-present” items particularly sensitive to high stressors (Spielberger, 1983). In a large population-based study of older adults, internal consistency for the STAI-6 ranged from .78 to .80 (Uchino, Holt-Lunstad, Uno, & Flinders, 2001).

**Outcome Measures**

**Caregiver quality of life.** The Caregiver Quality of Life Index-Cancer (CQOLC) is a measure developed to assess quality of life in family caregivers of patients with cancer (Weitzner, Jacobsen, Wagner, Friedland, & Cox, 1999). The measure consists of 35 items rated on a five point Likert scale ranging from 1 (not at all) to 5 (very much). Sample items include, “I get support from my friends and neighbors,” “It upsets me to see my loved one deteriorate,” and “It is difficult to maintain my outside interests.” In a study of a cross-section of family caregivers of patients with a variety of cancer
diagnoses, test-retest reliability and internal consistency was high ($a = .95$ and $91$ respectively; Weitzner et al., 1999).

**Death anxiety.** Death anxiety was assessed using the Death Avoidance subscale of Wong, Reker, and Gesser’s (1994) Death Attitude Profile-Revised (DAP-R). The DAP-R is a multidimensional measure of attitudes toward death consisting of four subscales: (a) Fear of Death/Dying, (b) Death Avoidance, (c) Approach Acceptance, and (d) Escape Acceptance. The Death Avoidance subscale was selected over the Fear of Death/Dying subscale due critiques of the use of self-report measures for measuring what is largely considered an unconscious phenomenon (Lehto & Stein, 2009). Wong and colleagues (1994) found death avoidance was associated with depression in older but not younger adults. The Death Avoidance subscale consists of 5 items rated on a 7-point scale in the direction of *strongly disagree* (1) to *strongly agree* (7). Sample items include, “I avoid death thoughts at all costs” and “Whenever the thought of death enters my mind, I try to push it away.” Internal consistency for the Death Avoidance subscale was among the highest for the scale ($a = .87$; Wong et al., 1994). Reliability and validity of the subscale were adequate for a sample of older adults (Ardelt, 2008).

**Self-compassion.** Self-compassion was measured using the Self-Compassion Scale – Short Form (SCS-SF; Raes, Pommier, Neff, & Gucht, 2011). The SCS-SF is a 12 item measure that is highly correlated ($r = .97$) with the original 26 item measure. The SCS-SF consists of items rated on a five-point Likert scale ranging from 1 (*almost never*) to 5 (*almost always*). Sample items include, “I try to be understanding and patient toward those aspects of my personality I don’t like,” “I try to see my failings as part of the human condition,” and “I’m intolerant and impatient towards those aspects of my
personality I don’t like” (reversed scored). The SCS-SF has demonstrated good internal consistency (Chronbach’s alpha = .86) in college samples. The original measure was shown to also have good internal consistency (Chronbach’s alpha = .87) in older adult samples (Batts, Goldwasser, & Leary, 2012).

**Meaning in life.** The Meaning in Life Questionnaire (MLQ; Steger, Frazier, Oishi, & Kaler, 2006) consists of 10-items that measures two dimensions of meaning in life: 1) The presence of meaning in one’s life and 2) the extent one is searching for meaning. Items are rated on a 7-point Likert scale from “1=Absolutely Untrue,” to “7=Absolutely True.” Sample items include, “I understand my life’s meaning,” “I have discovered a satisfying life purpose,” and “I am always searching for something that makes my life feel significant.” The MLQ was found to have good internal consistency, with Chronbach’s alphas ranging from .80 to .90 (Steger et al., 2006).

**Real relationship inventory.** The Real Relationship Inventory (RRI; Gelso et al., 2005; Kelley et al., 2010) was initially developed to measure the real relationship, which has been defined as the “personal relationship existing between two or more persons as reflected in the degree to which each is genuine with the other and perceives the other in ways that befit the other” (Gelso, 2011, pp. 12-13, as cited by Gelso et al., 2012). The RRI was selected because of its perceived theoretical congruence with the underpinnings of TIE compared to measures often used in studies of cognitive-behavioral therapy (i.e. Working Alliance Inventory). While conceptually distinct, both the real relationship and working alliance were related to session and treatment outcomes (Kivlighan et al., 2014; Horvath, Del Re, Fluckiger, & Symonds, 2011).
The RRI consists of two forms completed by the client and therapist. Each form contains 24 total items grouped into two subscales Genuineness and Realism. Items on both forms are rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The client form contains the following sample items: “I was able to be myself with my therapist,” “My therapist’s perceptions of me were accurate,” and “I appreciated my therapist’s limitations and strengths.” Sample items from the therapist form include: “My client and I are able to be genuine in our relationship,” “I am able to realistically respond to my client,” and “My client holds back significant parts on him/herself.” The RRI’s treatment outcome predictive validity has been demonstrated (Lo Coco, Prestano, Gullo, & Gelso, 2011; Marmarosh et al., 2009). Convergent and discriminant validity, internal consistency, and test-retest reliability has been supported (Gelso et al., 2005; Feurtes et al., 2007; Kelley et al., 2010);

**Data Analysis**

**Visual analysis.** Visual analysis of graphed EMA data was conducted using previously stated steps outlined by Kazdin (2011) in order to examine: (a) changes in means across phases; (b) changes in level – or the shift of performance from the end of one phase to the beginning of the next phase; (c) changes in trend or slope across phases; (d) latency of change – or the period between the onset of one condition and changes in performance; and (e) nonoverlapping data across phases (Kazdin, 2011; Morgan & Morgan, 2009).

**Statistical analysis.** Descriptive analyses of raw scores on intermittently assessed outcome measure variables. The following analyses were used to supplement visual analysis of EMA data.
Autocorrelation. PAST: Paleontological Statistics Package for Education and Data Analysis will be used to detect autocorrelation. The software generates a graph with an x-axis containing $n$ number of $\tau$ lag times up to $n/2$, where $n$ is the number of vector values, and a y-axis of autocorrelation values (a predominately zero autocorrelation indicates random data). A 95-percent confidence interval is plotted on lines at $\pm 1.76 \frac{1}{\sqrt{n - \tau + 3}}$, to visually distinguish serially dependent lags of data from random data.

Mann whitney u. The Mann Whitney U test was used to determine whether distributions of daily self-esteem and anxiety state significantly differed between two phases. Use of the Mann Whitney U test relies on the following assumptions: (a) groups are randomly drawn from the target population; (b) groups are independent of each other, as are observations within groups; and (c) data are either ordinal or continuous (Nachar, 2008). One advantage of the Mann-Whitney U test is its lack of distributional assumptions (e.g. normality). Researchers have noted the test may be used for analyzing small samples (e.g. five to 20) and data obtained from measures with poor internal consistency (Nachar, 2008, p. 13).

Nonoverlap of all pairs. NAP was calculated to compare estimated effect sizes of daily self-esteem and anxiety states between two phases (e.g. T1 versus T2, T2 versus T3). As stated previously, the NAP is a statistic derived from the Mann Whitney U test and values may be interpreted based on the following ranges: 0–.65 (weak effects); .66–.92 (medium effects); .93–1.0 (strong effects; Parker & Davis, 2009).
CHAPTER 4: RESULTS

This chapter presentation of study results consists of the following sections: (1) Demographic and psychosocial characteristics; (2) Participant enrollment and withdrawals; (3) Therapist-client variables; (4) Data analysis; and (5) Relevance of findings to the exploratory research question.

Screening and enrollment. 16 persons contacted the study after hearing about it through the following recruitment sources: mass email (n=13) and word of mouth (n=3). Of the 11 persons who could be reached by phone, 4 persons declined to participate after the researcher provided them with more information about the study (3 persons indicated they could not commit due to amount of time required to participate and 1 indicated attending weekly therapy sessions was not feasible due to distance of the site from home). 2 persons were determined ineligible at telephone screening due to scores on self-esteem (too high) and anxiety (too low) measures. All total of 5 women who initially screened eligible by phone were confirmed eligible in-person and enrolled in the study.

Demographic and Psychosocial Characteristics at Baseline

Demographic characteristics of enrolled participants (N=5) on the next page (Table 2). All were women between the ages of 48 and 69 ($M = 60.0$ years, $SD = 8.75$, range = 48 – 69), White, married and living with a male spouse, and reported having at least 12 or more years of education. Four participants identified with a Christian religious affiliation (i.e. Catholic or Protestant) and one identified as atheist/agnostic. The most frequently reported average yearly household income ranges were $25,000-$50,000 and $50,000-$74,999. All participants reported working at least part-time in addition to regularly assisting with three or more aspects of their spouse’s care. Participants’
impression of their spouse’s medical and functional status at the time of face-to-face screening shown in Table 3 on the following page (Participant 3 declined to provide this information). A summary of participants’ scores on selected psychosocial screening measures is presented in Table 4.

All participants obtained PHQ-Anxiety scores indicative of clinically significant anxiety symptoms. Adequate levels of social interaction/support were also reported by all participants. No participant obtained an ROS score that would suggest rigid/inflexible adherence to religious beliefs. Participants’ quality of life scores were compared to published caregiver group data according to spouse’s functional status (see Figure 3). All participants reported lower quality of life compared to a respective group of women (Mean score across participants was 68.4 [SD=9.56] versus mean of 84.6 [SD=4.65] across comparison groups).

Study Attrition and Treatment Withdrawals

One participant withdrew from the study and one withdrew from treatment. No treatment and study withdrawals were attributed to adverse effects from the study. Specifically, Participant 3 requested to withdraw from all aspects (i.e. therapy and assessments) of the study prior to starting therapy due to her impression of acute decline in spouse’s medical status. Participant 5 dropped out of therapy after completing session 5 due to her report of spouse’s preference she not attend; she completed the remaining number of study assessments. Researchers typically define attrition as the number of enrolled participants lost to follow-up assessments (Dumville, Togerson, & Hewitt, 2006).
Table 2: Demographic Characteristics of Participants

<table>
<thead>
<tr>
<th>Pt.</th>
<th>Age</th>
<th>Race</th>
<th>Education</th>
<th>Religious Affiliation</th>
<th>Current Employment Status</th>
<th>Household Income Range&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Level of involvement in spouse’s care&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>59</td>
<td>White</td>
<td>Some college</td>
<td>Protestant</td>
<td>Part-time</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>56</td>
<td>White</td>
<td>H.S. graduate</td>
<td>Protestant</td>
<td>Part-time</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>68</td>
<td>White</td>
<td>Bachelor’s degree</td>
<td>Catholic</td>
<td>Part-time</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>69</td>
<td>White</td>
<td>H.S. graduate</td>
<td>Protestant</td>
<td>Part-time</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>48</td>
<td>White</td>
<td>Bachelor’s degree</td>
<td>Atheist/agnostic</td>
<td>Full-time</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

<sup>Note.</sup> Pt.=participant; H.S.=high school

<sup>a</sup>Annual household income ranges: 1 = Less than $10,000; 2 = $10,000 to $24,999; 3 = $25,000 to $49,999; 4 = $50,000 to $74,999; 5 = $75,000 to $99,999; 6 = $100,000 or greater

<sup>b</sup>Number of spousal care aspects they reported regularly assisting with (maximum possible=7, minimum=1). Possible aspects included:

--Medication or medical device management
--Medical appointments (e.g. scheduling, billing, transportation to and from, attending)
--Meal preparation
--Assisting with spouse’s work schedule or with planning other commitments
--Managing finances
--Providing emotional/spiritual support
--Other
Table 3: Caregivers’ Ratings of Spouse’s Medical and Functional Status at Baseline

<table>
<thead>
<tr>
<th>Participant</th>
<th>Time since spouse’s first cancer diagnosis (years)</th>
<th>Number of treatment modalities received(^a)</th>
<th>Current nature of spouse’s treatment</th>
<th>ECOG performance status rating(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>2</td>
<td>Curative</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>3</td>
<td>Palliative</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>2</td>
<td>Palliative</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>2</td>
<td>Curative</td>
<td>1</td>
</tr>
</tbody>
</table>

Note. Data based on participant/caregiver questionnaire responses. ECOG = Eastern Cooperative Oncology Group; n/a=not available because the participant declined to respond.
\(^a\)Possible treatment modalities categories: 1=surgery, radiation, or chemotherapy only; 2=a combination of any of the two treatments; 3=all three treatment modalities
\(^b\)Participants rated based on the following descriptors: 0= Fully active, able to carry on all pre-disease performance without restriction; 1= Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature; 2= Ambulatory and capable of all self-care but unable to carry out any work activities. Up and active more than 50% of waking hours; 3= Capable of only limited self-care, confined to bed or chair more than 50% of waking hours; 4= Completely disabled. Cannot carry on any self-care. Totally confined to bed or chair.
Table 4: Raw Scores on Selected Psychological Screening Measures

<table>
<thead>
<tr>
<th>Participant</th>
<th>PHQ – Anxiety(^a)</th>
<th>DSSI – Social Interaction</th>
<th>ROS – Extrinsic</th>
<th>ROS – Intrinsic</th>
<th>ROS – Orientation(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>11</td>
<td>8</td>
<td>33</td>
<td>32</td>
<td>E/I</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>13</td>
<td>21</td>
<td>38</td>
<td>I</td>
</tr>
<tr>
<td>3</td>
<td>9</td>
<td>8</td>
<td>30</td>
<td>30</td>
<td>I</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>8</td>
<td>30</td>
<td>36</td>
<td>I</td>
</tr>
<tr>
<td>5</td>
<td>14</td>
<td>12</td>
<td>27</td>
<td>13</td>
<td>N/R</td>
</tr>
</tbody>
</table>

Group \(M\) (SD)

<table>
<thead>
<tr>
<th>PHQ – Anxiety(^a)</th>
<th>DSSI – Social Interaction</th>
<th>ROS – Extrinsic</th>
<th>ROS – Intrinsic</th>
<th>ROS – Orientation(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.8(1.9)</td>
<td>9.8 (2.5)</td>
<td>28.2 (4.5)</td>
<td>29.8 (9.9)</td>
<td></td>
</tr>
</tbody>
</table>

Note. PHQ = Patient Health Questionnaire; PHQ-Anxiety = Anxiety Symptoms; DSSI = Duke Social Support Index; DSSI-Social Interaction = Social Interaction; ROS = Religious Orientation Scale; ROS-Extrinsic = Extrinsic Religious Orientation; ROS-Intrinsic = Intrinsic Religious Orientation; I = intrinsic religious orientation; E = extrinsic religious orientation; E/I = indiscriminate pro religious orientation; N/R = non-religious.

\(^a\) Clinical cut-off score = 8

\(^b\) Based on Donahue (1985)’s proposed fourfold typology based on ROS subscale scores.

Figure 3: Participants’ Baseline Quality of Life Compared to a Sample of Caregivers with Spouses of Similar Functional Status

Note. CQOLC = The Caregiver Quality of Life Index-Cancer; Higher scores indicate better quality of life. Error bars indicate means and standard deviations across participants and per comparison group. Comparison group means and standard deviations are per group scores according to spouse’s performance status published by Weitzner et al. (1999). Participant 3 declined to provide ratings of spouse’s functional status necessary for making comparisons.
Based on this definition, the overall attrition rate for this study was 20%, which was lower than the average attrition rate (34%) for caregiver intervention studies included in Northouse et al.’s (2010) meta-analysis. Decline in spouse’s medical status and spouse’s death were the most common factors associated with caregiver attrition (Northouse et al., 2010).

**Therapist-Client Variables**

**Treatment fidelity.** One session was randomly selected for audio recording for each participant prior to starting therapy. Participant 5 withdrew from treatment prior to reaching the session that had been randomly selected for recording. Interobserver agreement on therapist fidelity for the remaining three participants was high (87.5%).

**Participant and therapist ratings of the relationship.** Therapist and participant scores on RRI client and therapist forms are presented on Table 5. Differences in total RRI score between therapist and participant are also included on the table. The greatest discrepancy in therapist-participant total RRI score occurred with Participant 5, who terminated early from therapy. This is not surprising, as incongruent therapist and client perceptions have been shown to have a negative impact on working alliance, increasing client risk of early termination (Tryon, Blackwell, & Hammel, 2007).

**Participant ratings of the intervention.** Participants’ ratings and qualitative responses to a questionnaire assessing their impression of the quality of therapy they received are presented in Table 6. Half of participants (2 and 4) reported being “very satisfied” with the intervention, while the others (participants 1 and 5) were “mostly satisfied.” Participants either agreed (2 and 5) or strongly agreed (1 and 4) with the

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8 The author calculated the mean attrition rate for studies with majority female spouse samples.
statement, “I gained something positive from this therapy.” There was no discrepancy in ratings for the following items (all participants rated 3=agree): “This therapy made me more aware of my needs,” “This therapy made me more aware of my values,” and “This therapy touched on deep, life-long issues of mine.” There were mixed ratings of agreement and disagreement per item for the following items: “This therapy made me more aware of my guilt,” “This therapy made me more aware of my feelings of inadequacy,” and “This therapy made me more aware of my anger.”

Table 5: Therapist and Participant Real Relationship Inventory Ratings

<table>
<thead>
<tr>
<th>Pt.</th>
<th>Participant’s Ratings</th>
<th>Therapist’s Ratings</th>
<th>Difference in Pt.-Therapist Total RRI Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Realism</td>
<td>Genuineness</td>
<td>Realism</td>
</tr>
<tr>
<td>1</td>
<td>46</td>
<td>44</td>
<td>48</td>
</tr>
<tr>
<td>2</td>
<td>46</td>
<td>48</td>
<td>42</td>
</tr>
<tr>
<td>4</td>
<td>53</td>
<td>57</td>
<td>55</td>
</tr>
<tr>
<td>5</td>
<td>44</td>
<td>36</td>
<td>53</td>
</tr>
</tbody>
</table>

Note. Pt=Participant; RRI=Real Relationship Inventory; Total RRI Score=Sum of Realism and Genuineness subscale scores; Greater difference in pt.-therapist total RRI scores indicate greater discrepancy between participant and therapist’s ratings.
Table 6: Participants’ Ratings and Qualitative Impressions of TIE

<table>
<thead>
<tr>
<th>Item</th>
<th>Possible Responses</th>
<th>Pt:</th>
<th>1</th>
<th>2</th>
<th>4</th>
<th>5</th>
<th>Responses Across Pts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Overall, how satisfied are you with the therapy you received?</td>
<td>0=Very dissatisfied, 1=Indifferent or mildly dissatisfied, 2=mostly satisfied, 3=very satisfied</td>
<td></td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>Very Satisfied (50%) Mostly Satisfied (50%)</td>
</tr>
<tr>
<td>2. The number of sessions seemed____ for helping me achieve my goals.</td>
<td>0=Insufficient, 1=Somewhat insufficient, 2=Mostly sufficient, 3=Sufficient</td>
<td></td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>Mostly Sufficient (75%) Sufficient (25%)</td>
</tr>
<tr>
<td>3. In general, the amount of time allotted for most sessions seemed____ for helping me learn to apply concepts and address other concerns that week.</td>
<td>0=Insufficient, 1=Somewhat insufficient, 2=Mostly sufficient, 3=Sufficient</td>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>Sufficient (75%) Mostly Sufficient (25%)</td>
</tr>
<tr>
<td>4. I gained something positive from this therapy.</td>
<td>0=Strongly disagree, 1=Disagree, 2=Unsure, 3=Agree, 4=Strongly agree</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>Strongly Agree (50%) Agree (50%)</td>
<td></td>
</tr>
<tr>
<td>5. The amount of time spent talking about death seemed relevant to concerns I have.</td>
<td>0=Strongly disagree, 1=Disagree, 2=Unsure, 3=Agree, 4=Strongly agree</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>Agree (75%) Unsure (25%)</td>
<td></td>
</tr>
<tr>
<td>6. I see how my feelings about my own death might affect how I feel about my spouse’s death.</td>
<td>0=Strongly disagree, 1=Disagree, 2=Unsure, 3=Agree, 4=Strongly agree</td>
<td></td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>Agree (75%) Unsure (25%)</td>
</tr>
<tr>
<td>Item</td>
<td>Possible Responses</td>
<td>Pt: 1</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>Responses Across Pts.</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>--------------------------</td>
<td>-------</td>
<td>---</td>
<td>---</td>
<td>----------------------------------------</td>
<td>----------------------------------------</td>
<td></td>
</tr>
<tr>
<td>7. This therapy made me more aware of my stress and anxiety.</td>
<td>0=Strongly disagree, 1=Disagree, 2=Unsure, 3=Agree, 4=Strongly agree</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>Agree (50%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly Agree (25%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Unsure (25%)</td>
<td></td>
</tr>
<tr>
<td>8. This therapy made me more aware of my feelings of inadequacy.</td>
<td>0=Strongly disagree, 1=Disagree, 2=Unsure, 3=Agree, 4=Strongly agree</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>Agree (50%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly Agree (25%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Disagree (25%)</td>
<td></td>
</tr>
<tr>
<td>9. This therapy made me more aware of my anger.</td>
<td>0=Strongly disagree, 1=Disagree, 2=Unsure, 3=Agree, 4=Strongly agree</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>Agree (75%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Disagree (25%)</td>
<td></td>
</tr>
<tr>
<td>10. This therapy made me more aware of my guilt.</td>
<td>0=Strongly disagree, 1=Disagree, 2=Unsure, 3=Agree, 4=Strongly agree</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>Agree (50%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Disagree (25%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Unsure (25%)</td>
<td></td>
</tr>
<tr>
<td>11. This therapy made me more aware of my needs.</td>
<td>0=Strongly disagree, 1=Disagree, 2=Unsure, 3=Agree, 4=Strongly agree</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>Agree (100%)</td>
<td></td>
</tr>
<tr>
<td>12. This therapy made me more aware of my values.</td>
<td>0=Strongly disagree, 1=Disagree, 2=Unsure, 3=Agree, 4=Strongly agree</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>Agree (100%)</td>
<td></td>
</tr>
<tr>
<td>Item</td>
<td>Possible Responses</td>
<td>Pt: 1 2 4 5</td>
<td>Responses Across Pts.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
<td>--------------------</td>
<td>-------------</td>
<td>---------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. This therapy motivated me to prioritize activities I find meaningful.</td>
<td>0=Strongly disagree, 1=Disagree, 2=Unsure, 3=Agree, 4=Strongly agree</td>
<td>3 3 3 2</td>
<td>Agree (75%) Unsure (25%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. This therapy made me think about my stress in a new way.</td>
<td>0=Strongly disagree, 1=Disagree, 2=Unsure, 3=Agree, 4=Strongly agree</td>
<td>4 3 4 2</td>
<td>Strongly Agree (50%) Agree (25%) Unsure (25%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. This therapy helped me better appreciate time I spend with my spouse.</td>
<td>0=Strongly disagree, 1=Disagree, 2=Unsure, 3=Agree, 4=Strongly agree</td>
<td>4 3 4 2</td>
<td>Strongly Agree (50%) Agree (25%) Unsure (25%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. This therapy made me re-evaluate ways I demonstrate care for others.</td>
<td>0=Strongly disagree, 1=Disagree, 2=Unsure, 3=Agree, 4=Strongly agree</td>
<td>3 3 3 2</td>
<td>Agree (75%) Unsure (25%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. This therapy was intense.</td>
<td>0=Strongly disagree, 1=Disagree, 2=Unsure, 3=Agree, 4=Strongly agree</td>
<td>1 3 4 3</td>
<td>Agree (50%) Strongly Agree (25%) Disagree (25%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. This therapy touched on deep, life-long issues of mine.</td>
<td>0=Strongly disagree, 1=Disagree, 2=Unsure, 3=Agree, 4=Strongly agree</td>
<td>3 3 3 3</td>
<td>Agree (100%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 6. Participants’ Ratings and Qualitative Impressions of TIE (cont.)

<table>
<thead>
<tr>
<th>Item</th>
<th>Possible Responses</th>
<th>Pt: 1</th>
<th>2</th>
<th>4</th>
<th>5</th>
<th>Responses Across Pts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>19. I feel better right now compared to before therapy.</td>
<td>0=Strongly disagree, 1=Disagree, 2=Une sure, 3=Agree, 4=Strongly agree</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>Agree (50%) Strongly Agree (25%) Unsure (25%)</td>
</tr>
<tr>
<td>20. This therapy helped me to be more genuine and open about my feelings.</td>
<td>0=Strongly disagree, 1=Disagree, 2=Une sure, 3=Agree, 4=Strongly agree</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>Strongly Agree (50%) Agree (50%)</td>
</tr>
</tbody>
</table>

Open-Ended Item:
In a few sentences, please describe what it was like for you to participate in this therapy, either during session, outside of session, or both.

Participant 1:
“Therapy was beneficial in terms of thinking of my own emotions and how I can improve on coping with stress and uncertainties by focusing on positive activities and daily reflections.”

Participant 2:
“It has given me a clear sense of where my feelings are and what I can do help myself. / Finding time for myself had been difficult and the sessions have provided an outlet for me to express my needs.”

Participant 4:
“I found out that my feelings are fairly normal. It opened me up to how some of these feelings stemmed back further than the discovery of my spouse’s cancer. I realize how important it is for me to take care of myself. Tools have been given to me of ways to relax and find some inner peace. I’ve always left feeling a weight lifted and looking forward to the next session. It has been a safe haven for me and opening up to release some of the inner feelings I’ve had.”

Participant 5:
“I wanted to try to get some help in dealing with my feelings of anxiety, and although there is no cure for this, and it’s something I’m going to have to deal with all of my life, including the physical tolls it is taking on me, I am hopefully learning to accept what I can and change what I can.”

Note. TIE=Terror Management Theory Integrated Existential Therapy; Pt=Participant; Participant 5 rated based on incomplete number of sessions attended (5 of 8).
Meditation and homework practice. Table 7 presents participants’ reported meditation and homework practice frequency during intervention and follow-up phases, based on their category ratings to two items added to the session 8 and 1-month follow-up online outcome assessment battery. All participants reported meditating at least one time per week in intervention and follow-up phases. Participant 1 reported a slight decrease in meditation frequency between intervention and follow-up phases while Participant 2 reported a larger increase in meditation between these phases. Participant 5 reported a slight increase in meditation since she withdrew from the study. Participant 4 reported similar meditation practice patterns in both intervention and follow-up phases. No participant reported a weekly meditation frequency shown to be effective for reducing anxiety symptoms (Goyal et al., 2014). Both Participants 1 and 5 reported “sometimes” completing homework assigned by while Participants 2 and 4 reported completing homework “very often.”

Daily Self-Esteem and Anxiety

EMA compliance. Table 8 presents overall EMA percentage response rates for each participant during the study. Percentages were calculated by dividing the total number of completed/received EMAs by the total number of EMAs sent to the participant. Across participants overall EMA compliance was 86.52% (SD=9.53, range=73.0-96.7), which was higher than expected based on assumed level of competing involvements inherent to caregiver status.

---

9 The Mindfulness-Based Stress Protocol recommends a minimum of 45-minutes per day of formal mindfulness practice (e.g. meditation), and 5-15-minutes of informal practice (Santorelli & Kabat-Zinn, 2013).
Table 7: Reported Meditation and Homework Practice Frequency During Intervention and Follow-Up Phases

<table>
<thead>
<tr>
<th>Participant</th>
<th>Category rated average weekly number of times meditated outside of therapy (Intervention)(^a)</th>
<th>Impression of how often completed homework assigned by therapist most weeks(^b) (Intervention)</th>
<th>Category rated average weekly number of times meditated since completing therapy (Post-Intervention)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

\(^a\) Categories: 0=Never, 1=1 time per week, 2=1-2 times per week, 3=2-3 times per week, 4=3-4 times per week, 5=5 or more times per week

\(^b\) Possible responses: 0=Never or rarely, 1=Sometimes, 2=Often, 3=Very often

Table 8: EMA Compliance

<table>
<thead>
<tr>
<th>Participant</th>
<th>EMAs Completed (# completed)</th>
<th>EMA Compliance (% completed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>206</td>
<td>88.0</td>
</tr>
<tr>
<td>2</td>
<td>231</td>
<td>96.7</td>
</tr>
<tr>
<td>3</td>
<td>48</td>
<td>81.4</td>
</tr>
<tr>
<td>4</td>
<td>273</td>
<td>93.5</td>
</tr>
<tr>
<td>5</td>
<td>158</td>
<td>73.0</td>
</tr>
<tr>
<td>Group (M(SD))</td>
<td>217.00(48.08)(^a)</td>
<td>86.52 (9.53)</td>
</tr>
</tbody>
</table>

Note. EMA=ecological momentary assessment.

\(^a\) Study completers only (does not include participant 3).
**Visual Analysis**

Figure 4 presents line graphs of participants’ average daily self-esteem and anxiety states across phases, and levels of death anxiety, self-compassion, and meaning in life assessed at baseline (T1), session 4 (T2), session 8 (T3), and at 1-month post intervention (T4; see Tables 9 and 10 for corresponding numerical data). EMA daily averages, as opposed to all scores, were plotted for facilitating ease of visual interpretations of the data (all scores were included in subsequent statistical analyses). Phase mean self-esteem and anxiety were plotted as horizontal lines. Visual inspection of the graph indicated excessive baseline variability in self-esteem and anxiety across participants. Possible sources of the extent of baseline variability observed include: participant error in measurement (e.g. initially technical difficulty sending accurate ratings), baseline differences in personality profile/emotional regulation abilities, and variability external influences affecting each participant (e.g. fluctuations in spouse’s medical status). Given the level of baseline variability observed, and lack of prior research to support the author’s speculation of factors contributing to the variability, the validity of causal inferences that can be made using visual analysis is limited (Kazdin, 2011). Changes in phase mean levels of anxiety and self-esteem also varied across participants.
Figure 4: Average Daily Self-Esteem and Anxiety and Self-Compassion, Death Anxiety, and Meaning in Life at Intermittent Time Points
### Table 9: Phase Mean Self-Esteem and State Anxiety

<table>
<thead>
<tr>
<th>Participant</th>
<th>State Self-Esteem</th>
<th></th>
<th></th>
<th></th>
<th>State Anxiety</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Baseline</td>
<td>Intervention</td>
<td>Post</td>
<td>Baseline</td>
<td>Intervention</td>
<td>Post</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>4.40 ± .93</td>
<td>5.10 ± .74</td>
<td>5.35 ± .62</td>
<td>2.46 ± .82</td>
<td>2.09 ± .59</td>
<td>1.97 ± .41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>5.47 ± 1.25</td>
<td>4.11 ± .49</td>
<td>4.00 ± .12</td>
<td>3.44 ± .81</td>
<td>3.33 ± 1.12</td>
<td>4.00 ± 1.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>5.48 ± .77</td>
<td>—</td>
<td>—</td>
<td>3.08 ± 1.06</td>
<td>—</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>5.66 ± .81</td>
<td>5.77 ± .47</td>
<td>6.00 ± .71</td>
<td>2.70 ± .96</td>
<td>2.56 ± .85</td>
<td>4.00 ± 1.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>2.85 ± 1.04</td>
<td>2.44 ± 1.05</td>
<td>2.00 ± .77</td>
<td>4.39 ± 1.28</td>
<td>4.32 ± .89</td>
<td>4.00 ± .79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>4.77 ± .96</td>
<td>4.36 ± .69</td>
<td>4.34 ± .56</td>
<td>3.21 ± .99</td>
<td>3.13 ± .86</td>
<td>3.49 ± .89</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note*: Phase medians are presented in Table 13 with statistical analyses.

### Table 10. Scores on Outcome Measures at Intermittent Time Points

<table>
<thead>
<tr>
<th>Participant</th>
<th>Self-Compassion Score</th>
<th></th>
<th></th>
<th></th>
<th>Death Anxiety Score</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>T1</td>
<td>T2</td>
<td>T3</td>
<td>T4</td>
<td>T1</td>
<td>T2</td>
<td>T3</td>
<td>T4</td>
</tr>
<tr>
<td>1</td>
<td>2.91</td>
<td>3.14</td>
<td>5.09</td>
<td>4.00</td>
<td>3.80</td>
<td>1.00</td>
<td>1.00</td>
<td>2.00</td>
</tr>
<tr>
<td>2</td>
<td>3.98</td>
<td>2.56</td>
<td>3.95</td>
<td>3.33</td>
<td>1.80</td>
<td>2.20</td>
<td>2.20</td>
<td>1.00</td>
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<tr>
<td>3</td>
<td>4.05</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1.80</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>4</td>
<td>3.32</td>
<td>3.06</td>
<td>4.31</td>
<td>3.82</td>
<td>4.20</td>
<td>2.40</td>
<td>2.60</td>
<td>2.40</td>
</tr>
<tr>
<td>5</td>
<td>4.54</td>
<td>3.99</td>
<td>3.12</td>
<td>2.91</td>
<td>5.14</td>
<td>1.40</td>
<td>5.40</td>
<td>3.20</td>
</tr>
<tr>
<td>Group: M (SD)</td>
<td>3.76</td>
<td>3.19</td>
<td>4.12</td>
<td>3.52</td>
<td>3.35</td>
<td>1.75</td>
<td>2.8</td>
<td>2.15</td>
</tr>
<tr>
<td>Change in Mean (group) from Previous Time Point</td>
<td>-.57</td>
<td>+.93</td>
<td>-.60</td>
<td>—</td>
<td>-1.60</td>
<td>+1.05</td>
<td>-.65</td>
<td></td>
</tr>
</tbody>
</table>

| Meaning in Life Score | Caregiver Quality of Life Score | | | | |
|-----------------------|---------------------------------|---|---|---|---|---|---|---|
| T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 | T1 | T2 | T3 | T4 |
| 1 | 3.64 | 4.36 | 3.90 | 3.60 | 74.00 | 84.00 | 101.00 | 92.58 |
| 2 | 4.59 | 4.58 | 5.30 | 4.99 | 69.00 | 74.00 | 75.00 | 68.87 |
| 3 | 3.92 | — | — | — | 76.00 | — | — | — |
| 4 | 3.54 | 4.84 | 4.40 | 4.40 | 71.00 | 53.00 | 63.00 | 51.94 |
| 5 | 6.20 | 4.74 | 5.77 | 5.30 | 52.00 | 49.00 | 37.00 | 54.19 |
| Group: M (SD) | 4.37 | 4.63 | 4.84 | 4.57 | 68.40 | 65.00 | 69.00 | 66.90 |
| Change in Mean (group) from Previous Time Point | +.25 | +.21 | -.27 | — | -3.40 | +4.00 | -2.11 |

*Note*. T1=Baseline, T2=Session 4, T3=Session 8, T4=1-Month Post
Statistical Analysis

Autocorrelation graphs were generated for each participant’s self-esteem and anxiety data per phase using PAST software (see Figure 5). Graphs indicated most participants’ data across phases fell within a range suggestive of a non-serially dependent/random response pattern. However, this was not the case for Participant 2’s Post-Intervention state anxiety data, therefore, statistical findings from this phase should be interpreted with caution. Mann Whitney U tests revealed significant changes in individual participants’ trend in daily self-esteem and anxiety states across phases (Table 11). NAP indices were generated using the Single Case Research™ web-based application and are presented in Table 14 (Vannest, Parker, & Gonen, 2011).
Figure 5: Autocorrelation

Note. Larger proportion of data falling outside of green lines is indicative of serial dependence
Figure 5: Autocorrelation (cont.)

**Participant 3**
Baseline

Self-Esteem

![Graph of Self-Esteem for Participant 3](image)

Anxiety

![Graph of Anxiety for Participant 3](image)

**Participant 4**

Self-Esteem

Baseline

![Graph of Self-Esteem for Participant 4 at Baseline](image)

Intervention

![Graph of Self-Esteem for Participant 4 at Intervention](image)

Post-Intervention

![Graph of Self-Esteem for Participant 4 at Post-Intervention](image)

Anxiety

Baseline

![Graph of Anxiety for Participant 4 at Baseline](image)

Intervention

![Graph of Anxiety for Participant 4 at Intervention](image)

Post-Intervention

![Graph of Anxiety for Participant 4 at Post-Intervention](image)

**Note.** Larger proportion of data falling outside of green lines is indicative of serial dependence
Figure 5: Autocorrelation (cont.)

<table>
<thead>
<tr>
<th>Participant 5</th>
<th>Baseline</th>
<th>Intervention</th>
<th>Post-Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Esteem</td>
<td><img src="image1.png" alt="Graph" /></td>
<td><img src="image2.png" alt="Graph" /></td>
<td><img src="image3.png" alt="Graph" /></td>
</tr>
<tr>
<td>Anxiety</td>
<td><img src="image4.png" alt="Graph" /></td>
<td><img src="image5.png" alt="Graph" /></td>
<td><img src="image6.png" alt="Graph" /></td>
</tr>
</tbody>
</table>
Table 11: Phase Trend Changes in Daily Self-Esteem and Anxiety Across Phases

<table>
<thead>
<tr>
<th>Participant</th>
<th>State Self-Esteem Mdn (n)</th>
<th>Mann Whitney U, p</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Baseline</td>
<td>Intervention</td>
<td>Post</td>
</tr>
<tr>
<td>1</td>
<td>4.00 (53)</td>
<td>5.00 (113)</td>
<td>5.00(40)</td>
</tr>
<tr>
<td>2</td>
<td>6.00 (15)</td>
<td>4.00 (141)</td>
<td>4.00(75)</td>
</tr>
<tr>
<td>3</td>
<td>6.00 (48)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>6.00 (38)</td>
<td>6.00 (187)</td>
<td>6.00(49)</td>
</tr>
<tr>
<td>5</td>
<td>3.00 (39)</td>
<td>2.00 (66)</td>
<td>2.00(53)</td>
</tr>
</tbody>
</table>

Table 12. Estimated Effect Sizes for Phase Changes in Self-Esteem and Anxiety

<table>
<thead>
<tr>
<th>Participant</th>
<th>State Self-Esteem T1 vs. T2, z, NAP</th>
<th>T2 vs. T3, z, NAP</th>
<th>T1 vs. T3, z, NAP</th>
<th>State Anxiety T1 vs. T2, z, NAP</th>
<th>T2 vs. T3, z, NAP</th>
<th>T1 vs. T3, z, NAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4.65,.72**</td>
<td>1.89,.60</td>
<td>4.85,.79**</td>
<td>-2.68,.37**</td>
<td>-67.46</td>
<td>-2.84,.33**</td>
</tr>
<tr>
<td>2</td>
<td>-4.26,.16**</td>
<td>-1.24,.45</td>
<td>-1.24,.45</td>
<td>.04,.50</td>
<td>.91,.53</td>
<td>.46,.53</td>
</tr>
<tr>
<td>3</td>
<td>.60,.54</td>
<td>-.51,.48</td>
<td>.12,.51</td>
<td>-.64,.47</td>
<td>8.46,.89**</td>
<td>5.70,.86**</td>
</tr>
<tr>
<td>4</td>
<td>-1.88,.39</td>
<td>-1.16,.44</td>
<td>-2.93,.31**</td>
<td>-1.23,.42</td>
<td>1.36,.57</td>
<td>-65.45</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. *p < .05, **p < .01.

NAP interpretive ranges (per Parker & Davis, 2009): Weak effects (NAP= 0–.65); Medium effects: (NAP=.66–.92); Strong effects: (NAP=.93–1.0)

*p < .05, **p < .01.
Relevance of Findings to the Research Questions

Results of the study indicated TIE was not associated with significant changes in self-esteem and anxiety states that were consistent across participants. Further, trends in outcome measures were not consistent with trends in daily self-esteem and anxiety ratings and subjective impressions of the intervention. Only Participant 1’s daily self-esteem and anxiety states significantly changed in ways consistent with the aims of the intervention; her baseline trend in self-esteem significantly increased ($z = 4.65, p < .001$) and baseline trend in self-esteem significantly decreased ($z = -2.68, p < .05$) from baseline to intervention phases, with both changes in trends maintained through follow-up. Estimated effect size indices suggested that for Participant 1 the intervention had stronger effects on self-esteem compared to anxiety (NAPs were .72 and .37 respectively). Nevertheless, Participant 2’s baseline trend in state self-esteem significantly decreased ($z = -4.26, p < .01$) during the intervention and was maintained during follow-up, although the estimated effect size decrease in self-esteem was weak (NAP = .16). For Participant 2, trend changes in self-esteem were not accompanied by significant trend changes in anxiety across intervention and follow-up phases ($p$ values were .10 and .26 respectively). Neither Participant 4 or 5 experienced significant changes in trend in baseline self-esteem and anxiety states during the intervention. However, Participant 4’s trend in state anxiety significantly increased from intervention to follow-up phases; NAP index suggested the trend increase anxiety was a strong effect ($z = 5.70, p < .001$, NAP = .86). Participant 5 experienced a significant weak in effect decrease in trend in state self-esteem from intervention to follow-up ($z = -2.93, p < .001$, NAP = .31). While early withdrawal from treatment might explain the absence of significant
intervention effects for Participant 5, however, this was not the case for Participant 4 who completed all sessions.

Pre- post- levels of self-compassion, death, anxiety, meaning in life, and caregiver quality of life varied for most participants across phases, in ways that did not appear to be associated with trends in daily self-esteem and anxiety states. It was anticipated that incremental increases in self-compassion might be correlated with significantly increased trend in self-esteem states. This was the case for Participant 1, whose self-compassion scores incrementally increased across baseline, session 4, and session 8 assessments, which was consistent with her trend increase in self-esteem across phases. However, other participants reported changes in self-compassion scores at session 4 and 8 that were not congruent with trends in self-esteem states across respective phases.

Trends in death anxiety scores across time points were not associated with trends in state anxiety across phases. It was speculated that changes in death anxiety might also be associated with changes in state anxiety. This was only the case for Participant 1, whose death anxiety scores and trends in state anxiety both decreased across phases. However, Participant 1 reported higher death anxiety at 1-month follow-up compared to session 8 but her trend in state anxiety was still significantly lower at follow-up compared to baseline. For remaining participants, baseline death anxiety scores decreased at session 4 but trends in state anxiety did not significantly change.

Trends in caregiver quality of life scores also varied across time points. Participants 1 and 2 reported incremental increases in baseline quality of life from sessions 4 and 8; however, only Participant 1’s trend in daily state anxiety significantly decreased between baseline and intervention phases. Participants 2 and 4 reported
decreased baseline quality of life at 1-month follow-up; Participant 5’s baseline quality of life was higher at 1-month follow-up.

Meaning in life scores were the most unpredictable, based on participants’ scores on other measures or in trends in self-esteem and anxiety states. Scores were also not consistent with participants’ rating to the items “This therapy motivated me to prioritize activities I find meaningful,” and “This therapy made me more aware of my values.”

Overall, participants’ reported impressions of TIE were positive. All participants attributed one or more subjective benefits to their involvement in the intervention. Nevertheless, participants’ impressions were assessed on the date of their last therapy session, which may have been more conducive for obtaining favorable responses (i.e. due to the “good-bye effect” or clients’ tendency to have positive impressions of therapy/therapist at termination regardless of outcome). With regard to this researcher’s expectations, Participant 1 was the only participant to experience statistically significant changes in mechanisms targeted by the intervention. RRI scores across participants indicated that Participant 1’s impressions of the therapeutic relationship were most congruent with therapist ratings.
CHAPTER 5: DISCUSSION

This chapter discusses the relevance of findings to the research questions and possible alternative explanations for findings based on the literature. Study strengths, and limitations and future research, clinical training, and practice implications are also explored. A chapter summary is included at the end.

This study explored the effects of a novel Terror Management Theory-based intervention (TIE) on stress and nonconsciously terror management mechanisms in five women with spouses receiving treatment for cancer. It was speculated that a spouse with visible side effects from cancer treatment might function as a mortality prime for caregivers, and that insufficient terror management processes might contribute to their conscious stress. The overarching aims of TIE was to reduce stress by fostering values-congruent cognitive and behavioral coping strategies relevant to terror management domains, and to promote reductions in death anxiety through mortality exposure exercises. Given the novel and preliminary basis for the intervention, research questions explored whether TIE would be associated with significant changes in daily self-esteem and anxiety states, and if so, whether they were associated with changes in caregiver self-compassion, death anxiety, quality of life and meaning in life.

Findings suggested TIE was not associated with significant trend changes in self-esteem and anxiety states that were consistent across participants. Thus, a causal relationship between the intervention and observed changes using single case research methods could not be made. There also appeared to be no consistent relationship between significant changes in self-esteem and anxiety states between phases, and trends in self-
compassion, death anxiety, meaning in life, and caregiver quality of life across study time points.

Possible Explanations for Results

It was assumed that homework assignments and a guided meditation on mortality would be sufficient for reducing death anxiety through exposure-like techniques. However, results suggested these techniques did not have a reliable effect on death anxiety across participants. Further, TIE techniques were not consistent with those evidence-based exposure therapies. For example, in Prolonged Exposure Therapy (PE) for posttraumatic stress disorder (PTSD) clients complete multiple imaginal and in-vivo exposures to their trauma, which fosters emotional processing of the trauma and habituation in PTSD symptoms (Eftekhari et al., 2013; Foa et al., 2007 Foa, Hembree, & Rothbaum, 2007). The limited number of mortality-related homework assignments and one mortality “exposure” session may not have been sufficient based on the frequency exposures emphasized in PE. Additionally, PE is anxiety provoking by design, as repeatedly eliciting trauma-related stress is the process through which habituation is believed to occur (Foa et al., 2007). If promoting habituation/desensitization to death anxiety was the aim of TIE, use of guided meditation may not have been appropriate, as this may have elicited a relaxed state not conducive to habituation in symptoms.

It is possible that other intervention factors, such as variable number of sessions completed sessions and/or dose-effect, affected findings. For example, one participant withdrew early from therapy. Only Participant 1 indicated the number of sessions were “sufficient” for helping her meet her goals (the remaining participants rated “mostly sufficient”). It is possible that the majority of participants required additional sessions to
achieve desired effects. Researchers found evidence of psychotherapy dose-effect, or client improvement as a function of treatment length (Kopta et al., 1994). However, it has been suggested that evidence of dose-effect may also reflect “progressive ending of treatment by clients who had achieved a good enough level of improvement” (Barkham et al., 2006, p. 160).

Therapist-client relational factors potentially affected results. Psychotherapy researchers found evidence suggesting common factors, specifically therapist-client relational factors, play a role in successful psychotherapy outcomes, regardless of therapy approach (Imel & Wampold, 2008). For example, working alliance was shown to account for up to 12% of outcomes across variety of psychotherapy modalities (Norcross, 2011; Lambert, 1992). Kirsch, Wampold, and Kelley (2015) noted that “a relationship is necessary for the delivery of any ‘specific’ psychotherapy, otherwise the treatment would not be psychotherapy” (p. 5). Researcher allegiance to the therapy approach was another common factor identified by psychotherapy researchers. This is pertinent to this study because the PI both developed and delivered the therapy (Munder et a., 2013). Across participants, Participant 1’s outcomes were most consistent with this researcher’s expectations; her scores on the Real Relationship Inventory ratings were also most consistent. Finally, client expectations were not assessed but have been shown to affect psychotherapy outcomes (Greenberg, Constantino, & Bruce, 2006).

Changes in spouse’s medical status and/or other external influences on individual participants may have affected outcomes. As previously stated, decline in spouse’s medical status was a significant risk factor for attrition from caregiver intervention studies (Northouse et al., 2010). Due the timing of this study in the PI’s doctoral training,
the PI was unable to obtain IRB approval to collect spousal medical status data beyond screening. It is also unclear to what extent reported changes in quality of life reflect changes in actual circumstances versus participants’ ability to cope with them.

Variation in baseline psychological factors implicated in caregiver research, but not assessed for this study, may account for findings. Attachment style moderated treatment outcomes in studies of caregivers of dementia patients; an anxious-ambivalent was associated with more distorted perceptions and appraisals of stressful situations (Markiewicz et al., 1997; Nelis, Clare, & Whitaker, 2012). Pilkonis’ (1988) proposed the concept of a compulsive caregiving attachment style, or one’s maladaptive tendency to consistently provide help rather than receiving it. Further, attachment style plays an integral role in terror management (Mikulincer et al., 2003). If differences in attachment style played a role in findings, effects might be most apparent as participants approached termination from therapy. One other baseline psychological factor that may have contributed to variable results was social support. While social support was screened, with individuals reporting limited social contact excluded, other aspects of social support, such as number of close friends and/or quality of relationships, were not assessed.

Diverse religious affiliations might have impacted findings. Exclusion criteria for the study was based on religious orientation, rather than religious affiliation; individuals who endorsed highly extrinsic and/or fundamentalist religious beliefs were screened out. However, Participant 5 identified as atheist/agnostic and her intrinsic score on the ROS was the lowest among participants. There is evidence that intrinsic religiousness mitigates worldview defense when mortality is salient (Jonas & Fisher, 2006). It is possible that Participant 5’s atheist/agnostic identity meant she did not possess the same mitigating
cultural worldview as other participants. Nevertheless, TMT researchers also found that
an atheist worldview, consisting of the belief in no life after death, similarly buffered the
negative effects of mortality salience compared to a theistic worldview (Heflick &
Goldenberg, 2011).

It is possible that grief and/or variation in grief symptoms accounted for
variability in mood states. Diagnostically, grief is marked by dysphoria that occurs in
“waves” and intact (usually) self-esteem (APA, 2013). The wave-like phenomenological
nature of grief is partly a function of one’s exposure to reminders of the deceased (APA,
2013) While persons who reported experiencing death of someone close in the past three
months were screened out, no grief measures were used. Additionally, it is possible that
participants in this study were experiencing symptoms of anticipatory grief. According to
researchers, caregivers of patients with terminal diseases are at risk for anticipatory grief
symptoms, especially if they report strain and/or poor adjustment in their role (Nielsen et
al., 2016). Future studies of spouse caregivers might consider use of grief measures at
screening and follow-up.

Lastly, it is possible that findings reflect individual existential coping differences.
Clinicians and theorists have noted the often paradoxical responses of individuals
following confrontations with death and/or existential threats. For example, Schneider’s
(2008) theory of existential therapy assumes a dialectical tendency of for individuals to
react in either expansive (e.g. self-inflating) or constrictive (e.g. self-denying) ways in the
face of existential trauma. PTSD researchers have also not been fully able to explain why
a traumatic event triggers PTSD for some individuals but not for others, and why some
individuals report a positive shift in life-perspective (Yehuda & Le Doux, 2007).
**Study Strengths and Limitations**

Results of this study should be interpreted within the context of its strengths and limitations. Strengths include drawing attention to the complex nature of spouse caregiver stress, and the need for more effective mental health interventions. This study also points to the feasibility of ecological momentary assessment (EMA) using short-message service (SMS) texting in clinical research. Further, this study examined what appears to be the first application of a Terror Management Theory informed psychotherapy. It is notable that most participants reported finding discussion of their own mortality relevant to their daily stress although Participant 5, who withdrew early from treatment, indicated she was “unsure” of the relevance of therapy topics to concerns. No adverse effects were observed or reported by participants who completed a guided meditation on death. All participants attributed increased awareness of their needs to their involvement in the therapy.

Limitations included the small sample size and variability in baseline data. The following factors likely contributed to the excessive variability in baseline data: (a) Short duration of the baseline phase across participants; (b) Participant inexperience with the EMA protocol; and (c) Assessment frequency. These factors might have been mitigated with a longer baseline periods, having more than one EMA orientation session and/or obtaining sample data over days, and collecting data less frequently. Additionally, psychometric factors might also have played a role, as measures were modified and/or used in ways inconsistent with the conditions in which reliability/validity was established.
There were limitations associated with this researcher’s dual role as researcher and therapist. Specifically, the dual role potentially impaired researcher objectivity and effectiveness as a therapist. For example, participants might have perceived a supportive therapist’s role contradicted by a researcher’s role in ensuring complete and timely data collection. The dual role may have prevented some participants from responding to assessments open and honestly. However, the dual role may have contributed positively to some aspects of the study (i.e. high assessment response rate).

Other study limitations include the small number of sessions selected for interrater review, and modified use of measures. For example, death anxiety was assessed based on death acceptance subscale items. It was assumed that lower death acceptance would be synonymous with higher death anxiety, however, this may not have been the case. Additionally, self-report measures of death anxiety are inherently limited given the presumed nonconscious nature of the phenomena. Indeed, researchers note consciously reported fear or anxiety related to death is relatively uncommon in the general population (Dwyer & Davidson, 2012). Palliative care specialists recommend that providers attend to implicit factors (i.e. the patient’s nonverbal cues), in addition to direct verbal report, when assessing how patients are coping with a terminal diagnosis (Maguire & Weiner, 2009). Finally, this study did not administer clinical measures for anxiety and depressive symptoms beyond baseline screening. Thus, it is not known whether fluctuations in psychological constructs of interest were associated with changes in clinical symptoms.

Future Directions

Since this study was conducted, Major, Whelton, and Duff (2016) called for the integration of TMT with psychotherapy research and practice. The researchers noted,
“What remains very understudied is the relationship between TMT findings in social psychology and their ramifications in clinical psychology” (Major, Whelton, & Duff, 2016, p. 22). To this author’s knowledge, this study was the first clinical application and preliminary investigation of a TMT informed psychotherapy. Results of this study suggest further development of such an intervention is needed prior to future research scrutiny. While there was not sufficient evidence to suggest TIE affected targeted mechanisms, future applications of this or other TMT informed therapies should not be ruled out. A number of well established therapies were developed based on insignificant or serendipitous preliminary findings. For example, Interpersonal Psychotherapy (IPT) originated as a control condition in psychotherapy research until findings suggested its efficacy was superior to the “active” therapy (Kirsch, Wampold, Kelley, 2015).

Results of this study may guide future revisions of TIE, or the development of other TMT informed therapies. This author proposes the following revisions to TIE based on this study’s findings: (a) Replace the guided meditation on death and dying with an imaginal exposure more congruent with evidence-based exposure therapies. For example, participants might be asked to imagine their own death during several sessions, perhaps starting with a death the imagine would be more pleasant and working up to one they might find unpleasant; (b) Given the high response to EMA, future revisions to this or other interventions might consider therapeutic use of EMA. For example, transmitting daily mortality reminders and/or mindfulness prompts to clients’ smart phones; and (c) Based on participants’ anecdotal reports, a group component to the intervention may promote further engagement with concepts emphasized in this therapy. A group retreat at
the end of individual sessions might provide an opportunity to practice learned strategies, address potential anxiety-related to termination, and foster healthy peer involvement.

Considerations for future research include use of independent therapist and research staff. Researchers might also consider selection of alternative measures of death anxiety, and other nonconscious TMT constructs (i.e. physicality). Reliable and valid measures of cognitive flexibility and mindfulness should also be incorporated into future research studies; both constructs are relevant to the aims of TIE but were not formally assessed in this study. Measures of anticipatory grief and contingencies of self-worth might also be included, as both may elucidate shifts in caregivers’ relationship to changing external events. As mentioned previously, researchers should consider assessing attachment style at screening, and administering clinical measures of anxiety and depression at all study time points. Finally, inclusion of a measure of caregiver burden, in addition to quality of life, might be useful for more thorough understanding of psychosocial changes in this population.

**Clinical practice and training implications.** Several implications specific to professional psychology training and practice can be drawn from this study. Results of this study point to the complexity of psychological concerns of women caregivers in late adulthood and the need for more effective psychotherapies. Training programs emphasizing developmental/life span models of psychopathology may need to devote more focus to adjustment and grief-related issues associated with common late life events, such as retirement, diagnosis of a chronic disease, assuming a caregiver role, and coping with death. While researchers found death anxiety tends to decline with age, complicated bereavement rates are significantly higher among older adults compared to
younger individuals (9% versus 2.7%; Kersting et al., 2011). This suggests that a proportion of older adults has difficulty coping with death. It is possible that older adults may underreport death anxiety, or experience it as anxiety related to the death of one’s family members or peers. Nevertheless, there appears to be growing interest in social opportunities to discuss death among many older adults. For example, the proliferation of U.S. chapters of Death Cafés – a U.K. based organization formed in 2001 described as a “social franchise” aimed at “increasing awareness of death...helping people make the most of their lives” – received national media attention (Underwood & Reid, 2001; Prichep, 2013).

While there is an increasing number of undergraduate courses on the psychology of death and dying, few graduate-level courses are available to psychologists in training (Eckerd, 2009). Further, the majority of therapies for grief and death-related concerns are delivered by counselors not trained as psychologists, which may point to the lack of emphasis on these issues by clinical and counseling psychology training programs. Grief is rarely assessed in clinical practice and not easily distinguished from normative ways of responding, or from a wide range of psychopathology with similar presentation (i.e. Major Depressive Disorder). The latest iteration of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition provides a paragraph distinguishing grief from MDE, but offers no formal diagnosis for distinguishing normative bereavement from complex grief\(^\text{10}\). There also remain few evidence-based therapies for specifically treating grief. More recently psychologists specializing in grief work have speculated on the potential benefits of mindfulness-based therapies for grieving individuals (Kumar, 2005).

\(^{10}\) “Persistent Complex Bereavement Disorder” is listed as a condition needing further study in DSM-5 (APA, 2013).
Yalom (1980) stressed the importance of therapist reflection on their own mortality, noting many therapists avoid the topic of death out of personal discomfort. This author attempted to be mindful of the personal impact of conducting research and clinical work pertaining to death related concerns through regular practice of mindfulness meditation. Indeed, the process of writing and conducting this study likely consisted of many explicit and implicit mortality reminders for this author. This author’s experience practicing mindfulness meditation throughout the process seemed valuable for managing personal human emotions surrounding death, and for staying present when clients discussed suffering related to death and other difficult realities they faced. Personal disclosure of experiences practicing mindfulness appeared helpful for fostering client interest in both meditation and discussing the topic of death (i.e. as a potential strategy for the making best use of one’s limited life). This observation – of the positive impact of appropriate therapist personal disclosure – is consistent with humanistic therapist qualities emphasized by Yalom and others (Yalom, 1980; Schneider, 2008).

The results of this study afford psychologists with the opportunity to reflect on the current strengths and limitations of existing approaches in meeting the needs of a growing number of older adults and their families. This includes considering the use of new or modified therapy approaches and creative methods of assessment. Flexibility and adaptability in use of these strategies may be key to more effectively meeting the mental health needs of the aging population.

**Summary**

This study provided a preliminary examination of the effects of a terror management theory based intervention on daily anxiety and self-esteem states, and other
outcome measures, in five women with spouses receiving treatment for cancer. The intervention was not associated with significant changes that were consistent across participants. More research on TMT informed psychotherapies is needed given the psychological complexity and presumed existential nature of caregiving concerns.
APPENDIX A: RECRUITMENT MATERIALS

Recruitment Email

Subject: [Research] Stress in Spouses of Cancer Patients

Women between the ages of 18 and 85 with spouses experiencing side effects from cancer treatments are invited to participate in a research study on the effects of a new psychotherapy for reducing stress and improving quality of life.

Other eligibility requirements include:
**Feeling stressed, worried, or anxious for several days over the past month
**Feeling dissatisfied with yourself or low self-worth
**Own a cellphone with text-messaging capabilities
**Regular access to the Internet

Eligible participants will be asked to complete online and text message assessments over the course of 12 to 16 weeks in addition to receiving 8, 1.5-hour sessions of the new psychotherapy at no cost. A Visa gift card will be provided as compensation for completing the assessments.

A University of Iowa doctoral candidate in Counseling Psychology is conducting this study.

Call (515) 523-0843 or email Adam at adam-m-lewis@uiowa.edu for more information.

/**********
Distribution of this message was approved by the University of Iowa's Institutional Review Board. Neither your name nor e-mail address was released to the sender. The policy and guidelines for the UI Mass Mail service, including information on how to filter messages, are available at: http://its.uiowa.edu/massmail.
**********/
APPENDIX B: STUDY INFORMED CONSENT

INFORMED CONSENT DOCUMENT

Project Title: A Terror Management Theory Based Intervention for Anxiety in Spouses of Cancer Patients: A Multiple-Baseline Study

Principal Investigator: Adam M. Lewis, PhD Candidate
Clinical Supervisor: William Ming Liu, PhD
Research Team Contact:
Name: Adam Lewis
Phone: (515) 523-0843
Email: adam-m-lewis@uiowa.edu
Address: Department of Psychological & Quantitative Foundations
361 Lindquist Center
University of Iowa
Iowa City, IA 52242

This consent form describes the research study to help you decide if you want to participate. This form provides important information about what you will be asked to do during the study, about the risks and benefits of the study, and about your rights as a research subject.
- If you have any questions about or do not understand something in this form, you should ask the research team for more information.
- You should discuss your participation with anyone you choose such as family or friends.
- Do not agree to participate in this study unless the research team has answered your questions and you decide that you want to be part of this study.

Purpose of the Study
This is a research study. We are inviting you to participate in this research study because you are a woman between the ages of 18 and 85, you have a spouse that has been diagnosed with cancer in the past five years and are involved in the regular care of your spouse. The purpose of this study is to test a new therapy approach to help you manage stress and improve your quality of life. This new therapy approach, known as Terror Management Theory Integrated Existential Therapy (or TIE for short), has been developed by the Principal Investigator (PI) of this study. TIE is designed to help you achieve a healthier outlook on life and death and to improve your self-worth. TIE is being studied because other forms of counseling have not been shown to be very helpful to people in your situation. This is the first research study and clinical application of TIE.

How Many People Will Participate?
Approximately 15 people will take part in this study at the University of Iowa.

How Long Will I Be In The Study?
If you agree to take part in this study, your involvement lasts between 12 and 16 weeks. You will be asked to complete a screening visit that will take about 1½ hours and eight - 1½ hour long sessions of TIE each week over the course of 8 weeks. You will also be asked to complete assessments via text message 3 times a day over the course of the entire 12-16 weeks study. Each text message assessment takes approximately 1-2 minutes to complete. You will also be asked to complete 4, 15-20 minute long
online assessments over the course of the 12-16 weeks study.

What Will Happen During This Study?
If you are interested in participating in this study you will be asked to meet with the PI for a face-to-face screening appointment. This appointment will take approximately 1½ hours. At the beginning of the screening appointment you will be asked to read over this form and sign it if you agree to participate in this study. After obtaining your written consent to participate, the PI will administer a 10-15 minute cognitive screening interview, during which you will be asked to recall a short list of words, recognize shapes, and to draw a figure.

After the cognitive screening, you will be asked to complete a series of questionnaires on a computer that will take approximately 30-45 minutes. The online questionnaires consist of questions pertaining to your mood over the past week, the amount of family and social support you receive, your spiritual views, attitudes toward death, your mental health treatment history, substance use history, and your level of involvement in your spouse’s care. Examples of the types of questions you will be asked include: “Over the last 2 weeks, how often have you been feeling tired or having little energy?” “In the past week, how many times, if any, did you talk with a friend or relative on the telephone?” You may choose not to respond to any questions you do not feel comfortable answering. However, if you do not respond to questions used to determine your eligibility for this study you will automatically be ineligible for this study. You will be asked to provide the following demographic information on the online screening questionnaire:

- Gender (used for determining your eligibility)
- Age (used for determining your eligibility)
- Year of birth
- Race and ethnicity
- Marital status
- Sexual orientation
- Education level
- Number of children
- Employment status
- Household income
- Religious affiliation

Once you complete the online screening questionnaire, the PI will verify that your cell phone is capable of sending and receiving text messages. You will be provided with a brief orientation on how to complete the daily text message assessments. At the end of your screening appointment, the PI will review your responses to the interview and online questionnaire and you will be told whether or not you are eligible to participate in the study. What happens next is based on the number of participants who are enrolled in the study at the time of your screening appointment.

If at least 4 participants are enrolled:
- The PI will call you within 24 hours of your screening appointment to schedule your first therapy session. All participants will be randomly assigned to staggered start dates: (a) within 1 week; (b) in 1 week; (c) in 2 weeks; (d) in 3 weeks; or (e) in 4 weeks.
You will start receiving daily text message assessments 3 times day.
You will be asked to complete an online questionnaire that takes approximately 15-minutes
to complete. You will be emailed a link to the online questionnaire.

If fewer than 4 participants are enrolled:
- You will not begin the study activities, including assessments and therapy, until at least 3 more
  participants enroll in the study.
- You will be offered a list of local and national mental health resources.
- You may refuse to participate in this study at any time in the future.
- Once enough participants have enrolled the PI will call you by phone to see if you are still
  interested in participating in the study. If you are interested, the PI may need to reassess you over
  the telephone to confirm that you remain eligible for the study.

Text Message Assessments:
You will be asked to complete a 7-item assessment that will be sent to you via text messaging at 3
different times every day. The text messages will be sent to you at random times within each of the
following intervals:
- Between 8:00 AM and noon (Morning)
- Between noon and 5:00 PM (Afternoon)
- Between 5:00 PM and 10:00 PM (Evening)
You will be asked to reply to each individual text message with a single text message that contains your
responses to 7 questions. The questions will ask you to rate to what extent you feel calm, tense, upset,
relaxed, content, worried and have high self-esteem. You will complete these text message assessments
every day for the duration of the study.

Therapy Sessions:
Prior to your first therapy session you will be mailed a therapy workbook, called TIE for Family
Caregivers: Workbook for Terror Management Theory Integrated Existential Therapy, and CD of
guided audio meditations. You will be asked to bring the workbook to your first therapy session and to
review Module 1 beforehand. During your first therapy session we will describe the therapy you will be
receiving, outline what will be expected of you, and answer any questions or concerns you might have.

A typical session may involve the therapist:
- Asking you questions about your mood recently
- Asking you to talk about recent stressful events
- Reviewing homework and exercises you complete in the therapy workbook
- Facilitating a guided meditation
- Helping you set and be accountable to goals you set
- Offering you a different perspective on problems you may be experiencing
- Serving as an active objective listener to any concerns you may have
- Respectfully guiding discussion to promote the most effective use of time
- Assigning homework to complete before the next session

You will be asked to complete a 1½ hour face-to-face session of TIE each week for a total of 8 weeks.
Sessions will all be completed with the PI and will take place at the Iowa City/Johnson County Senior
Center (28 S Linn St., Iowa City, IA 52245).

You will also be asked to complete 4 online assessments of your mood, attitudes toward life and death, stress related to caregiving, and any additional mental health treatment you might be receiving at the following times: (1) On the day you are called to schedule your first therapy session; (2) At the end of session 4; (3) At the end of session 8; and (4) 1-month after you complete therapy. You will be asked to complete assessments 1 and 4 in a quiet, private place at home. Sessions 4 and 8 will be structured so that you will be able to complete assessments 2 and 3 within the usual therapy time. The online assessment you will be asked to complete during session 8 consists of an additional questionnaire, which asks you to provide feedback about the therapy and workbook, your working relationship with the therapist, and the extent to which you practiced applying skills you learned in therapy. Each online assessment will take approximately 15 to 30 minutes to complete.

During one of your face-to-face appointments you will be asked to complete a paper questionnaire which asks you to provide non-personally identifying information about your spouse’s treatment (e.g., year they were first diagnosed, number of treatments, and whether treatment is curative or palliative) and your impression of the disease's impact on your spouse’s daily life. This questionnaire takes approximately 5 minutes to complete. Your responses to this questionnaire will be associated with data from other questionnaires you will be asked to complete for the study.

To help ensure the quality of the treatment you receive, one session will be randomly selected for audio recording. This recording will only be reviewed by authorized members of the research team. The audio recordings will be destroyed once we finish collecting data for the study. You will be informed at the beginning of the session whether or not that session will be audio recorded that day.

If you need to cancel or reschedule an appointment, please call (515) 523-0843 as soon as possible. If you do not show for a session, we will attempt to reach you up to three times. If we do not receive a response from you after three attempts have been made, we will be assumed you are no longer interested in receiving treatment. During this time we will continue to send you online and text message assessments unless you contact us requesting to opt out from them.

Your appointment may be canceled if the Iowa City/Johnson County Senior Center is closed due to inclement weather. You may check with local news outlets or call the Senior Center at (319) 356-5220 to determine if the Center is open.

After Completing Therapy Sessions
After completing all of the therapy sessions, you will continue to receive the daily text message assessments for 1 month. You will also be asked to complete the same online questionnaire that you completed before therapy and at the end of sessions 4 and 8 at 1-month post-treatment.

What are the Risks of this Study?
You may experience one or more of the risks indicated below from being in this study. In addition to these, there may be other unknown risks, or risks that we did not anticipate, associated with being in this study:

- Emotional discomfort with the topic of death. During the first therapy appointment you will be provided with a list of resources to use in the event of an emergency or if you require mental
health care afterhours.

- Privacy risks associated with the use of cellphones and the Internet to collect data. Your text messages will be sent to a Gmail (Google) account created for this study. It is possible that your phone number and the content of text messages sent and received to that account could be viewed by unauthorized persons able to gain access to Google website computers. We will use a 2-step verification process for the Google account and request that you only respond to text message questions with numbers to minimize threats to the security of your data and privacy.
- You will be asked to provide information over the Internet. It is possible that your responses could be viewed by persons who have access to the computers hosting the web site or by unauthorized persons who gain access to the web site computers. We will use a secure web site and computers to collect the study information and we will not collect any information in the online questions or through the web site that would identify you.

What are the Benefits of this Study?
We don’t know if you will benefit from being in this study. However, some of the skills you may learn (e.g. mindfulness meditation) from TIE have been shown to reduce stress. Even if you do not benefit from this study, your participation may help researchers develop more effective treatments in the future.

What Other Options are There?
This study is not your only option for treatment. You may benefit from medication or counseling from clinicians in the Iowa City/Johnson County area.

Will it Cost Me Anything to be in this Study?
The following are costs associated with participating in this study:

- Travel to and from the Iowa City/Johnson County Senior Center
- Parking
- A total of up to 336 text messages will be sent to you during the time you are involved in the study. If your cellphone plan does not include unlimited text messages, you will be responsible for the costs associated with up to 672 sent/received text messages (about 168 per month) at standard text messaging rates.

Will I be Paid to Participate in this Study?
After you complete the study you will be mailed a Visa gift card of up to $50 as compensation for your participation. This amount will be based on your completion of online assessments at the following time points:

- Baseline $10
- Session 4 $10
- Session 8 $10
- 1-month follow-up $20
Who is Funding this Study?
The University and the research team are receiving no payments from other agencies, organizations, or companies to conduct this research study.

What about Confidentiality?
We will keep your participation in this research study confidential to the extent permitted by law. However, it is possible that other people, such as those indicated below may become aware of your participation in this study and may inspect and copy records pertaining to this research. Some of these records could contain information that personally identifies you.

- Federal government regulatory agencies,
- Auditing departments of the University of Iowa, and
- The University of Iowa Institutional Review Board (a committee that reviews and approves research studies)

To help protect your confidentiality, we will use a study ID number instead of your name to identify your study data. The study ID number will not be linked to your name. All records pertaining to this research will be stored on the REDCap data system in compliance with University of Iowa Institutional Review Board Standard Operation Procedures. The REDCap platform is managed by the Institute for Clinical and Translational Science at the University of Iowa.

If we write a report or article about this study or share the study data set with others, we will do so in such a way that you cannot be directly identified.

We will disclose information to the proper authorities that you share with us about situations involving imminent danger and/or risk of harm to yourself or specifically identified others, child abuse, and dependent adult abuse.

Is Being in this Study Voluntary?
Taking part in this research study is completely voluntary. You may choose not to take part at all. If you decide to be in this study, you may stop participating at any time. If you decide not to be in this study, or if you stop participating at any time, you won’t be penalized or lose any benefits for which you otherwise qualify. Your decision to participate or not participate in this study does not impact your eligibility for healthcare services.

What if I Decide to Drop Out of the Study?
Leaving the study early may cause you to experience the following harms or discomforts:

- Increased symptoms of anxiety

If you decide to leave the study early, we will ask you to speak with us. For your safety, the PI and/or clinical supervisor may need to meet with you for the purposes of helping you address any unforeseen negative effects from participating in the study and/or referral to an appropriate treatment provider.

If your decision to withdraw from the study is related to emergent or unforeseen issues that make it difficult for you to participate, we may be able to make accommodations for your continued participation depending on the nature of these issues.

Page 6 of 8
Can Someone Else End my Participation in this Study?
The researchers might decide to end your participation in this research study earlier than planned if your mental health significantly declines during your involvement in the study or if they have concerns about your safety.

What if I Have Questions?
We encourage you to ask questions. If you have any questions about the research study itself, please contact Adam Lewis at (515) 523-0843 (phone) adam-m-lewis@uiowa.edu (email). If you experience a research-related injury, please contact Dr. William Liu at (319) 335-5295 (phone).

If you have questions, concerns, or complaints about your rights as a research subject or about research related injury, please contact the Human Subjects Office, 105 Hardin Library for the Health Sciences, 600 Newton Rd, The University of Iowa, Iowa City, IA 52242-1098, (319) 335-6564, or e-mail irb@uiowa.edu. General information about being a research subject can be found by clicking “Info for Public” on the Human Subjects Office website, http://hsro.research.uiowa.edu. To offer input about your experiences as a research subject or to speak to someone other than the research staff, call the Human Subjects Office at the number above.

This Informed Consent Document is not a contract. It is a written explanation of what will happen during the study if you decide to participate. You are not waiving any legal rights by signing this Informed Consent Document. Your signature indicates that this research study has been explained to you, that your questions have been answered, and that you agree to take part in this study. You will receive a copy of this form.

Subject’s Name (printed): ____________________________________

Do not sign this form if today’s date is on or after EXPIRATION DATE: 02/06/16.

(Signature of Subject) ____________________________ (Date)__________________________

Statement of Person Who Obtained Consent
I have discussed the above points with the subject or, where appropriate, with the subject’s legally authorized representative. It is my opinion that the subject understands the risks, benefits, and procedures involved with participation in this research study.

__________________________________________

Page 7 of 8
(Signature of Person who Obtained Consent)   (Date)
APPENDIX C: SINGLE-ITEM SELF-ESTEEM SCALE

1. I have high self-esteem.

   Not very true of me  1  2  3  4  5  6  7 Very true of me.
APPENDIX D: STATE TRAIT ANXIETY INVENTORY-6 IN FULL FORMAT AND TEXT-MESSAGE ABBREVIATION

A number of statements which people have used to describe themselves are given below. Read each statement and then circle the most appropriate number to the right of the statement to indicate how you feel right now, at this moment. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not at all</th>
<th>Very Much</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I feel calm</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>2. I am tense</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>3. I feel upset</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>4. I am relaxed</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>5. I feel content</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>6. I am worried</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>

*Note.* The original scale uses a 4-point Likert scale.

Text message abbreviation:

```
Right now 1.CALM 2.TENSE 3.UPSET 4.RELAXED 5. CONTENT 6. WORRIED [1=Not very true,...,7=Very true]
```

As it appears, with the SISES, in a single text message to participants:

```
FRM: UI Researcher
MSG: Right now 1.CALM 2.TENSE 3.UPSET 4.RELAXED 5.CONTENT 6.WORRIED 7.HAVE HIGH SELF-ESTEEM [1=Not very true,...,7=Very true]
```
APPENDIX E: TEXT MESSAGE ASSESSMENT AND REFERENCE CARD

Text message ecological momentary assessment (EMA) as it appears to participants:

FRM: UI Researcher
MSG: Right now 1.CALM 2.TENSE 3.UPSET 4.RELAXED 5.CONTENT 6.WORRIED 7.HAVE HIGH SELF-ESTEEM [1=Not very true,…,7=Very true]

Laminated reference card:

<table>
<thead>
<tr>
<th>Not Very True</th>
<th>Very True</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

Right now I feel:
1. Calm  5. Content
2. Tense  6. Worried
3. Upset  7. High self-
4. Relaxed  esteem

→Reply with ONE message
→Separate each response with “#”
APPENDIX F: SELF-COMPASSION SCALE – SHORT FORM

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

<table>
<thead>
<tr>
<th>Almost Never</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Almost Always</th>
</tr>
</thead>
</table>

1. When I fail at something important to me I become consumed by feelings of inadequacy.
2. I try to be understanding and patient towards those aspects of my personality I don’t like.
3. When something painful happens I try to take a balanced view of the situation.
4. When I’m feeling down, I tend to feel like most other people are probably happier than I am.
5. I try to see my failings as part of the human condition.
6. When I’m going through a very hard time, I give myself the caring and tenderness I need.
7. When something upsets me I try to keep my emotions in balance.
8. When I fail at something that’s important to me, I tend to feel alone in my failure.
9. When I’m feeling down I tend to obsess and fixate on everything that’s wrong.
10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
11. I’m disapproving and judgmental about my own flaws and inadequacies.
12. I’m intolerant and impatient towards those aspects of my personality I don’t like.

*Note: the original scale uses a 5-point Likert scale*
APPENDIX G: CAREGIVER QUALITY OF LIFE INDEX-CANCER

Below is a list of statements that other people caring for loved ones with cancer have said are important. Please read each item and circle the response which most applies to you during the past few weeks.

During the past few weeks:

1. It bothers me that my daily routine is altered
   Not at all  A little bit  Somewhat  Quite a bit  Very Much

2. My sleep is less restful
   Not at all  A little bit  Somewhat  Quite a bit  Very Much

3. My daily life is imposed upon
   Not at all  A little bit  Somewhat  Quite a bit  Very Much

4. I am satisfied with my sex life
   Not at all  A little bit  Somewhat  Quite a bit  Very Much

5. It is difficult to maintain my outside interests
   Not at all  A little bit  Somewhat  Quite a bit  Very Much

6. I am under a financial strain
   Not at all  A little bit  Somewhat  Quite a bit  Very Much

7. I am concerned about accessing financial benefits that may be available
   Not at all  A little bit  Somewhat  Quite a bit  Very Much

8. My economic future is uncertain
   Not at all  A little bit  Somewhat  Quite a bit  Very Much

9. I fear my loved one will die
   Not at all  A little bit  Somewhat  Quite a bit  Very Much
10. I have more of a positive outlook on my life since my loved one’s illness
   Not at all   A little bit   Somewhat   Quite a bit   Very Much

11. My level of stress and worries has increased
   Not at all   A little bit   Somewhat   Quite a bit   Very Much

12. My sense of spirituality has increased
   Not at all   A little bit   Somewhat   Quite a bit   Very Much

13. It bothers me limiting my focus day to day
   Not at all   A little bit   Somewhat   Quite a bit   Very Much

14. I feel sad
   Not at all   A little bit   Somewhat   Quite a bit   Very Much

15. I feel under increased mental strain
   Not at all   A little bit   Somewhat   Quite a bit   Very Much

16. I get support from my friends and neighbors
   Not at all   A little bit   Somewhat   Quite a bit   Very Much

17. I feel guilty
   Not at all   A little bit   Somewhat   Quite a bit   Very Much

18. I feel frustrated
   Not at all   A little bit   Somewhat   Quite a bit   Very Much

19. I feel nervous
   Not at all   A little bit   Somewhat   Quite a bit   Very Much

20. I worry about the impact my loved one’s illness has on my children or other family members
   Not at all   A little bit   Somewhat   Quite a bit   Very Much
21. I have difficulty dealing with my loved one’s changing eating habits
   Not at all    A little bit     Somewhat    Quite a bit    Very Much

22. I have developed a closer relationship with my loved one
   Not at all    A little bit     Somewhat    Quite a bit    Very Much

23. I feel adequately informed about my loved one’s illness
   Not at all    A little bit     Somewhat    Quite a bit    Very Much

24. It bothers me that I need to be available to chauffeur my loved one to appointments
   Not at all    A little bit     Somewhat    Quite a bit    Very Much

25. I fear the adverse effects of treatment on my loved one
   Not at all    A little bit     Somewhat    Quite a bit    Very Much

26. The responsibility I have for my loved one’s care at home is overwhelming
   Not at all    A little bit     Somewhat    Quite a bit    Very Much

27. I am glad that my focus is on getting my loved one well
   Not at all    A little bit     Somewhat    Quite a bit    Very Much

28. Family communication has increased
   Not at all    A little bit     Somewhat    Quite a bit    Very Much

29. It bothers me that my priorities have changed
   Not at all    A little bit     Somewhat    Quite a bit    Very Much

30. The need to protect my loved one bothers me
   Not at all    A little bit     Somewhat    Quite a bit    Very Much

31. It upsets me to see my loved one deteriorate
   Not at all    A little bit     Somewhat    Quite a bit    Very Much

120
32. The need to manage my loved one’s pain is overwhelming
   Not at all    A little bit    Somewhat    Quite a bit    Very Much

33. I’m discouraged about the future
   Not at all    A little bit    Somewhat    Quite a bit    Very Much

34. I am satisfied with the support I get from my family
   Not at all    A little bit    Somewhat    Quite a bit    Very Much

35. It bothers me that other family members have not shown interest in
taking care of my loved one
   Not at all    A little bit    Somewhat    Quite a bit    Very Much
APPENDIX H: DEATH ATTITUDE PROFILE-REVISED: DEATH AVOIDANCE SUBSCALE

The following statements pertain to different attitudes toward death. Indicate the extent to which you agree or disagree. If possible, try to use the undecided category sparingly.

Strongly disagree  1   2   3   4   5   6   7 Strongly agree

1. I avoid death thoughts at all costs.
2. Whenever the thought of death enters my mind, I try to push it away.
3. I always try not to think about death.
4. I avoid thinking about death altogether.
5. I try to have nothing to do with the subject of death.
1. What day of the week is it?
2. What is the year?
3. What state are we in?
4. Please remember these five objects. I will ask you what they are later.
   Apple       Pen       Tie       House       Car
5. You have $100 and you go to the store and buy a dozen apples for $3 and a tricycle for $20.
   How much did you spend?
6. How much do you have left?
7. Please name as many animals as you can in one minute.
   0 4 animals    1 5-9 animals    2 10-14 animals    3 15+ animals
8. What were the five objects I asked you to remember? 1 point for each one correct.
9. I am going to give you a series of numbers and I would like you to give them to me backwards. For example, if I say 42, you would say 24.
   0 87           1 648           2 8537
10. This is a clock face. Please put in the hour markers and the time at ten minutes to eleven o’clock.
    Hour markers okay
    Time correct
11. Which of the above figures is largest?
12. I am going to tell you a story. Please listen carefully because afterwards, I’m going to ask you some questions about it.
    Jill was a very successful stockbroker. She made a lot of money on the stock market. She then met Jack, a devastatingly handsome man. She married him and had three children. They lived in Chicago. She then stopped work and stayed at home to bring up her children. When they were teenagers, she went back to work. She and Jack lived happily ever after.
    What was the female’s name?
    What work did she do?
    When did she go back to work?
    What state did she live in?

TOTAL SCORE

<table>
<thead>
<tr>
<th>SCORING</th>
<th>HIGH SCHOOL EDUCATION</th>
<th>LESS THAN HIGH SCHOOL EDUCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>27-30</td>
<td>NORMAL</td>
<td>25-30</td>
</tr>
<tr>
<td>21-26</td>
<td>MILD NEUROCOGNITIVE DISORDER</td>
<td>20-24</td>
</tr>
<tr>
<td>1-20</td>
<td>DEMENTIA</td>
<td>1-19</td>
</tr>
</tbody>
</table>
APPENDIX J: DUKE SOCIAL SUPPORT INDEX: SOCIAL INTERACTION SUBSCALE

1. Number of family members within 1 hour that subject can depend on or feel close to.
2. Number of times past week spent time with someone not living with.
3. Number of times past week talked with friends/relatives on telephone.
4. Number of times past week attended meetings of clubs, religious groups, or other groups that you belong to (other than work)
## APPENDIX K: PATIENT HEALTH QUESTIONNAIRE: DEPRESSION AND ANXIETY SUBSCALES

### 1. Over the last 2 weeks, how often have you been bothered by any of the following problems?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Not at all</th>
<th>Several days</th>
<th>More than half the days</th>
<th>Nearly every day</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Little interest or pleasure in doing things</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>b.</td>
<td>Feeling down, depressed, or hopeless</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>c.</td>
<td>Trouble falling or staying asleep, or sleeping too much</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>d.</td>
<td>Feeling tired or having little energy</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>e.</td>
<td>Poor appetite or overeating</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>f.</td>
<td>Feeling bad about yourself — or that you are a failure or have let yourself or your family down</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>g.</td>
<td>Trouble concentrating on things, such as reading the newspaper or watching television</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>h.</td>
<td>Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>i.</td>
<td>Thoughts that you would be better off dead or of hurting yourself in some way</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

### 2. Over the last 4 weeks, how often have you been bothered by any of the following problems?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Not at all</th>
<th>Several days</th>
<th>More than half the days</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Feeling nervous, anxious, on edge, or worrying a lot about different things.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>b.</td>
<td>Feeling restless so that it is hard to sit still.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>c.</td>
<td>Getting tired very easily.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>d.</td>
<td>Muscle tension, aches, or soreness.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>e.</td>
<td>Trouble falling asleep or staying asleep.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>f.</td>
<td>Trouble concentrating on things, such as reading a book or watching TV.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>g.</td>
<td>Becoming easily annoyed or irritable.</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
APPENDIX L: PRIMARY CARE PTSD SCREEN

Instructions:

In your life, have you ever had any experience that was so frightening, horrible, or upsetting that, in the past month, you:

1. Have had nightmares about it or thought about it when you did not want to?
   YES / NO

2. Tried hard not to think about it or went out of your way to avoid situations that reminded you of it?
   YES / NO

3. Were constantly on guard, watchful, or easily startled?
   YES / NO

4. Felt numb or detached from others, activities, or your surroundings?
   YES / NO
APPENDIX M: RELIGIOUS ORIENTATION SCALE

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

Extrinsic Orientation Subscale:

1. Although I believe in my religion, I feel there are many more important things in my life.
2. It doesn’t matter so much what I believe so long as I lead a moral life.
3. The primary purpose of prayer is to gain relief and protection.
4. The church is most important as a place to formulate good social relationships.
5. What religion offers me most is comfort when sorrows and misfortune strike.
6. I pray chiefly because I have been taught to pray.
7. Although I am a religious person I refuse to let religious considerations influence my everyday affairs.
8. A primary reason for my interest in religion is that my church is a congenial social activity.
9. Occasionally I find it necessary to compromise my religious beliefs in order to protect my social and economic well-being.
10. One reason for my being a church member is that such membership helps to establish a person in the community.
11. The purpose of prayer is to secure a happy and peaceful life.

Intrinsic Orientation Subscale:

12. It is important for me to spend periods of time in private religious thought and meditation.
13. If not prevented by unavoidable circumstances, I attend church.
14. I try hard to carry my religion over into all my other dealings in life.
15. The prayers I say when I am alone carry as much meaning and personal emotion as those said by me during services.
16. Quite often I have been keenly aware of the presence of God or the Divine Being.
17. I read literature about my faith.
18. If I were to join a church group I would prefer to join a Bible study group rather than a social fellowship.
19. My religious beliefs are really what lie behind my whole approach to life.
20. Religion is especially important because it answers many questions about the meaning of life.

Note: Items were interspersed when presented to participants.
APPENDIX N : DEMOGRAPHIC/SCREENING QUESTIONNAIRE

1. Gender:
   _Female
   _Male
   _Other (if so, please specify_______)

2. Age:

3. Which one or more of the following best represents your race?
   a. _White
      _Black or African American
      _Asian
      _Native Hawaiian or Other Pacific Islander
      _American Indian, Alaska Native
      _Bi- or Multi-Racial
      _Other (if so, please specify____)
   b. Do you identify as Hispanic or Latino/Latina?
      YES  NO

4. Do you think of yourself as__?
   _Heterosexual or straight
   _Lesbian, gay or homosexual
   _Bisexual
   _Questioning
   _Other (if so, please specify____)

5. Current relationship status:
   __Single      __Never Married      __Separated   __Divorced
   __Married or with a long-term partner
   If married, indicate for how many years ____

6. Are you currently living with your spouse/partner?
   __Yes  __No

7. Do you have any children?
   __Yes  __No (if no, skip to item 7)
   a. How many children do you have (include any by marriage)?
   b. Age of the youngest child?
   c. Age of oldest child?
   d. Approximately how many miles away is the child who resides the closest to where you live?

8. What is your highest level of education?

128
9. Current employment status:
   _Working full-time_  _Working part-time_
   \[\text{If working, how many hours do you typically work per week? }\_\_\_
   _Unemployed_  _On disability_
  
  _Retired_
  \[\text{If retired, please indicate:}
   \text{Year retired: }____
   \text{Number of years at longest held job: }____

10. What, if any, best describes your religious affiliation? :
   \[\square \text{Atheist/Agnostic} \quad \square \text{Buddhist} \quad \square \text{Catholic} \quad \square \text{Hindu} \quad \square \text{Jehovah’s Witness} \quad \square \text{Jewish} \quad \square \text{LDS/Mormon} \quad \square \text{Muslim} \quad \square \text{Protestant} \quad \square \text{Other: }\underline{} \\
   \square \text{None}

11. How would you rate the importance of faith/belief in your life?
   \[0 \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \]
   \[\text{(Not Important) (Very Important)}\]

12. Have you ever regularly practiced meditation for at least one month?
   Yes  No

13. Have you ever used any of the following hallucinogens or drugs that often lead to profound distortions in one’s perception of reality?
   *LSD or “acid”
   *mescaline/peyote/San Pedro cactus
   *psilocybin or “magic mushrooms”
   *MDMA or “ecstasy”
   *ketamine or “special K”
   *DMT or “Ayahuasca”

   _YES_  _NO (if no, skip to 14)_
   _Not sure: (if so, please explain: )_

   a. In your lifetime, how many times have you used hallucinogens?
   b. When was the last time you used hallucinogens?
14. Do you often provide assistance with any of the following aspects of your spouse’s care?
   _medication or medical device management
   _medical appointments (e.g. scheduling, billing, transportation, or attending them)
   _meal preparation
   _assisting with your spouse’s work schedule or with planning other commitments
   _finances
   _emotional / spiritual support

15. Do you possess a cell phone with text messaging capabilities?
   _YES    _NO (if no, skip to 16)

   a. What is your cellphone service provider (e.g. ATT&T, Verizon, Sprint)

   b. Do you have unlimited text messages as part of your service plan?
      _YES (if yes, skip to 16)
      _NO

      **If no, please note you will be asked to respond to 3 text messages daily which is about 180 total sent and received messages per month.

      If you are enrolled in this study do you understand that standard text messaging rates would apply?
      _YES    _NO

16. Has a mental health professional ever diagnosed you with post-traumatic stress disorder (PTSD)?
    _YES    _NO

    If yes, please indicate what year:_________________

17. Are you currently receiving individual counseling or psychotherapy to manage your mood? (Do not count involvement with a support group).
    _YES    _NO

18. In your lifetime did you ever attempt suicide or deliberately harm yourself because you intended to die?
    _YES    _NO (if no, please skip to 19)

   a. When was the last time you attempted suicide?_______

19. Have you ever deliberately injured yourself without intending to kill yourself?
    _YES    _NO
20. Have you ever been hospitalized for any psychiatric conditions?
   __YES  __NO

21. How comfortable are you with discussing the topic of death and dying as it pertains to you, the people you care about, and suffering in the world?
   
   Very uncomfortable
   Uncomfortable
   Neither Uncomfortable or Comfortable
   Comfortable
   Very comfortable

22. Has a friend or family member with whom you were close to died within the past 3 months?
   __YES  __NO

The following questions pertain to your spouse or partner:

23. Spouse’s gender:
   __Female
   __Male
   __Other (if so, please specify_______)

24. Spouse’s age:

25. Which one or more of the following best represents your spouse’s race?
   __White
   __Black or African American
   __Asian
   __Native Hawaiian or Other Pacific Islander
   __American Indian, Alaska Native
   __Bi- or Multi-Racial
   __Other (if so, please specify____)

26. Is your spouse currently undergoing treatment for cancer?
   __Yes  __No
   *(Check YES if they recently completed a round of treatment and will likely undergo additional treatments)*

27. Do you currently notice the side effects of cancer treatments on your spouse even though you might not pay as much attention to them as you once did?
   __Yes  __No (if no, skip to 28)
a. Please describe what side effects are *currently* noticeable (e.g. hair loss, scars, weight, personality):

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

b. Would a stranger be able to observe most of these aspects?
   __Yes  __No
APPENDIX O: GREYSON NEAR DEATH EXPERIENCE SCALE

Have you ever had a brush with death?
  YES  NO (→ If no, skip to the next page)

1. Did time seem to speed up or slow down?
  YES  NO
2. Were your thoughts speeded up?
  YES  NO
3. Did scenes from your past come back to you?
  _ NO
    _ I remember many past events
    _ My past flashed before me, out of my control
4. Did you suddenly seem to understand everything?
  _ NO
    _ Everything about myself or others
    _ Everything about the universe
5. Did you have a feeling of peace or pleasantness?
  _ NO
    _ Relief or calmness
    _ Incredible peace or pleasantness
6. Did you have a feeling of joy?
  _ NO
    _ Happiness
    _ Incredible joy
7. Did you feel a sense of harmony or unity with the universe?
  _ NO
    _ I felt no longer in conflict with nature
    _ I felt united or one with the world
8. Did you see, or feel surrounded by, a brilliant light?
  _ NO
    _ An unusually bright light
    _ A light clearly of mystical or other-worldly origin
9. Were your senses more vivid than usual?
  _ NO
    _ More vivid than usual
    _ Incredibly more vivid
10. Did you seem to be aware of things going on elsewhere, as if by extrasensory perception (ESP)?
    _ NO
    _ YES, but the facts have not been checked out
    _ YES, and the facts have been checked out
11. Did scenes from the future come to you?
    _ NO
Scenes from my personal future
Scenes from the world’s future

12. Did you feel separated from your body?
   - NO
   - I lost awareness of my body
   - I clearly left my body and existed outside it

13. Did you seem to enter some other, unearthly world?
   - NO
   - Some unfamiliar and strange place
   - A clearly mystical or unearthly realm

14. Did you seem to encounter a mystical being or presence, or hear an unidentifiable voice?
   - NO
   - I heard a voice I could not identify
   - I encountered a definite being, or a voice clearly of mystical or unearthly origin

15. Did you see deceased or religious spirits?
   - NO
   - I sensed their presence
   - I actually saw them

16. Did you come to a border or point of no return?
   - NO
   - I came to a definite conscious decision to “return” to life
   - I came to a barrier that I was not permitted to cross; or was “sent back” against my will
APPENDIX P: MEANING IN LIFE QUESTIONNAIRE

MLQ Please take a moment to think about what makes your life feel important to you. Please respond to the following statements as truthfully and accurately as you can, and also please remember that these are very subjective questions and that there are no right or wrong answers. Please answer according to the scale below:

<table>
<thead>
<tr>
<th>Absolutely</th>
<th>Mostly</th>
<th>Somewhat</th>
<th>Can't Say</th>
<th>Somewhat</th>
<th>Mostly</th>
<th>Absolutely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

1. ___ I understand my life’s meaning.
2. ___ I am looking for something that makes my life feel meaningful.
3. ___ I am always looking to find my life’s purpose.
4. ___ My life has a clear sense of purpose.
5. ___ I have a good sense of what makes my life meaningful.
6. ___ I have discovered a satisfying life purpose.
7. ___ I am always searching for something that makes my life feel significant.
8. ___ I am seeking a purpose or mission for my life.
9. ___ My life has no clear purpose.
10. ___ I am searching for meaning in my life.

MLQ syntax to create Presence and Search subscales:
Presence = 1, 4, 5, 6, & 9-reverse-coded
Search = 2, 3, 7, 8, & 10

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APPENDIX Q: REAL RELATIONSHIP INVENTORY – CLIENT FORM

Real Relationship Inventory—Client Version

Items

Instrument Directions: Please complete the items below in terms of your relationship with your therapist. Use the following 1–5 Likert scale in rating each item. Scale: (5) Strongly Agree; (4) Agree; (3) Neutral; (2) Disagree; (1) Strongly Disagree.

Genuineness

1. I was able to be myself with my therapist.
2. I was holding back significant parts of myself.
3. I appreciated being able to express my feelings in therapy.
4. I was open and honest with my therapist.
5. My therapist seemed genuinely connected to me.
6. I was able to communicate my moment-to-moment inner experience to my therapist.
7. My therapist was holding back his/her genuine self.
8. My therapist and I were able to be authentic in our relationship.
9. My therapist and I had an honest relationship.
10. My therapist and I expressed a deep and genuine caring for one another.
11. I felt there was a significant holding back in our relationship.
12. It was difficult for me to express what I truly felt about my therapist.

Realism

2. My therapist and I had a realistic perception of our relationship.
3. My therapist liked the real me.
4. It was difficult to accept who my therapist really is.
5. My therapist’s perceptions of me seem colored by his or her own issues.
6. The relationship between my therapist and me was strengthened by our understanding of one another.
7. I appreciated my therapist’s limitations and strengths.
8. We do not really know each other realistically.
9. I was able to see myself realistically in therapy.
10. I was able to separate out my realistic perceptions of my therapist from my unrealistic perceptions.
11. I had a realistic understanding of my therapist as a person.
12. My therapist did not see me as I really am.
13. My therapist’s perceptions of me were accurate.

Note. Reversed-scored items: 3, 6, 8, 12, 14, 21, 22, and 24.
APPENDIX R: REAL RELATIONSHIP INVENTORY – THERAPIST FORM

Real Relationship Inventory—Therapist Form

<table>
<thead>
<tr>
<th>Items</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My client is able to see me as a real person separate from my role as a therapist.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2. My client and I are able to be genuine in our relationship.</td>
<td></td>
<td></td>
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<tr>
<td>3. My client feels liking for the “real me.”</td>
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<tr>
<td>4. My client genuinely expresses his/her positive feelings toward me.</td>
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<tr>
<td>5. I am able to realistically respond to my client.</td>
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<tr>
<td>6. I hold back significant parts of myself.</td>
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<tr>
<td>7. I feel there is a “real” relationship between us aside from the professional relationship.</td>
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<tr>
<td>8. My client and I are honest in our relationship.</td>
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<tr>
<td>9. My client has little caring for who I “truly am.”</td>
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<tr>
<td>10. We feel a deep and genuine caring for one another.</td>
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<tr>
<td>11. My client holds back significant parts on him/herself.</td>
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<tr>
<td>12. My client has respect for me as a person.</td>
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<tr>
<td>13. There is no genuinely positive connection between us.</td>
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<tr>
<td>14. My client's feelings toward me seem to fit who I am as a person.</td>
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</tr>
<tr>
<td>15. I do not like my client as a person.</td>
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<tr>
<td>16. I value the honesty of our relationship.</td>
<td></td>
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<tr>
<td>17. The relationship between my client and me is strengthened by our understanding of one another.</td>
<td></td>
<td></td>
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<tr>
<td>18. It is difficult for me to express what I truly feel about my client.</td>
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<tr>
<td>19. My client has unrealistic perceptions of me.</td>
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<tr>
<td>20. My client and I have difficulty accepting each other as we really are.</td>
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<tr>
<td>21. My client distorts the therapy relationship.</td>
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<td></td>
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<tr>
<td>22. I have difficulty being honest with my client.</td>
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<tr>
<td>23. My client shares with me the most vulnerable parts of him/herself.</td>
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<tr>
<td>24. My client genuinely expresses a connection to me.</td>
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</tbody>
</table>

Note. Realism subscale items = 1, 3, 5, 7, 9, 12, 14, 15, 17, 19, 20, 21; Genuineness subscale items = 2, 4, 6, 8, 10, 11, 13, 16, 18, 22, 23, 24. Reverse scored items 6, 9, 11, 13, 15, 18, 19, 20, 21, and 22.
APPENDIX S: TIE FIDELITY RATING CHECKLIST

For each item rate 0=no 1=yes

Session 1: Introduction and Assessment
1. Discusses the theoretical rationale for intervention
2. Mentions that the intervention is experimental
3. Discusses the length, frequency, and duration of sessions
4. Provides pre-treatment assessment feedback
5. Allows time for client questions
6. Elicits mortality salience through written activity
7. Assesses aspects of self-esteem
8. Assesses aspects of cultural worldview
9. Assesses aspects of close relationships
10. Discusses meditation
11. Collaborates with client in establishing a plan for meditation practice
12. Discusses potential barriers to adhering to meditation plan
13. Facilitates a brief closing meditation

Session 2: Death Anxiety and Everyday Stress
1. Checks in on meditation practice
2. Praises client’s efforts over the past week
3. Normalizes the client’s difficulties with aspects of meditation
4. Discusses the concept of stress
5. Describes stress as not necessarily “bad” or “good”
6. Explains the connection between stress and health (psychological AND physical) problems
7. Mentions “humans evolved to feel stress/anxiety”
8. Compares and contrasts stress and stressors of ancestors and people today
9. Explains how death anxiety is relevant to everyday stress and nonspecific anxiety
10. Explains how reminders of death may affect how the client thinks and feels
11. Facilitates client insight into mortality reminders in their daily life
12. Facilitates a brief closing meditation
13. Reminds client of the time and number of sessions at the beginning of the session

Session 3: Promoting Healthy Mortality Awareness
1. Checks in on meditation practice
2. Provides a brief overview of Terror Management Theory
3. Allows time for the client to ask questions about Terror Management Theory
4. Discusses the benefits of mortality awareness
5. Provides examples and non-examples of healthy mortality awareness
6. Allows time for client to ask questions about the concept of healthy mortality awareness
7. Completes the My Deathbed exercise with the client
8. Explains how to complete the My Life To-Do List homework exercise
9. Checks in with the client’s emotions AND somatic responses at least once
10. Facilitates a brief closing meditation  
11. Reminds client of the time and number of sessions at the beginning of the session

Session 4: Radical Acceptance and Self-Compassion  
1. Checks in on meditation practice  
2. Discusses the concept of radical acceptance  
3. Completes Accepting Life on Life’s Terms with the client  
4. Discusses the concept of self-compassion  
5. Responds to the client’s questions about radical acceptance and self-compassion  
6. Completes the Free to Be Me exercise with the client  
7. Introduces the How Would You Treat a Friend homework assignment  
8. Explains the Self-Compassion Break worksheet  
9. Negotiates number of times to use the Self-Compassion Break worksheet  
10. Suggests client refer to the Free to Be Me exercise when practicing loving-kindness meditations  
11. Facilitates a loving kindness meditation  
12. Reminds client of the time and number of sessions at the beginning of the session

Session 5: Choosing What Matters  
1. Checks in on client’s meditation practice.  
2. Discusses the concept of choice  
3. Provides examples and counter-examples of choice  
4. Completes the “Making a Choice” exercise with the client  
5. Helps the client see their decision-making process as part of the human condition  
6. Discusses the concept of values  
7. Provides examples and non-examples of values  
8. Allows client the opportunity to ask questions  
9. Completes the Choosing What Matters exercise with the client  
10. Facilitates closing meditation.  
11. Reminds client of the time and number of sessions at the beginning of the session

Session 6: Living Fully  
1. Checks in on client’s meditation practice  
2. Introduces concept of living fully  
3. Introduces CAMP (Compassion, Acceptance, Mortality Awareness, Present Living)  
4. Fosters acceptance of failure through normalization  
5. Challenges the client to “fail better”  
6. Fosters client taking appropriate responsibility for setbacks  
7. Validates client’s paradoxical and/or ambivalence about choosing new ways of being (e.g. “On one hand you feel _____ on the other hand you feel _____”)  
8. Relates client’s ambivalence to in-session experience (e.g. “As we talk about your mixed feelings, what is going on for you right now, right here?”)  
9. Introduces Choices to Consider handout  
10. Facilitates closing meditation

*Note: Sessions 7 and 8 will not be rated for fidelity due to the objectives covered.
APPENDIX T: PARTICIPANT WORKBOOK

TIE for Family Caregivers

Workbook for Terror Management Theory Integrated Existential Therapy
Sessions 1 through 6

Adam M. Lewis
Ph.D. Candidate

11 Numbered blank pages are omitted
Participant Workbook for Terror Management Theory Integrated Existential Psychotherapy

Adam M. Lewis

Author: Adam M. Lewis, Ph.D. Candidate, Department of Psychological and Quantitative Foundations, University of Iowa.

About this Workbook: This workbook was originally developed and written for the author’s dissertation research project, entitled: Terror Management Theory Based Psychotherapy for Anxiety in Spouses of Cancer Patients: A Multiple-Baseline Study. The information included in this workbook is factual to the best of the author’s knowledge. This workbook is not intended to replace or countermand advice given to you by your healthcare providers. No names and identifying details of actual people are used. Any similarity to actual persons is coincidental.

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Breathing in,
I see the birth of the wave.
Breathing out,
I smile to the death of the wave.
Breathing in,
I see the birthless nature of the water.
Breathing out,
I smile to the deathless nature of the water.

--Thich Nhat Hanh
# Table of Contents

Module 1: Introduction and Assessment  
   Session 1 .......................................................... 3

Module 2: Death Anxiety and Everyday Stress  
   Session 2 .......................................................... 13

Module 3: Terror Management Strategies  
   Session 3: Promoting Healthy Mortality Awareness ............... 25  
   Session 4: Radical Acceptance and Self-Compassion ............... 45  
   Session 5: Choosing What Matters .................................. 61

Module 4: Living Fully  
   Session 6 .................................................................. 79

Appendix A:  
   Meditation Practice Log ............................................. 89

Appendix B:  
   365 Achievable Things to Do Before You Die ....................... 115

Resources ...................................................................... 125

About the Author .......................................................... 127
Module 1: Introduction and Assessment

Session 1

When you come back to the here and now, you will recognize the many conditions of happiness that already exist.

—Thich Nhat Hanh

Objectives

- To learn about the treatment
- To help your therapist get to know you
- To learn about meditation
- To foster realistic expectations

Overview of Treatment

The author developed Terror Management Theory Integrated Existential Psychotherapy (TIE) for spouses of patients with cancer. It incorporates concepts from research on Terror Management Theory and mindfulness meditation, as well as existential-humanistic therapy practices. TIE is believed to reduce symptoms of anxiety and improve quality of life by helping you: (1) achieve a new perspective on life and death, (2) improve your self-worth, and (3) prioritize meaningful activities. There is evidence that some of the skills you will learn (i.e. meditation) may reduce stress. However, TIE has never been delivered or studied before; therefore, its effects are unknown.
Treatment Aims

The specific aims of TIE include helping you:

- Be more present with yourself and others
- Accept what you can and cannot change
- Choose new ways of managing stress
- Prioritize activities that give your life meaning

Your First Session

During the first session, your therapist will ask you to write in the space below as part of an exercise. Please leave this space blank until then.
Meditation

Meditation refers to a variety of secular and religious practices for cultivating awareness of the present moment. Examples of meditation practices include relaxation, guided imagery, yoga, and mindfulness. The type of meditation you will be practicing is psychology-based and not affiliated with a religious belief system.

Meditation doesn’t require any special abilities. In fact, if you ever lost track of time because you were so busy with a monotonous activity — such as driving, washing the dishes, or walking — then you experienced meditation. If you are reading this sentence, you have what it takes to meditate.

What are the potential benefits of meditation? A review of 47 research studies on meditation found that practicing it for two to six months was as effective for treating anxiety and depression as many antidepressants. Unlike medication no negative side effects were reported with meditation. Nevertheless, meditation may not be helpful for everyone. If you have questions about whether meditation is appropriate for you, discuss them with your therapist and your physician.

Getting Started

You don’t need to purchase anything to meditate. You can meditate anywhere: while seated, standing, walking, or lying down. Seated meditation, on a chair or cushion, is recommended for beginners.

If you have chronic knee problems, you may prefer to use a chair. Pick one you won’t easily fall asleep in. When meditating in a chair, sit upright with both feet flat on the floor.

If you use a cushion, select one that is firm like a sofa cushion. The cushion should be at a height that promotes blood flow in the legs. Feel free to use additional cushions. A zafu is a cushion specifically designed for sitting meditation, which can be purchased online or at many yoga studios.

During seated meditation, sit upright with an attitude of confidence. Your spine should be erect but not stiff, like a stack of coins. The lower part of

---

the back and pelvis should curve slightly. Eyes open or closed are both fine. Below is a diagram of various seated meditation positions.

Various Seated Meditation Positions

Finding a Space

Consider designating a space in your home for meditation. In this space you might include a picture or statue of an inspiring person, an uplifting quote, a candle, spiritual text, or any other visual reminder of what's important to you.

It might be helpful to let close family members know you will be meditating. This can both reduce distractions from them and provide those who depend on you an opportunity to be supportive.

If it is difficult to find a quiet place in your home, consider using a hospital meditation room or a room you reserve at your local library or place of worship. Meditating in your car is another option; however, please do not meditate while driving. What matters most about where you meditate is that you are there. Write down some places where it's possible for you to meditate in the space below.

<table>
<thead>
<tr>
<th>Places Where I Can Meditate:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.</strong></td>
</tr>
<tr>
<td>Advantage:</td>
</tr>
<tr>
<td>Disadvantage:</td>
</tr>
<tr>
<td><strong>2.</strong></td>
</tr>
<tr>
<td>Advantage:</td>
</tr>
<tr>
<td>Disadvantage:</td>
</tr>
<tr>
<td><strong>3.</strong></td>
</tr>
<tr>
<td>Advantage:</td>
</tr>
<tr>
<td>Disadvantage:</td>
</tr>
</tbody>
</table>
How Long and How Often?

Benefitting from meditation requires frequent practice. How often you meditate is more important than the amount of time you spend meditating. Take a firm but gentle stance with yourself when it comes to sticking to your practice frequency goals. Start out with 10-minute-long sessions, three to five times per week. Gradually, you may decide to meditate for longer periods. However, always do what feels comfortable to you, even if it means sitting for less time. For more experienced meditators, 15 to 30-minute-long sessions, four to five times per week is sufficient.

Some people like to meditate in the morning after drinking coffee or tea. Others prefer to meditate as soon as they come home from work. Find a regular time of day that works well for you. The ideal time is when you are feeling alert, although this won't always be feasible. Don't let feeling tired or distracted keep you from meditating. It is okay to fall asleep. As a meditation teacher of mine once said, "You will wake up eventually." If you feel tired, make sure the lights are on in the room. Sit upright and try to keep your eyes open. If you still end up falling asleep, count it as time spent meditating. Don't dwell on it. See if you can stay awake next time.

Working with Discomfort and Pain

Meditation can help you become more aware of your mind and body. At times, you may notice your heart rate, the temperature in your hands, muscle tension, and areas of chronic pain. These sensations are normal and usually pass. However, please see the next page for sensations that require immediate medical assistance. The following paragraph pertains to sensations that aren't signs of a serious medical condition.

Try to observe what's happening in your body without coming up with a story about it. If you become distracted with some aspect of your body, try counting the breaths as you breathe naturally. Count up from one to ten, returning to one any time the mind wanders or if you reach ten. The goal is not to reach ten, but to be mindful with each breath. Our tendency is to try to avoid discomfort, even though this can cause us additional suffering. Many people with chronic pain unknowingly react to it by tensing up their necks and shoulders. Over time, neck and shoulder pain may develop in addition to the primary source of chronic pain. Meditation can help you become more aware of how you react to pain and to other challenges you face. This can give you the freedom to not respond in ways that cause you additional suffering.
If you have any of the following symptoms, you may be having a heart or attack or stroke and need to call 9-1-1 immediately:

**Signs of Stroke (F.A.S.T.)**

**F**ace Drooping: does one side of the face droop or is it numb?
**A**rm Weakness: is one arm weak or numb?
**S**peech Difficulty: is it difficult to speak or is speech slurred?
**T**ime to call 9-1-1: if you experience any of these symptoms

**Heart Attack Signs in Women**

1. Uncomfortable pressure, squeezing, fullness or pain in the center of your chest. It lasts more than a few minutes, or goes away and comes back.
2. Pain or discomfort in one or both arms, the back, neck, jaw or stomach.
3. Shortness of breath with or without chest discomfort.
4. Other signs such as breaking out in a cold sweat, nausea or lightheadedness.
5. As with men, women's most common heart attack symptom is chest pain or discomfort. But women are somewhat more likely than men to experience some of the other common symptoms, particularly shortness of breath, nausea/vomiting and back or jaw pain.

If you have any of these signs, don’t wait more than five minutes before calling for help.

---

What if I Become Distracted Or Have Unwanted Thoughts?

It is normal to have doubts about your ability to sit quietly for any amount of time. Maybe you believe you can’t meditate because you don’t have a certain level of attention or you have too many unwanted thoughts. While these are reasonable concerns, they are based on common myths about the mind. We are wired to think about multiple things and plan for the future. No amount of meditation can keep anyone with a brain from ever being distracted or from having unwanted thoughts.

Psychologists asked healthy research subjects to repeatedly think about a white bear for five minutes. Subjects were then asked to ring a bell each time they thought about a white bear. After subjects thought about a white bear as much as they could for five minutes, they were then asked to not think about a white bear for the same amount of time. Subjects were still instructed to ring a bell if they thought about a white bear. The results were not what the researchers expected. As it turns out, subjects thought about a white bear more often when they were not supposed to. Different researchers reported similar findings. The conclusion: the more you try to avoid having unwanted thoughts, the more likely you are to have them.

Expect occasional unwanted thoughts and your mind to wander. These are what minds tend to do. The mind is like the weather. You can’t control what you happen to be thinking or feeling at any moment, just as you can’t control the temperature outside. You can do things to increase your chances of waking up in a better mood. However, even people who wake up to sunshine most days experience stress from what they cannot change.

A Zen Perspective on Meditation (Optional)

Buddhists invented the practice of Zazen, a type of seated meditation. The following story may be helpful for fostering realistic expectations:

A young monk was frustrated because of her perceived difficulty with meditation. Unable to determine what she was doing wrong, she met with her teacher.

"Even after 10 years of practicing Zazen my mind still wanders and my knees hurt after I get up from the lotus [seated] position. I worry I am not cut out for monastic life!"

After a long pause, the teacher replied, "After 35 years of practicing Zazen, my mind wanders and my knees hurt every time I get up from the lotus position. How could you not be cut out for monastic life?"

Below is another Zen perspective on meditation:

Consider you hold a hollow bamboo tube with a garter snake inside. Your task is to keep the snake both alive and contained. You cover both open ends of the tube with your hands. You will need to keep your hands loose enough to let the snake breathe, but not so loose that the snake escapes.

In this metaphor, the bamboo tube represents the structure of your meditation practice. This includes how often you practice, your posture, and ability to focus on your breathing. These are aspects you can control.

The snake represents unstructured aspects of meditation, such as the mind's tendency to wander, moment-to-moment emotions, bodily sensations, and external circumstances that interfere with your practice. These are aspects you have little or no control over.

Your hands represent your level of discipline and commitment. Be both gentle and firm with yourself when it comes to sticking to your goals. Gentleness allows you room to breathe and grow, while firmness keeps you accountable to your goals. Don't let the snake get away! The picture on the next page is a summary of the snake and bamboo tube metaphor.
Homework

Each week your therapist will recommend certain meditation tracks on the CD you were provided with. Your therapist will help you set goals for the amount of meditation you practice that week based on your individual needs. Each week you will turn in meditation logs, which are located at the back of this workbook. Your therapist may also assign homework to complete before the next session.

About Using this Workbook

The purpose of the workbook is not to give you advice, but rather new strategies for you to consider. It is ultimately your choice whether or not to use them. You also have a choice to keep doing what you’ve always done to manage stress or to try something different. Only you will know if what you tried was successful in helping you feel better.

Try to approach this workbook with an open mind. You don’t need to memorize or agree with everything in this workbook. There are no quizzes or exams. For the exercises, creativity and coloring outside of the lines is encouraged. If you have any questions or reactions related to what you read, write them down and bring them up with your therapist. Your feedback will help improve future treatments.
Module 2: Death Anxiety and Everyday Stress

Session 2

To live is to suffer; to survive is to find meaning in suffering.

—Viktor Frankl

Objectives

- To learn about stress and anxiety
- To explore the connection between death anxiety and stress you experience
- To become aware of mortality reminders in your life

Overview

This module explores the potential relationship between stress, anxiety, and death anxiety. You will also learn how death anxiety may contribute to your stress in ways you were not aware of.

What is Stress?

Stress occurs whenever something challenges our expectations or disrupts our usual patterns. In other words, stress happens when things don’t go our way. When designing bridges, engineers need to account for stress caused by the weather and traffic. Human stress is similar. Stress is not necessarily “bad” or “good” it is a fact of life. We suffer from stress when we don’t account for it, or when we manage it in ways that aren’t helpful.
Suffering from Stress

Suffering from stress is harmful to one's health. Chronic suffering from stress is associated with anxiety disorders, high blood pressure, and irritable bowel syndrome (IBS). Some stressors create more stress than others. While being in a stressful environment might lead to stress that is difficult to manage, one can practice strategies to reduce their chances of suffering. People cope with stress based on what limited resources are available to them. Many people cannot afford a gym membership or yoga classes. Others may have a family history of anxiety disorders and may require psychotherapy or medication. However, sometimes people overlook or choose not to pursue resources they have access to.

<table>
<thead>
<tr>
<th>How I Manage Stress:</th>
</tr>
</thead>
<tbody>
<tr>
<td>In what ways have you tried to manage stress in the past? How helpful were these methods?</td>
</tr>
<tr>
<td>Unhelpful</td>
</tr>
<tr>
<td>Unhelpful</td>
</tr>
<tr>
<td>Unhelpful</td>
</tr>
<tr>
<td>Unhelpful</td>
</tr>
</tbody>
</table>

| In what ways are you coping with stress right now? How helpful are these methods? |
| Unhelpful | Not Sure | Helpful | Check if you would use this method again |
| Unhelpful | Not Sure | Helpful |
| Unhelpful | Not Sure | Helpful |
| Unhelpful | Not Sure | Helpful |

---


Anxiety and Evolution

Anxiety is an unpleasant emotional and physical reaction to stress. It includes feelings of fear and apprehension, increased heart rate, sweating, muscle tension, and stomach discomfort. Some scientists believe humans evolved the ability to feel anxiety. Anxiety can help us quickly respond in life-threatening situations. For example, who do you think would run away more quickly at the sound of a bear: the person who felt a surge of anxiety or the person who couldn’t panic?

Our automatic reactions to stress may not have changed much over time. According to neuroscientists, automatic anxiety reactions involve primitive parts of the brain. Nevertheless, human daily life is much different than it was even 50 years ago. Unlike our ancestors, most of us don’t frequently encounter life-threatening situations. The table below explores the potential role of anxiety in human everyday life over time.

<table>
<thead>
<tr>
<th>Areas</th>
<th>Our Ancestors</th>
<th>People Today</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical environment</td>
<td>any change in weather, dangerous animals, finding safe drinking water</td>
<td>natural disaster, noise, bright lights, pollution</td>
</tr>
<tr>
<td>Organizational</td>
<td>tribal affiliation/status, physical strength and agility</td>
<td>laws, socioeconomic status, social rules, work-related, meeting deadlines</td>
</tr>
<tr>
<td>Major life events</td>
<td>childbirth, acute illness, any injury, death</td>
<td>marriage, buying a home, family planning, chronic diseases, divorce, unemployment, death</td>
</tr>
<tr>
<td>Daily hassles</td>
<td>having enough food, surviving</td>
<td>hygiene, commuting, managing money, household chores</td>
</tr>
<tr>
<td>Underlying fear</td>
<td>Death</td>
<td>Social disapproval / being cut off from society’s resources</td>
</tr>
</tbody>
</table>

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Anxiety in Non-life Threatening Situations

While anxiety is helpful for responding in life-threatening situations, our lives are no longer as dangerous as they were for our ancestors. Today many people suffer from anxiety that isn’t helpful because they experience it in situations that aren’t dangerous. According to the National Institute of Mental Health, over 18% of adults in the United States suffer from an anxiety disorder.

Anxiety disorders are associated with a pattern of “thinking and acting as if there is danger when there is no real danger.”¹ In other words, people with anxiety disorders tend to see the world as a threatening and dangerous place. The media often reinforces this type of worldview. For example, we’re constantly exposed to news stories on what can kill us as opposed to what’s more likely to. According to the U.S. Department of Health and Human Service, heart disease is the leading cause of death for Americans.²

² http://www.anxietybc.com/sites/default/files/RealisticThinking.pdf
³ http://www.cdc.gov/nchs/data/series/sr_06/sr06_05.pdf
Am I Over-Estimating Danger?

Believing something is dangerous when, in fact, it is not causes us unnecessary suffering. Here are some questions for helping you challenge anxiety in non-life threatening situations:

- Am I confusing what’s possible with what’s probable?

- What is my chance of dying from this? What evidence do I have for and against this?

- What is the worst that could happen?
  - If the worst happened, will I have access to food and shelter? Will I still have the ability to communicate with others?

- Am I more afraid of dying or of being embarrassed in this situation?

- Is this my fear or somebody else’s fear?

- One month from now, will this situation feel as bothersome? What about in 10 years?

- Think of someone who seems to “have it all together,” or someone of sound mind. What might they do in this situation?
Death Anxiety

How did the fear of a tiger at the watering hole become fear of humiliation at the office water cooler? Put simply, our lives and minds are more sophisticated than those of Neanderthals. While our automatic reactions to anxiety may be similar, how we think and act in response to its triggers is much different.

Death anxiety refers to anxiety related to death and/or survival in the modern world. It is not usually consciously experienced as fear of death but as anxiety related to major life transitions, alienation, or loss of social status. Survival in the modern world requires social skills for obtaining a job, attracting a mate, or relying on social programs to meet our basic needs. Social alienation and stigmatization are associated with unemployment and higher mortality rates.

Indeed, studies suggest that fear of public speaking is more common than fear of death. Some psychologists have questioned whether people actually fear public speaking more than death or if this reflects our innate tendency to avoid thinking about death. There is good evidence to suggest people avoid thinking about death in ways they aren’t aware of.

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How Can Something I’m Not Aware of Affect Me?

If you’re wondering how you can be impacted by something you’re not aware of, imagine being so engrossed with a task you “forget” to eat. Suddenly you realize you are hungry and it’s much later than the time when you usually eat lunch. How did it finally occur to you that you are hungry? If most of your attention was devoted to a task, you may not have noticed physical signs of hunger. Your nose could have detected the smell of food in another room without you realizing it. If you were in a work environment, your ears could have picked up on the sound of your coworkers walking to the lunchroom.

The amount of profit generated from advertising campaigns points to the impact of messages we don’t perceive or try to ignore. Americans are exposed to over 850 advertisements each day on average. Do you remember the last ad you saw and the product it featured? Perhaps you saw a commercial on television that seemed to have little or nothing to do with the product being sold. Yet these ads may have contained messages capable of being registered by our eyes and ears but not perceived consciously. 23 milliseconds, or less than one second, is all the time needed for the brain to register visual information. Indeed, researchers found that flashing the name of an iced tea brand at this speed was enough to affect their brand preference.

Mortality Reminders

A mortality reminder is any person, situation, or symbol capable of consciously or unconsciously reminding us of our vulnerability to death. Mortality reminders are a lot like advertisements in terms of how they may be perceived. Examples of mortality reminders include the news, obituaries, hospitals, cemeteries, health prevention campaigns (e.g. a picture of a diseased lung on a pack of cigarettes), and the human body. In the next chapter you will learn more about research on the effects of mortality reminders. The worksheet on the next page asks you to consider possible mortality reminders in your daily life.

## Worksheet: Mortality Reminders in Your Life

This worksheet asks you to consider mortality reminders you may encounter in your life.

<table>
<thead>
<tr>
<th>Mortality Reminder</th>
<th>How it’s Perceived (e.g., which of the five senses)</th>
<th>Frequency of Contact (1=very infrequent, 5=very frequent)</th>
<th>How I Often Respond</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Example:</strong></td>
<td></td>
<td></td>
<td>Sigh, cross arms, turn the channel</td>
</tr>
<tr>
<td>War in the news</td>
<td>Sight and sound</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

Adam M. Lewis  
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Summary of Terms

**Death Anxiety:** Anxiety related to death and/or survival in the modern world. It is usually not consciously experienced as anxiety related to death but as anxiety related to major life transitions, losses, and health concerns.

**Mortality Reminder:** Any person, situation, or symbol capable of consciously or unconsciously reminding us of our vulnerability to death.

Notes to Myself

Feel free to write down any notes or questions you have about the material.
Module 3: Terror Management Strategies

Session 3: Promoting Healthy Mortality Awareness

Carve your name on hearts, not tombstones. A legacy is etched into the minds of others and the stories they share about you.

—Shannon Alder

Objectives

- To learn about Terror Management Theory
- To learn how mortality reminders might affect you
- To cultivate healthier terror management strategies

Overview

Over the next three sessions you will learn about Terror Management Theory and work on improving strategies for managing everyday stress. Strategies you will learn include practicing healthy mortality awareness, cultivating radical acceptance and self-compassion, and living out your values.

Terror Management Theory

Terror Management Theory is based on the assumption that people are motivated to avoid thinking about the fact they will die someday. This might seem like an obscure area of research, however, results from over 300 studies provide evidence in support of the theory.17

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The Potential Effects of Death on the Mind

In the previous module, you learned that people might be affected by reminders of their mortality even when they’re not aware of it. How did researchers first reach this conclusion? In early studies on Terror Management Theory, researchers asked participants to make complete words using the following word fragments:<br><br>COFF__<br>GRA__<br>SK__L<br><br>Before participants were asked to complete the word task, however, one group was asked to imagine their own death while the other group was not. Those not asked to think about their death tended to make commonly used words (e.g. “coffee”, “grape”, “skill”). However, participants who were reminded of their mortality tended to make death-related words (e.g. “coffin”, “grave”, and “skull”). Even though participants were not aware of it, a mortality reminder affected how they completed the words.<br><br>Not reminded of their mortality:  Reminded of their mortality:<br>Coffee  Coffin<br>Grape  Grave<br>Skill  Skull<br><br>Other studies found that when people are unconsciously reminded of death, they tend to endorse more extreme cultural beliefs (e.g. both liberal and conservative), negative reactions toward other cultures, inflated self-esteem, and increased desire for close relationships. It is believed that one’s self-esteem, cultural worldview, and close relationships play an important role in how we manage death anxiety at an unconscious level.

Terror Management in Daily Life

Below is an example of the potential psychological effects of mortality reminders. The mortality reminder in this example is a news story on Ebola. Note that steps 1 through 4 occur on a conscious level, while the remaining steps are unconscious for most people.\(^{(20)}\)

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Terror Mismanagement

In the figure on the previous page, you saw the potential role of a person’s self-esteem, cultural worldview, and close relationships in reducing death anxiety triggered by mortality reminders. People who suffer from a range of disorders often have problems in these areas. For example, low self-esteem and lack of social support are often seen in individuals with depression, anxiety, and eating disorders. People with rigid beliefs about the world often have a difficult time coping when reality challenges those beliefs. Even if you don’t believe your problems have anything to do with death anxiety, many well established psychotherapies focus on improving coping in terror management domains like this treatment.

For More Information on Terror Management Theory

You were not presented with enough information to understand Terror Management Theory in great depth. If you would like to learn more about Terror Management Theory, visit the following website:

http://www.psychwiki.com/wiki/Terror_Management_Theory_%28TMT%29

Will Thinking About Death Make Me More Anxious?

To clarify, thinking about death isn’t associated with anxiety, avoidance of it is. So far, you’ve only read about the complex ways our minds may work to distract us from our mortality. This is not necessarily unhealthy. If we thought about death all of the time, we wouldn’t be able to function in our daily lives. However, there are costs associated with our avoidance of death and other realities.

At the beginning of this chapter, you learned that suffering is the result of: (1) not taking into account sources of stress, and/or (2) mismanagement of stress. Death is the ultimate stressor. We can better cope with death-related stress when we fully account for the reality of death. What does this mean? Taking into full account our vulnerability to death involves practicing healthy mortality awareness, or choosing to think about death in a life-affirming way. Healthy mortality awareness is associated with greater life satisfaction. In a study of older adults, the more anxious and
uncomfortable people were with death, the less satisfied they were with their life and vice versa.21

\[\text{Death Discomfort} \rightarrow \text{Life Satisfaction} \]
\[(\text{High}) \rightarrow (\text{Low})\]

\[\text{Death Discomfort} \rightarrow \text{Life Satisfaction} \]
\[(\text{Low}) \rightarrow (\text{High})\]

Being human is a terminal condition. A baby contains cells in the process of dying. Nevertheless, culture enables us to see ourselves as separate from people with terminal diseases. Regardless of one’s age, current health, culture of origin, and amount of wealth, all living beings eventually die. Confronting death in a healthy way may lead to a healthier perspective on your work, relationships, and other aspects of your life. Meditation and thinking about what gives your life meaning can help you manage death anxiety.

When Thoughts of Death Aren’t Healthy

Healthy mortality awareness is a life-enhancing perspective. Being consumed with death or excessively avoiding it is not. Thinking about death is unhealthy when it keeps you from doing what is important to you, or when it motivates you to harm yourself or others. Examples of healthy and unhealthy ways of thinking about death are provided on the following page.

Notes to Myself

Feel free to write down any notes or questions you have about the material.
Healthy Mortality Awareness

Examples of healthy mortality awareness:
- Reflecting on how many years you can reasonably expect to live
- Talking about your wishes for end-of-life care
- Living each day as if it were your last
- Walking through a cemetery
- Volunteering for Hospice or in a hospital palliative care unit
- Writing an obituary
- Displaying a memento mori (reminder of your mortality)

Healthy mortality awareness is not:
- Preoccupation with movies or video games that unrealistically depict death or violence
- Wishing you or someone else were dead
- Being so consumed with the topics of death or an afterlife you avoid taking any risks
- Using the reality of death to justify reckless and harmful behavior. For example, not quitting smoking because “I’m going to die eventually.”

**Research suggests that for most people, thinking about mortality or discussing the topic of death with someone else does not lead to suicidal thoughts or even negative emotions.**

However, if you feel uncomfortable with the topic of death, it is recommended that you continue to practice meditation. Also consider talking with a loved one or friend, spending time in nature, or listening to music you enjoy. You might also consider participating in a spiritual activity, or reading an inspiring book or poem.

Please do not hesitate to bring up any questions or concerns with your therapist. If you need to speak with someone immediately, please call the Iowa City Johnson County Crisis Center at 319-351-0140.
Worksheet: My Deathbed

Most people have no choice over the circumstances surrounding their natural death. However, imagine what it would be like if you could choose a death in your bed at home. The purpose of this exercise is not to predict the future but for you to be able to recall this exercise in non-life-or-death stressful situations.

1. What sensations do you feel in your body right now while imagining death in your bed? (E.g. tingling in hands, coolness in feet, softness in shoulders)

2. Who, if anyone, would you like to be present at your deathbed? What might they say to you?

3. What song would you like to hear while lying in your deathbed?

4. Who, if anyone, would you not want present at your deathbed? What message do you hope they will receive?

5. In one sentence, what would you like your last words to be?

Recall the deathbed exercise whenever you need perspective on what's trivial and what truly matters to you.

Adam M. Lewis 2014
The Top 5 Regrets of the Dying  
(According to a Palliative Care Nurse)

1. I wish I had the courage to live a life true to myself, not the life others expected of me.
   "This was the most common regret of all. When people realize that their life is almost over and look back clearly on it, it is easy to see how many dreams have gone unfulfilled. Most people had not honored even a half of their dreams and had to die knowing that it was due to choices they had made, or not made. Health brings a freedom very few realize, until they no longer have it."

2. I wish I hadn’t worked so hard.
   "This came from every male patient that I nursed. They missed their children’s youth and their partner’s companionship. Women also spoke of this regret, but as most were from an older generation, many of the female patients had not been breadwinners. All of the men I nursed deeply regretted spending so much of their lives on the treadmill of a work existence."

3. I wish I had the courage to express my feelings.
   "Many people suppressed their feelings in order to keep peace with others. As a result, they settled for a mediocre existence and never became who they were truly capable of becoming. Many developed illnesses relating to the bitterness and resentment they carried as a result."

4. I wish I had stayed in touch with my friends.
   "Often they would not truly realize the full benefits of old friends until their dying weeks and it was not always possible to track them down. Many had become so caught up in their own lives that they had let golden friendships slip by over the years. There were many deep regrets about not giving friendships the time and effort that they deserved. Everyone misses their friends when they are dying."

5. I wish that I had let myself be happier.
   "This is a surprisingly common one. Many did not realize until the end that happiness is a choice. They had stayed stuck in old patterns and habits. The so-called ‘comfort’ of familiarity overflowed into their emotions, as well as their physical lives. Fear of change had them pretending to others, and to their selves, that they were content, when deep within, they longed to laugh properly and have silliness in their life again."

Sources:
The Top Five Regrets of the Dying: A Life Transformed by the Dearly Departing by Bronnie Ware
http://www.huffingtonpost.com/2013/08/03/top-5-regrets-of-the-dying_n_3640593.html
Worksheet: My Life To-Do List (part 1)

1. Think about your current “to-do” list. Use the space below to write down a few items you feel you need to accomplish today or by the end of the week. Rank each item based on its level of priority or importance with “1” being the highest priority.

   List 1

   [Check boxes for items]

2. Next consider some things you would like to accomplish before you die. Write these down and rank each item in the space below. (If you need ideas, see Appendix B for a list of 365 achievable things to do before you die):

   List 2

   [Check boxes for items]
Worksheet: My Life To-Do List (part 2)

3. Assume you will accomplish the most important item on each list. Write epitaphs relevant to each of your top items on the two headstones below.

For example, if cleaning the garage was your top item from List 1, then on the first headstone you might write, “Here lies Wendy. She knew how to clean up a mess.” Use of humor is strongly encouraged for the first headstone.

If you ranked traveling to Africa as the most important item on List 2, then on the second headstone you might write, “Here lies Wendy. Life was her safari.” A completed example is included for you on the next page.

Most important item on List 1:

Most important item on List 2:

An epitaph about your most important item from List 1

An epitaph about your most important item from List 2
Worksheet Example: My Life To-Do List (part 2)

Most important item on List 1:
Pay the electric bill

Most important item on List 2:
Hear the London Symphony Orchestra

Here Lies:
Floyd

No late fees were assessed at the time of his death.

Here Lies:
Maggie

Music gave her mind wings and soul to those she touched.

An epitaph about your most important item from List 1

An epitaph about your most important item from List 2
Worksheet: My Life To-Do List (part 3)

What was doing this exercise like for you?

What kind of feelings came up for you and/or what sensations did you notice in your body?

If you had to choose one of the headstones for your actual grave, which one would you choose? Why?

What, if anything, will you take away from this exercise?
Module 3: Terror Management Strategies
Session 4: Radical Acceptance and Self-Compassion

A moment of radical acceptance is a moment of genuine freedom.

— Tara Brach

Objectives
- To learn about radical acceptance
- To learn about self-compassion
- To learn how assertive communication is a form of self-compassion

Overview
In this module you will learn about radical acceptance and self-compassion. You will also learn how to practice both in order to improve your relationship with yourself and others.

Radical Acceptance

Radical acceptance is:

- A mindset that everything is as it is and as it should be
- Seeing things as they are without judging them as good or bad
- Being curious rather than cynical
- Trying to see reality while understanding the limitations of our perspective
Exercise: Accepting Life on Life’s Terms

Realities difficult for me to accept right now:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

What I do when I refuse to accept reality:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

How I experience suffering when I refuse to accept reality:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

The 24-Hour Challenge (Optional)

This is an optional challenge for cultivating radical acceptance. Osho first described it:

Just for twenty-four hours, try it – total acceptance, whatsoever happens. Someone insults you, accept it; don’t react, and see what happens.32

Self-Compassion

Self-compassion involves:

- Being kind toward yourself when you experience pain and failure
- Seeing your experiences as part of being human
- Being a non-judgmental observer of painful thoughts and feelings
- Seeing yourself as more than:
  - your body
  - your health
  - what happened to you in the past
  - your mind and emotions

A Healthier Way of Relating to Yourself

Self-compassion is similar to the compassion you feel toward others. Think about a situation when you were genuinely kind and compassionate toward someone. Now imagine treating yourself in the same way.

Some people find it difficult to practice self-compassion because it feels selfish. In American culture, selfishness is considered negative, even though our culture often rewards individuals who achieve success at any cost. Consider an alternative perspective on selfishness:

A person who is deeply interested in his happiness is always interested in others' happiness also— but not for them. Deep down he's interested in himself, that's why he helps. If in the world everybody is taught to be selfish, the whole world will be happy... Teach everybody to be selfish— unselfishness grows out of it.  

Sacrificing Yourself (And Others)

Many people justify not caring for themselves if they believe it will lead to better care for others. While these individuals often have good intentions, they may actually be contributing to the suffering of themselves and others in the name of "good care."

For example, imagine you needed a major surgery. On the day of your surgery how would you feel knowing your surgeon was overwhelmed with

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stress and hadn’t been sleeping? Let’s assume this surgeon deeply cared about her patients but sacrificed most of her evenings, weekends, and vacation days. Even if your surgeon’s lack of sleep was due to the amount of time she spent planning your surgery, this does not mean she wasn’t compromising your care. Research suggests the level of care you might receive from this well-intentioned, but sleep deprived, surgeon would be comparable to that provided by a rested physician who had consumed two to three alcoholic beverages.\(^{24}\)

Caring for someone shouldn’t involve sacrificing your needs in an unhealthy way. By treating yourself with the best level of care you are helping those who may depend on you. This may take some getting used to. Staying alive and healthy is first and foremost to helping others. Yet this is often difficult when people are faced with events or situations they didn’t choose. This is why airlines often need to remind people that in the event of an emergency put your oxygen mask on first before assisting others.

**When Self-Compassion is Difficult**

If it is difficult for you to feel compassion toward yourself right now, try directing it toward yourself as a child. This can be healing, especially if others were not kind or compassionate toward you when you were growing up. It may be helpful to think about a picture of you as a child when you practice self-compassion.

**Radical Acceptance and Self-Compassion**

Recall, that radical acceptance involves accepting reality without judging it as good or bad. Radical acceptance and self-compassion go hand-in-hand. You will not benefit from self-compassion if you do not accept all aspects of yourself, including those you dislike. In order to benefit from the practice of self-compassion you may need to work on observing what you don’t like about yourself first.

Exercise: Observing Painful Aspects of Yourself

This exercise is meant to help you become an observer of painful aspects of yourself without clinging to them.

Imagine you are on a moving train. Out the window you see the scene of an accident. Think of the accident scene as a source of suffering for you. Think of the window as the boundary between where you are, safely inside the train, and the scene of the accident outside.

Give yourself permission to feel whatever feelings and sensations come up for you. Try to stay with any discomfort for as long as you imagine the train moving past the accident scene.

Take a few deep breaths, allowing air to slowly flow into your diaphragm. Remember you are on a train moving toward a destination of your choosing.
Assertive Communication and Self-Compassion

Assertive communication involves communicating how you feel in a direct and truthful manner respectful of the rights and feelings of others. It is a form of self-compassion because it is a way of accepting the reality of your thoughts, feelings, and experiences.

Assertive communication is often confused with aggressiveness. Being assertive does not involve the use of verbal abuse, blaming, name calling, intimidation, or sarcasm. Expressing your anger in a note when it is possible for you to speak directly is also not an example of assertive communication.

The use of “I” statements is an important part of assertive communication. “I” statements convey that what you say reflects your own feelings and needs. By using “I” statements, you take responsibility for your experience of the situation. It is difficult to argue against someone’s experience of something. Consider someone said to you: “This is my experience of the events.” You couldn’t just say “No it’s not,” because you can’t know how another person experiences anything. Your experience is yours alone.

Examples of assertive communication include:

- “I feel helpless when I hear you saying you feel like a burden.”
- “It upsets me when it seems like you’re not listening to my concerns.”
- “I have some concerns I would like to share with you. It would mean a lot to me if you could just listen. I’m willing to listen to what you have to say afterward.”
- “I know that you feel frustrated when you’re ready to leave the house and I’m not. I feel overwhelmed when you get frustrated, and that makes it difficult for me to hurry.”
- “The sound of your dog barking in my bedroom has made it difficult for me to fall asleep.”
Steps for Assertive Communication:

1. **Awareness of body**
   - Posture, upright, as if taking a stand
   - Eye contact
   - A soft facial expression
   - Hands, arms, and legs are open and uncrossed
   - Feel your two feet firmly on the ground
   - Voice is calm. If this is difficult, try not to sound whiney or abrasive.
   - Eye contact

2. **Acknowledge the person’s feelings**
   "I know you feel upset when..."

3. **Explain how the person’s actions contribute to the problem**
   "...but when you do that,"

4. **Describe how the person’s actions impact your feelings**
   "I feel..."

5. **State what you want in a direct and respectful way**
   "In the future I'd appreciate it...."

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**Assertive communication:** Speaking your truth in a direct and open way, while respecting the rights and feelings of others
Worksheet: Free to Be Me

This is an exercise in radical self-compassion. List all aspects of yourself, including ones you don’t like. An example of a completed worksheet is included on the following page. Keep in mind that your freedoms and limitations are only part of the story; they do not define you.

<table>
<thead>
<tr>
<th>My Freedoms</th>
<th>My Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Qualities I like about myself</strong></td>
<td><strong>Qualities I don’t like about myself</strong></td>
</tr>
<tr>
<td><strong>Qualities I am proud of</strong></td>
<td><strong>Qualities I am ashamed of</strong></td>
</tr>
<tr>
<td><strong>Qualities I share with others</strong></td>
<td><strong>Qualities I try to hide from others</strong></td>
</tr>
<tr>
<td><strong>A strength</strong></td>
<td><strong>A weakness</strong></td>
</tr>
</tbody>
</table>

An aspect of my personality: __________________________

How others might describe me: ________________________

How I manage stress: ________________________________

An aspect of my body:

An event in my past that still affects me: ______________

An aspect of my culture:

A quality I share with my mother: _____________________

A quality I share with my father: _____________________

A quality I observe in my partner/spouse/people I date: _____________________

A quality I observe in my friends: ____________________

A quality I observe in my enemies: ____________________

When I think about my future:

Subjects in school: _________________________________

Hobbies or interests: _______________________________

A person who exhibits many of your freedoms: _____________

A person who exhibits many of your limitations: ___________

You have imperfection in common with all human beings. Accept all aspects of yourself with compassion and kindness. Practice this with others.

Adam M. Line ©2014
Free to Me: Completed Example

**My Freedoms**
- Qualities I like about myself
- Values I am proud of
- Qualities I share with others
  - A strength
- An aspect of my personality:
  - creative
- How others might describe me:
  - caring
- How I manage stress:
  - walking
- An aspect of my body:
  - my smile
- An event in my past that still affects me:
  - becoming a parent
- An aspect of my culture:
  - community volunteer
- A quality I share with my mother:
  - hard working
- A quality I share with my father:
  - good listener
- A quality I observe in my partner/spouse/ or people I date:
  - confidence
- A quality I observe in my friends:
  - fun loving
- A quality I observe in my enemies:
  - low stress level
- When I think about my future:
  - enjoying retirement
- Subjects in school:
  - reading, art
- Hobbies or interests:
  - knitting

**My Limitations**
- Qualities I don’t like about myself
- Values I am ashamed of
- Qualities I try to hide from others
  - A weakness
- An aspect of my body:
  - my thighs
- An event in my past that still affects me:
  - teasing in school
- An aspect of my culture:
  - growing up poor
- A quality I share with my mother:
  - difficulty expressing affection
- A quality I share with my father:
  - overly critical
- A quality I observe in my partner/spouse/ or people I date:
  - cockiness
- A quality I observe in my friends:
  - offended easily
- A quality I observe in my enemies:
  - lazy
- When I think about my future:
  - worries about my health
- Subjects in school:
  - algebra
- Hobbies or interests:
  - gossip

A person who exhibits many of your freedoms: my son

A person who exhibits many of your limitations: my mother-in-law
Exercise: How would you treat a friend?

1.) First, think about times when a close friend feels really bad about him or herself or is really struggling in some way. How would you respond to your friend in this situation (especially when you’re at your best)? Please write down what you typically do, what you say, and note the tone in which you typically talk to your friends.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2.) Now think about times when you feel bad about yourself or are struggling. How do you typically respond to yourself in these situations? Please write down what you typically do, what you say, and note the tone in which you talk to yourself.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

3.) Did you notice a difference? If so, ask yourself why. What factors or fears come into play that lead you to treat yourself and others so differently? How might things change if you responded to yourself in the same way you typically respond to a close friend when you’re suffering?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Why not try treating yourself like a good friend and see what happens?

An exercise developed by Kristin Neff (2014).
Self-Compassion Break

This practice can be used any time of day or night, and will help you remember to evoke the three aspects of self-compassion when you need it most. Think of a situation in your life that is difficult, that is causing you stress. Call the situation to mind, and see if you can actually feel the stress and emotional discomfort in your body. Now, say to yourself:

1. This is a moment of suffering.
   Other options include:
   - This hurts.
   - Ouch.
   - This is stress.

2. Suffering is a part of life.
   Other options include:
   - Other people feel this way.
   - I’m not alone.
   - We all struggle in our lives.

3. Now, put your hands over your heart, feel the warmth of your hands and the gentle touch of your hands on your chest. Or adopt the soothing touch you discovered felt right for you. Say to yourself:

   May I be kind to myself.

   You can also ask yourself, “What do I need to hear right now to express kindness to myself?” Consider some of these phrases or come up with your own:
   - May I accept myself as I am
   - May I forgive myself
   - May I be strong
   - May I be patient

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Based on the work of Kristin Neff (2019).
Module 3: Terror Management Strategies

Session 5: Choosing What Matters

This is what I choose to do, even though I may know more and choose differently tomorrow.

-Rollo May

Objectives

- To learn about choice
- To learn about values
- To gain awareness of what matters to you

Overview

In this session you will learn about the existential concept of choice as it pertains to what you can and cannot control. You will apply the concept of choice to defining what matters to you.

What is Choice?

A choice refers to a “selection between alternatives.” That’s it. If you are reading this sentence, you made a choice to open the workbook. By reading the workbook, you are making a choice not to do other things right now. You may not have been aware that by opening the book you were choosing not to do other things. Nevertheless, a choice to do one thing means not doing several other things, regardless of one’s intention.

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A choice doesn’t imply a rational decision-making process. It is just a selection. Our daily lives are filled with choices that we often don’t consider. Even though you may not like your job, you are making a choice to be there each day. And while not showing up to work may not be a good idea, it is a choice you could make. One can achieve a sense of freedom when they realize they are making a choice to follow through with their perceived obligations.

**A choice is:**
- A selection between alternatives
- Something you may or may not be aware of
- A selection that may or may not involve reasoning
- Usually conveyed by your actions
- Sometimes conveyed by inaction (e.g. doing nothing)

**A choice is NOT:**
- A judgment
- Necessarily good or bad
- Indicative of a person’s character
- A guarantee of a particular outcome

**Exercise: Making a Choice**

This is a brief exercise to help you understand the concept of choice.

1. Take a moment to look at each of the three shapes. Notice any thoughts, feelings, and physical sensations you have as you look at the shapes.

2. Choose one of the shapes and write it down.

   Choice of shape: __________________________

188
3. Write down your reasons for making the choice you made in the suitcase below. Also note any thoughts, feelings, and physical sensations you had while making your selection.

What was this exercise like for you? Even though there was no right or wrong answer, and there were no negative consequences involved, chances are you used reasoning to make your selection. Perhaps one of the shapes triggered a memory for you. For example, maybe your mind wandered to a time when you first learned about shapes. It's also fine if you just went with the shape on the right.

In the suitcase you were asked to write down aspects associated with your decision-making process. What you wrote is an example of the "baggage" associated with having a human brain. While humans have the ability to think about the past and plan for the future, we also have the tendency to rationalize, judge, and evaluate what is in front of us, even when the situation does not call for it.
Choices in Most Difficult Situations

- Do Nothing
- Do What You Usually Do
  - Refuse to accept what can’t be changed
- Do Something Different
  - Change what can be changed
  - Accept what can’t be changed
What are Values?

Values are chosen life directions (Hayes & Smith, 2005). Like the word choice, our definition of values varies from its everyday usage. To help you think about the concept of values, take a look at the picture below:

Notice each airplane is marked with the shapes from the possible choices in the previous exercise. Your values framework would be whichever airline (square, triangle, or circle) you choose to fly on. Consider there are a limited number of airlines to choose from, and that cost and convenience often influence our decision-making process. Each airplane is heading toward a different destination influenced by your reason for traveling, whether for work or in the interest of your family. Remember there are usually a number of ways of traveling to a particular destination.

Values are:
- An individual’s sense of what’s important
- Expressed through action
- Culturally-based
- Aspirational

Values are NOT:
- Feelings
- Always in the future
- Always clear-cut
- Something one can ever attain
Exercise: Choosing What Matters

Instructions: On each line, write down values in each area that matters. There are no right or wrong answers and you do not have to complete every item.

1. Close/Intimate Relationships:

<table>
<thead>
<tr>
<th>Things you might consider:</th>
</tr>
</thead>
<tbody>
<tr>
<td>What sort of partner would you like to be in an intimate relationship?</td>
</tr>
<tr>
<td>What personal qualities would you like to develop?</td>
</tr>
<tr>
<td>What sort of relationship would you like to build?</td>
</tr>
<tr>
<td>How would you interact with your partner if you were the ‘ideal you’ in this relationship?</td>
</tr>
</tbody>
</table>

(1)

(2)

(3)

Which of these values, if any, do you hold because:

- Somebody else wants you to or thinks you should
- Not doing so would make ashamed, guilty, or anxious
- You view it as important, whether or not others agree
- You value this because living out this value makes life better and more meaningful

*Based on Mark Harris’ (2008) Values Worksheet and Blackledge & Ciarrocht’s Personal Values Questionnaire*

Retrieved from [http://psychologyresearchhelp.wiki.usfca.edu](http://psychologyresearchhelp.wiki.usfca.edu)
2. Family Relationships:

<table>
<thead>
<tr>
<th>Things you might consider:</th>
</tr>
</thead>
<tbody>
<tr>
<td>What sort of parent/family member would you like to be?</td>
</tr>
<tr>
<td>What sort of qualities would you like to have as a parent/family member?</td>
</tr>
<tr>
<td>What sort of relationships would you like to build with your children/family?</td>
</tr>
<tr>
<td>How would you act if you were the ‘ideal parent’?</td>
</tr>
</tbody>
</table>

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**Which of these values, if any, do you hold because:**

<table>
<thead>
<tr>
<th>Somebody else wants you to or thinks you should</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not doing so would make ashamed, guilty, or anxious</td>
<td></td>
</tr>
<tr>
<td>You view it as important, whether or not others agree</td>
<td></td>
</tr>
<tr>
<td>You value this because living out this value makes life better and more meaningful</td>
<td></td>
</tr>
</tbody>
</table>
3. Friendships:

<table>
<thead>
<tr>
<th>Things you might consider:</th>
</tr>
</thead>
<tbody>
<tr>
<td>What sort of qualities do you bring to your friendships?</td>
</tr>
<tr>
<td>If you could be the best friend possible, how would you behave towards your friends?</td>
</tr>
<tr>
<td>What sort of friendships would you like to build?</td>
</tr>
</tbody>
</table>

(1)  

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Which of these values, if any, do you hold because:

- Somebody else wants you to or thinks you should
- Not doing so would make ashamed, guilty, or anxious
- You view it as important, whether or not others agree
- You value this because living out this value makes life better and more meaningful
4. Work/Retirement:

<table>
<thead>
<tr>
<th>Things you might consider:</th>
</tr>
</thead>
<tbody>
<tr>
<td>What do you value in your work or in your retirement?</td>
</tr>
<tr>
<td>What would make it more meaningful?</td>
</tr>
<tr>
<td>What kind of worker would you like to be?</td>
</tr>
<tr>
<td>What personal qualities would you like to bring to your work?</td>
</tr>
<tr>
<td>What sort of work relations would you like to build?</td>
</tr>
</tbody>
</table>

(1)

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(3)

Which of these values, if any, do you hold because:

- Somebody else wants you to or thinks you should

- Not doing so would make ashamed, guilty, or anxious

- You view it as important, whether or not others agree

- You value this because living out this value makes life better and more meaningful
5. Education/Skills/Training:

<table>
<thead>
<tr>
<th>Things you might consider:</th>
</tr>
</thead>
<tbody>
<tr>
<td>What do you value about learning, education, training, or personal growth?</td>
</tr>
<tr>
<td>What new skills would you like to learn?</td>
</tr>
<tr>
<td>What knowledge would you like to gain?</td>
</tr>
<tr>
<td>What further education appeals to you?</td>
</tr>
<tr>
<td>What personal qualities would you like to apply?</td>
</tr>
</tbody>
</table>

(1)

(2)

(3)

Which of these values, if any, do you hold because:

- Somebody else wants you to or thinks you should
- Not doing so would make ashamed, guilty, or anxious
- You view it as important, whether or not others agree
- You value this because living out this value makes life better and more meaningful
6. **Hobbies/Interests:**

<table>
<thead>
<tr>
<th>Things you might consider:</th>
</tr>
</thead>
<tbody>
<tr>
<td>What sorts of hobbies, sports, or leisure activities do you enjoy?</td>
</tr>
<tr>
<td>How do you relax and unwind?</td>
</tr>
<tr>
<td>How do you have fun?</td>
</tr>
<tr>
<td>What sorts of activities would you like to do?</td>
</tr>
</tbody>
</table>

(1)

(2)

(3)

**Which of these values, if any, do you hold because:**

- Somebody else wants you to or thinks you should [ ]
- Not doing so would make ashamed, guilty, or anxious [ ]
- You view it as important, whether or not others agree [ ]
- You value this because living out this value makes life better and more meaningful [ ]
7. Health and Wellness:

<table>
<thead>
<tr>
<th>Things you might consider:</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are your values related to maintaining your physical and emotional well-being?</td>
</tr>
<tr>
<td>How do you want to look after your health, with regard to sleep, diet, exercise, smoking, alcohol, etc.?</td>
</tr>
<tr>
<td>Why is this important?</td>
</tr>
</tbody>
</table>

(1)

(2)

(3)

Which of these values, if any, do you hold because:

- Somebody else wants you to or thinks you should
- Not doing so would make ashamed, guilty, or anxious
- You view it as important, whether or not others agree
- You value this because living out this value makes life better and more meaningful
### 8. Cultural Identity:

<table>
<thead>
<tr>
<th>Things you might consider:</th>
</tr>
</thead>
<tbody>
<tr>
<td>What aspects of your cultural identity or identities do you most value?</td>
</tr>
<tr>
<td>What values make you a shining example of your belonging to this group?</td>
</tr>
<tr>
<td>What aspects of your cultural identity serve to promote the wellness of all living beings (e.g., people, animals, nature)?</td>
</tr>
</tbody>
</table>

(1)  

(2)  

(3)  

### Which of these values, if any, do you hold because:

- Somebody else wants you to or thinks you should  
- Not doing so would make ashamed, guilty, or anxious  
- You view it as important, whether or not others agree  
- You value this because living out this value makes life better and more meaningful
9. Citizenship/Environment/Community Life:

<table>
<thead>
<tr>
<th>Things you might consider:</th>
</tr>
</thead>
<tbody>
<tr>
<td>How would you like to contribute to your community or environment, e.g. through volunteering, or recycling, or supporting a group/ charity/ political party?</td>
</tr>
<tr>
<td>What sort of environments would you like to create at home, and at work?</td>
</tr>
<tr>
<td>What environments would you like to spend more time in?</td>
</tr>
</tbody>
</table>

(1)

(2)

(3)

Which of these values, if any, do you hold because:

- Somebody else wants you to or thinks you should
- Not doing so would make ashamed, guilty, or anxious
- You view it as important, whether or not others agree
- You value this because living out this value makes life better and more meaningful
10. **Spirituality/meaning in Life:**

   **Things you might consider:**
   - What spiritual, philosophical, or other belief framework gives your life meaning and purpose?

(1) 

(2) 

(3) 

**Which of these values, if any, do you hold because:**

- Somebody else wants you to or thinks you should
- Not doing so would make ashamed, guilty, or anxious
- You view it as important, whether or not others agree
- You value this because living out this value makes life better and more meaningful
Module 4: Living Fully

Session 6

The best way to meet the anxiety about growing old is to make sure one at the moment is fully alive.  

-Rollo May

Make your own kind of music, even if nobody else sings along.  

-Barry Mann and Cynthia Weil  
(As made famous by Cass Elliot)

Objectives

- To learn about living fully
- To learn how to cope with setbacks to meeting your goals

Overview

In this module you will learn about living fully and how to cope with setbacks to accomplishing your goals.

Living Fully

Living fully involves:
- Living out your life to the extent that you are free and able to.
- Actively pursuing and participating in things that matter to you.
- Living up to your potential.
- Awareness of your strengths, and weaknesses.
- Accepting life as limited by death.
- Self-compassion and radical acceptance of what is.
- Being present.
Living Beyond Survival Mode:
CAMP for Living Fully

Compassion
Acceptance
Mortality Awareness
Present Living

**Compassion**: Showing compassion toward yourself and others. Acceptance and awareness of human limitations.

**Acceptance**: Radical acceptance of the past, present, and taking responsibility for the choices you make.

**Mortality Awareness**: Remembering life is precious and we cannot predict when we will die. Making the most of each day.

**Present Living**: Living in the here and now. Committing to being present and taking action. Being open to taking the road less traveled.
Fail Better and Feel Better

Living fully is a process and not something you can attain. It also involves failure. Failure is an important part of being human. When we fail, we confront our limitations. If we take time to observe, rather than blame ourselves and others, we allow space for growth to occur. A professional weight lifter can’t know what they can lift without knowing what they can’t lift. A person who can lift 400 pounds would suffer unnecessarily if they focused on their inability to lift 405 pounds.

The next time you fail, try not to spend too much time considering how you could have tried harder. If you truly wanted whatever it was you were striving for, then you would have been trying your best. Instead, consider how you can fail better in the future. What does this mean? Failing better is about mastering the art of falling down and standing back up. Most people know that Olympic skaters often have years of experience skating. However, we often overlook how much experience they have falling down! We, as spectators, only see part of the story. Failure is part of every person’s life story. And if it were not, would you be interested in reading their memoir? Until you stop breathing, there will always be more right with you than wrong with you. Remember to breathe.

Choose Your Own Ending

Your final assignment is up to you. You may write about anything or just leave the space blank. If you leave the space blank, then make that your intention. You can use the following questions if you would like a guide for what to write in the space:

What do you know now that you think you or someone else could benefit from reading in the future?

What advice would you give someone in a difficult situation you were once in?

What's next? What would you do if you had enough money?
## Appendix A:

### Meditation Practice Log

**Week ___**

**CD Track Listing:**

<table>
<thead>
<tr>
<th></th>
<th>Title</th>
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<td>1</td>
<td>Breathing Meditation (Short)</td>
<td>5:31</td>
<td>Diana Winston</td>
<td>marc.ucla.edu</td>
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<td>2</td>
<td>Breathing Meditation</td>
<td>15:20</td>
<td>Lois Hallow</td>
<td><a href="http://health.ucsd.edu/specialties/mindfulness/Pages/default.aspx">http://health.ucsd.edu/specialties/mindfulness/Pages/default.aspx</a></td>
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<td>Working with Discomfort</td>
<td>6:55</td>
<td>Diana Winston</td>
<td>marc.ucla.edu</td>
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<td>4</td>
<td>Loving Kindness Meditation</td>
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<td>Diana Winston</td>
<td>marc.ucla.edu</td>
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<td>Self-Compassion Meditation</td>
<td>20:11</td>
<td>Kristin Neff</td>
<td><a href="http://www.self-compassion.org">www.self-compassion.org</a></td>
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<td>6</td>
<td>Body Scan Meditation (Short)</td>
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<td>Body Scan Meditation</td>
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<td>marc.ucla.edu</td>
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Track #(s):

Check if you met your goal

☐ ☐ ☐ ☐ ☐ ☐
Appendix B:

365 Achievable Things to Do Before You Die

1. Create your own bucket list of at least 100 things you want to do before you die
2. Be a tourist in your own city
3. Spend the day at a spa
4. Adopt a shelter animal
5. Participate in Free Hugs (http://freehugscampaign.org/)
6. Volunteer at a homeless shelter
7. Go to a haunted house
8. Do 50 random acts of kindness
9. Take a flying lesson
10. Watch a sunrise and sunset in the same day
11. Visit 5 different museums
12. Try 3 types of ethnic cuisine in one day
13. Ride a moped
14. Knit something
15. Get a massage
16. Take public transportation
17. Sing karaoke in public
18. Feed animals at the zoo
19. Order room service
20. Ride in a canoe and/or kayak
21. Go caroling
22. Sew something wearable
23. Sew something un-wearable
24. Throw someone a surprise party
25. Ice skate
26. Roller skate
27. Ride a Segway
28. Get a makeover at a salon
29. Sponsor a child
30. Name a star
31. Go to a comedy club
32. Learn and perform a magic trick
33. Bake cookies for your neighbors, co-workers, etc
34. Leave a 50% tip at a restaurant
35. Take a cooking lesson

Source: http://www.gotofthecouch.co/p/blog-page.html
36. Learn to make one really nice meal from scratch
37. Create your own personal recipe book
38. Throw a boomerang
39. Shoot a bow and arrow
40. Give up meat (for at least a week)
41. Write letters to 5 people who positively influenced you
42. Tour a factory
43. Host a dinner party
44. Pay the toll for the car behind you
45. Take a bubble bath by candlelight with champagne, wine or sparkling cider
46. Go on a hayride
47. Wish upon a star
48. Play the lotto
49. Take a lesson to play a musical instrument
50. Learn to swim
51. Identify 10 constellations
52. Learn to tie 5 knots
53. Drive or ride on a motorcycle
54. Climb a rock wall
55. Climb a tree
56. Toss a coin into a fountain
57. Send postcards from your home city
58. Join postcrossing (www.postcrossing.com) and collect postcards
59. Sell something online
60. Visit a nursing home
61. Play chess
62. Eat caviar, brie, and lobster
63. Play golf
64. Become an ordained minister
65. Speak in a foreign accent for a whole day
66. Build a snow, sand or dirt man
67. Read a holy book from cover to cover
68. Meditate
69. Make and bury a time capsule
70. Take a jumping pic
71. Write your will
72. Plan your own funeral
73. Host a scavenger hunt
74. Take the scenic route
75. Buy stock
76. Ride in a limo
77. Paint a picture
78. Get a caricature done of yourself
79. Go to a religious service of another faith
80. Learn to say hello in 9 languages
81. Shop on Black Friday
82. Get a complete physical done with blood work
83. Dress up and eat at a fast food restaurant or dive bar
84. Play darts
85. Play pool/billiards
86. Bet on a horse or dog race
87. Play poker
88. See a play/musical
89. Change a flat tire
90. Donate blood
91. Become an organ donor
92. Donate your body to science
93. Learn a dance
94. Make spaghetti sauce from scratch
95. Take a class on Craftsy (www.craftsy.com)
96. Ban negativity from your life
97. Parachute
98. Jump off a diving board
99. Slide down a waterslide
100. Ride a rollercoaster
101. Send a care package
102. Thank a veteran
103. Carve a pumpkin
104. Be passionate about a worthy cause
105. Be someone’s biggest fan
106. Plant a tree
107. Plant a garden
108. Paint a room purple, hot pink or neon green
109. Host a theme party
110. Have a signature look
111. Have a cool nickname
112. Attach notes to balloons and release them
113. Tape something inspirational in a public bathroom stall
114. Get a tan
115. Grow your hair long
116. Cut your hair really short
117. Start a blog
118. Speak pig Latin
119. Do a charity walk/run
120. Make s’mores over a campfire
121. Go camping
122. Get something pierced
123. Get a tattoo
124. Get something besides your eyebrows waxed
125. Decorate your yard for a holiday or occasion
126. Take a CPR class
127. Make something out of clay
128. Go bowling
129. Go to a concert for a band or singer you've never heard of
130. Watch a Shirley Temple movie
131. Make homemade ice cream
132. Make homemade root beer
133. Go to the opera
134. Release sky lanterns
135. Play the harmonica
136. Read a classic novel
137. Take a day trip someplace new
138. Learn to make a good mixed drink
139. Have a signature drink
140. Take a tennis lesson
141. Hire a maid for a least one day
142. Fill up your tank with premium gas
143. Write a letter to an editor
144. Write a letter to a senator/congressperson
145. Sign a petition
146. Start a petition
147. Listen to the other political party with an open mind
148. Write a poem
149. Research your family tree
150. Ask your elders to write down their stories for you, or write them down for them. If you don't have elders, write your stories down for future generations
151. Attend a professional sports game
152. Attend a minor or little league game
153. Sew a memory quilt
154. Tour a vineyard
155. Do a wine tasting
156. Eat at a fancy restaurant
157. Eat with chopsticks
158. Write down your dreams for at least one week
159. Sleep on a satin pillowcase
160. Read Think and Grow Rich by Napoleon Hill
161. Try to juggle
162. Start a campfire
163. BBQ with charcoal
164. Buy something for a stranger off their wish list/registry
165. Leave an inspirational message on a sticky note in a public restroom
166. Write to a celebrity
167. Be a pen pal
168. Complete a crossword puzzle without cheating
169. Make reservations
170. Use the valet service
171. Bleach or dye your hair, or wear clip on hair extensions
172. Sleep under the stars
173. Listen to classical, new age, jazz and world music for one hour each or longer
174. Try to break a world record
175. Study a foreign language
176. Send someone flowers, just because
177. Continue your education
178. Sell Avon
179. Complete a couch to 5k challenge
180. Eat a pickle pop
181. Try 10 new restaurants
182. Go to a festival
183. Make something out of duct tape
184. Take an art class
185. Watch a movie outdoors
186. Take a hike
187. Picnic in the park
188. Eat food from a street vendor
189. Do something that completely terrifies you
190. Learn to love yourself
191. Listen to a radio station you don't normally listen to for a day
192. Choose different pizza toppings
193. Make and decorate gingerbread men
194. Create passive income
195. Watch a game at a pub
196. Quit a bad habit in 21 days
197. Bake homemade bread
198. Crochet
199. Ride a horse
200. Go to the symphony
201. Win something
202. Tie a tie
203. Learn to play something on the piano and/or guitar
204. Star gaze
205. Master the art of self confidence
206. Hand write letters to your friends and mail them
207. Have nice undergarments
208. Take a great picture, print it, frame it and hang it on the wall
209. Watch at least one game of soccer, hockey, and cricket
210. Cheer wildly
211. See a foreign film at the theater
212. Wear a crazy hat out in public
213. Feed the ducks
214. Take a cat for a walk
215. Spend the day at the beach or lake
216. Follow people who inspire you on Twitter and/or Facebook
217. Go somewhere where you are the minority
218. Learn the origins of the holidays you celebrate
219. Hold the door open for strangers
220. Join a club or team
221. Shop at a flea market, swap meet or garage sale
222. Start a collection
223. Contribute to someone's kickstarter (www.kickstarter.com)
224. Donate to an animal shelter
225. Write a note and leave it in a library book
226. Make a giant rubber band ball
227. Get a mani/pedi
228. Share your wisdom with someone
229. Walk in the rain
230. Fast for a few days
231. Start a retirement fund
232. Eat something really crazy
233. Have the restaurant staff sing to you for your birthday
234. Learn self defense
235. Learn 5 or more yoga poses
236. Compost
237. Recycle
238. Start a scrapbook with mementos and souvenirs
239. Stay in a bed and breakfast
240. Play relaxing sounds or music as you sleep
241. Nap in a hammock
242. Write a list of everything you're grateful for
243. Imagine you won $5 million, and plan what you would spend it on down to the penny
244. Buy something from an auction
245. Start a fan page for someone or something, doesn't have to be a celebrity!
246. Toast to something with champagne or sparkling cider
247. Get a book signed by the author
248. Visit a different state, country or province
249. Donate 10,000 grains of rice on Free Rice (freerice.com)
250. Do a 365 day photo project
251. Make an origami crane
252. Try 25 new recipes
253. Order something different off the menu
254. Visit a farmer's market
255. Wake up 30 minutes earlier than usual
256. Boycott something
257. Send a post card to Post Secret (www.postsecret.com)
258. Ask a child to tell you a story
259. Teach a song to a child
260. Go bike riding
261. Beat a video game
262. Put together a 1,000 piece puzzle
263. Pick up litter
264. Play Rock Band, Guitar Hero or Band Hero
265. Spend a day in silence
266. Enter a writing contest
267. Go surfing, sledding or 4-wheeling
268. Have professional pictures taken
269. Raise butterflies, tadpoles, praying mantii or have an ant farm
270. Cut down on or give up caffeine
271. Donate some money each month to your favorite charity
272. Start watching a tv show you've never seen before
273. Try a new hairstyle
274. Watch a car race
275. Have an emergency fund
276. Build up a one month food stockpile
277. Drink only water for a week
278. Buy a word of the day calendar and learn a new word every day
279. Try a different type of coffee, tea, soft drink, beer, or mixed drink
280. Try kombucha tea or kefir
281. Find the coolest thing in your city and photograph it
282. Take a photo from a skyscraper or tallest building you can find
283. Give someone else a massage
284. Watch a movie marathon
285. Pick your own fruit
286. Take a photography class
287. Watch a documentary
288. Write a letter for future generations to read
289. Write a letter to yourself to open in 10 years
290. Forgive others
291. Forgive yourself
292. Have a hot stone massage
293. Ride in a horse drawn carriage
294. Try 10 new fruits/berries/veggies
295. Try juicing or make smoothies
296. Have a water balloon/water gun fight
297. Think of something you are grateful for every morning when you wake up for at least a week
298. Change a diaper
299. Be interviewed on video
300. Build and fly a kite
301. Jumpstart a car
302. Have your home safety inspected
303. Find the event calendar for your city, or a bigger city nearby, and make note of the fun stuff coming up you can do. Set reminders to do them!
304. Use reusable grocery bags
305. Take a morning jog
306. Create an alter-ego
307. Say YES more often
308. Say NO more often
309. Haggle
310. Play a prank on someone
311. Break a superstition
312. Realize how beautiful/attractive you are
313. Do your own taxes
314. Go a full day without spending any money
315. Eat nothing but fresh food for a week
316. Make a blessings jar
317. Go mirror-less for a day
318. Sit in a sauna
319. Find someone with your same name
320. Do a cleanse
321. Bake a cake
322. Eat sushi
323. Learn a janitor’s name
324. Learn a coffee barista’s name
325. Call customer service and ask them about their day
326. Write a letter to a world (non-US) leader
327. Go on a news fast
328. Start a gratitude journal
329. Make something out of paper mache
330. Write down your regrets then flush or burn them
331. Hug a person dressed as an animal
332. Apologize and mean it
333. Get a mammogram or prostate exam
334. Give up TV for a week
335. Write your personal manifesto
336. Eat at a restaurant alone
337. Go to the movies alone
338. Tell a joke on open mic night
339. Make fresh squeezed juice
340. Get someone to help you pick out new clothes
341. Shop at a resale clothing store
342. Go to a tailor
343. Delete your social media profiles for at least a week
344. Have a passionate love affair (your spouse counts! Don't cheat!)
345. Pay off your debt
346. Make rock candy/crystals
347. Go on evening walks
348. Hit a baseball
349. Dribble a basketball and shoot a goal
350. Throw a football in a spiral
351. Kick a goal with a soccer ball
352. Get a facial
353. Buy something from an infomercial
354. Make homemade pickles
355. Host a game night
356. Memorize a great joke
357. Ask for a raise
358. Listen to someone worse off than you
359. Write thank you notes
360. Learn to identify poisonous and edible plants in the wild
361. Be a clown for a day
362. Learn how to make balloon animals
363. Compliment 15 people in one day
364. Eat a salted dessert
365. Splash water at someone you know at a water park
Resources

Mental Health Resources (Local):
- Iowa City/Johnson County Senior Center
  Individual counseling at no-cost provided by psychology doctoral students working under the supervision of a licensed psychologist. Available to all members of the Senior Center ages 50 and up. Telephone: 319-356-5220
- The Crisis Center of Johnson County
  Crisis line 319-351-0140 available 24 hours a day, 7 days a week
- Behavioral Oncology Clinic, University of Iowa Hospitals & Clinics
  Serves "patients diagnosed with cancer in need of psychological care due to adjustment difficulties, depression, anxiety, or other psychosocial stressors." Telephone: 319-356-2607
- The Spraehere Clinic
  Psychological services on a sliding fee basis provided by psychological doctoral students working under the supervision of University of Iowa clinical psychology faculty. Telephone: (319) 335-2467
- Women's Resource & Action Center
  Individual counseling at no-cost provided by psychology doctoral students working under the supervision of a licensed psychologist. Serving individuals in the greater Iowa City area and University of Iowa community. Telephone: 319-335-1486
- Community Mental Health Center for Mid-Eastern Iowa
  Psychiatry, psychotherapy, supported community living, homeless outreach, crisis services, and consultations. Iowa City: 319-338-7884

Caregiver Supportive Organizations (National):
- Caregiver Action Network
  "Non-profit organization providing education, peer support, and resources to family caregivers across the country free of charge."
  Telephone: 202-772-5050
  Email: info@caregiveraction.org
  Website: http://www.caregiveraction.org/
- VA Caregiver Support
  For caregivers of veterans
  Telephone: 1-855-203-3274
  Website: http://www.caregiver.va.gov/

Books:
- Soul Care for Caregivers: How to Help Yourself While Helping Others By Susanne West
- The Mindfulness and Acceptance Workbook for Anxiety: A Guide to Breaking Free from Anxiety, Phobias, and Worry Using Acceptance and Commitment Therapy By John Forsyth and Georg Eifert
- Radical Self-Acceptance By Tara Brach
- Grieving Mindfully: A Compassionate and Spiritual Guide to Coping with Loss By Sameet Kumar

Guided Meditation CDs:
- Breathing Guided Meditation By Michael Stone
- Self-Compassion Step-By-Step By Kristin Neff
- Mindfulness Meditation for Pain Relief By Jon Kabat-Zinn
About the Author

Adam M. Lewis is a doctoral candidate in Counseling Psychology at the University of Iowa. He received a bachelor’s degree in psychology from the University of Michigan and wrote an honors thesis entitled: Feeling Good Thinking about My Death: A New Way of Looking at the Effects of Mortality Salience. Prior to attending graduate school, Adam worked at Northwestern University as a study program coordinator for psychologist David Mohr at what is now the Center for Behavioral Intervention Technologies (CBITs). As a doctoral student, he received training in psychological assessment and psychotherapy with an emphasis on older adults and persons with chronic health conditions. Eventually Adam hopes to work as a psychologist for the U.S. Department of Veterans Affairs. When Adam is not thinking about his mortality, he enjoys reading about Buddhism, finding interventions that work for his black cat Carl’s bad behavior, and attending retreats at Zen monasteries.
APPENDIX U: GUIDED MEDITATION ON DEATH AND DYING


This practice is called “savasana” or “corpse pose” which can also be translated as the practice of dying. Many teachers consider this to be one of the most difficult meditation practices. To be still, to let go, and to really enter a space of deep release. To practice dying, is also to embrace living. To practice letting go is to practice a deeper engagement with our lives now. [omitted script]

[bell sounds]

In this meditation you can lie down on your back with both shoulder blades flat on the floor. The legs falling symmetrically away from one another. The palms turning up toward the ceiling and the middle knuckles of the hands drawing towards the floor. Let the palms be empty. Empty handed. Feel the way the center of the palm becomes hollow. Feel the way the roof of the mouth becomes hollow as well. Allow the lower jaw to release as you exhale softly, and then feel that exhale draw all the way down to the heels.

Let the gums, soften around the teeth. Let the heels become heavy. The legs receive gravity. Feel how gravity wants the legs. Gravity receives the legs, the arms, the base of the skull. The torso. Let the breath become natural, in the belly feel the incoming and outgoing winds of the breath. On the inhalation, relax your effort so that the belly breathes itself. And let the whole body receive the inhale and the exhale. Notice what the tongue is doing and continually give the tongue space. Let the eyeballs drop deep into their sockets as the base of the skull widens across the floor, and the skin of the forehead goes smooth.

Let all the distant places the mind can wander, be just that, distant places, and gather your awareness inward, feeling how the breath becomes finer and most likely shallower. At first, there can be some anxiety when we let go of controlling the breath. We are so used to manipulating the breath, sculpting the breath, simply let the breath breathe itself. Let the body breathe without sculpting it. Let the legs experience themselves. Allow the arms to experience themselves. Giving space, patiently for the elaboration of silence. The elaboration of life. Allowing life to happen through this body without clinging. [omitted script]

When you are born you are born on an inhale. And when you die you die on an exhale. And watch as the body and nervous system relax, how naturally the exhale becomes longer.

Feeling, exhaling. Without clinging to ideas. To the world out there. Or motivating memory. Let there be space around the exhale and imagine that these are the last 10 minutes of your life. Imagine if you could choose how you wanted to die. Imagine if you
could decide what your last exhale will be like. And exhale as if this is your last exhale.
You can explore the exhale, not by controlling the exhale, but by feeling the space around
the exhale. By letting go during the exhale. Or by infusing the space around the exhale
with generosity. Generously giving your body away.

Exhale, as if this is your last exhale. How would you want to exhale, if this were your last
exhale? As the breath comes and goes imagine your death as a practice of generosity
giving it all away. Usually we think of death as taking away. As taking life. See if you
can feel through your exhaling how death is a giving away. A deep surrender. It’s as easy
as listening. Through the exhale, the body is listening to itself letting go. Listening.
Breathing. Simply letting go. Receiving the body’s stillness until all that’s left is the
breath. The body is just the natural world breathing, feeling, being.

[Several minutes long pause followed by the sound of a bell]

Let your skin be open to the room. Feel how gravity receives the body and the body
receives gravity. Allow your ears to be open to sound. The sounds in the body and the
sounds of the environment. Letting the senses be open as the breath sweeps the mind. The
body settled. The spine: like a collection of flowers resting on the earth. Motionless hands
and arms like quiet grasses breathing. Now begin to feel the breath in the belly again.
And as you lie here, let the eyes begin to open and lie here feeling the breath in the belly
again. Waking up the toes. Waking up the feel and ankles and begin to explore all the
ways a foot can move. [omitted script]

Coming back to life, back from corpse pose. [omitted script]

Feeling how lucky we are to be alive. Now, it’s possible to enter the world again but with
a little bit less clinging. We practice dying and coming back to life again. Now your heart
is exactly the size of your body. [Sound of bells]
REFERENCES


http://dx.doi.org/10.1037/a0036612


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