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Psychosocial processes at the end of life :: the relationship between generativity and fear of death/

Joshua R. Bringle
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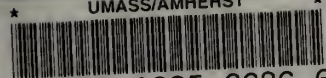
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PSYCHOSOCIAL PROCESSES AT THE END OF LIFE: THE RELATIONSHIP
BETWEEN GENERATIVITY AND FEAR OF DEATH

A Dissertation Presented

by

JOSHUA R. BRINGLE

Submitted to the Graduate School of the University of Massachusetts Amherst in partial
fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

February, 2007

Department of Psychology Clinical Division

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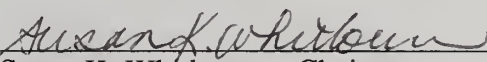
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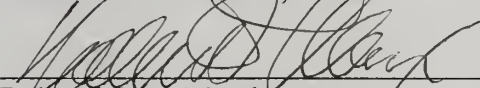
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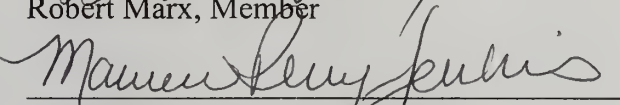
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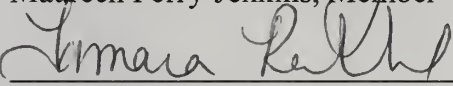
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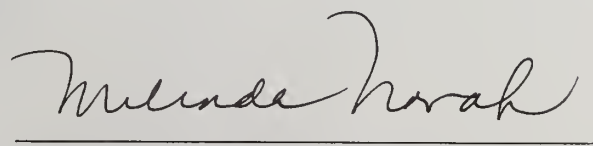
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ABSTRACT

PSYCHOSOCIAL PROCESSES AT THE END OF LIFE: THE RELATIONSHIP BETWEEN GENERATIVITY AND FEAR OF DEATH

FEBRUARY, 2007

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Erikson (1963) theorized that favorable psychosocial development would lead to lower levels of negative death attitudes and greater acceptance of mortality. This study examined the relationship between resolution of Stage 7 (Generativity vs. Stagnation) and death attitudes in a sample of community-dwelling older adults (60-94). Structural regression models were used to test the relationship between Generativity and Ego Integrity and their relationship to death attitudes. The effect of Generativity on the expression of death attitudes was mediated by Ego Integrity. These relationships were present using both participant reports of Generativity as well as the reports of participant-recommended informants. These findings provide support for the cumulative nature of Erikson's epigenetic theory in later adulthood. The implications of these findings are discussed in terms of practical applications for older adults.

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CHAPTER I

GENERATIVITY AND FEAR OF DEATH

Coming to terms with mortality is a central task for every individual. Within the psychological literature, research on death and dying has dramatically increased in the last fifty years and in the last twenty five. Thanatology, the study of death and care of the dying, has emerged as a valued field of study (Wass & Neimeyer, 1995). Kastenbaum (1999) notes that death is less likely to be considered fantastic and mythical than was true in the past. Instead death has begun to be recognized as an integral part of life; a topic worthy of weighted discussion and scholarly attention. One area of thanatological study is the individual experience of anticipating death. A growing body of literature has developed on the systematic study of concerns and beliefs about death and dying. Despite the growth of the field, relatively little is known about what contributes to death attitudes across the lifespan. The current study is an investigation based on Erikson's (1963) theory of psychosocial development and its relationship to older adults' fears about dying and acceptance of their own mortality. Higher levels of Generativity, an individual's commitment to future generations, was expected to predict lower levels of specific fears about death and greater acceptance of mortality.

Demographic Changes Affecting Thanatology

Modern Thanatology emerged in the 1960s with the writings of Ernest Becker (1962, 1973) and Elizabeth Kubler-Ross (1969) who were among the first thinkers of the 20th Century to discuss systematically the psychological experiences associated with dying, death, and grief. Demographic trends concurrent with the aging of the baby boomer generation in America (individuals born 1946-1964) have contributed to a

heightened interest in issues related to the end of life. Census data make it clear that there is a graying of both America and world. In the year 1900, there were 3.1 million Americans over the age of 65 representing approximately 4% of the population. In the year 2000, there were 35 million Americans 65 and older, approximately 12% of the total population. It is estimated that by the year 2030 there will be over 69 million Americans over the age of 65 representing 20% of the population. Furthermore, the percentage of Americans in the oldest-old (over the age of 85) is estimated to jump from current estimates at 1.5% of the population to 2.4% by the year 2030 and 3.7% by the year 2040 (U.S. Census Bureau, 2003)

By the end of the 20th Century, mortality rates had decreased, life expectancy had increased, and the leading causes of death had changed. Death, for many, became a process and not an event as medical technology was developed that could inform an individual about potentially terminal medical conditions. A person born in the year 1900 could expect to live approximately 50 years, this figure increased to approximately 70 years by the year 1960 and is estimated to increase further to approximately 83 years for those born in the year 2050 (NCHS, 1998; U.S. Census Bureau, 2003). In the year 1900, acute diseases such as tuberculosis, pneumonia, and enteritis were the three leading causes of death accounting for almost 30% of all deaths in the United States. In 1995, chronic cardiac diseases and malignant neoplasms were the two leading causes of death and accounted for 55% of all deaths (Hoyert, Kochanek, & Murphy, 1999; NCHS, 1998). For many, death comes later in life and older adults are often aware of the medical conditions that will cause their death.

With the graying of America and changes in the leading causes of death, end-of-life issues concerning prolonged illness and physical deterioration are crucial to gerontology as older adults will increasingly face advance knowledge about the likely cause of their death. Resulting physical limitations and recommended lifestyle changes may cause increased anxiety, frustration, and depressive symptoms in older adults who are coping with medical issues. Older adults will increasingly encounter what Glaser and Strauss (1965) describe as the death trajectories involving steady downward declines rather than death from acute conditions. Death will be a process that will need to be negotiated by the individual, the family, and health care providers. It is important that clinical gerontologists become prepared to help older adults adjust to life with chronic illness and help them come to terms with their mortality.

Theories and Measurement of Attitudes toward Death

Researchers define attitudes toward death in terms of both anxiety and fear. Fear and anxiety are theoretically distinct concepts, though their clinical presentations overlap to a large degree and research has demonstrated similarities in the emotional experiences of each (Wicker & Young, 1990). The term *fear* traditionally implies a rational response to known, specific threats or upcoming events in the environment. The term *anxiety* implies a more generalized, diffuse and, perhaps, less consciously accessible sense of doubt about the nature of a more ambiguous threat as well as self-doubt regarding the person's abilities to cope with the threat. Measures of death anxiety assess a wide range of reactions, emotions, and attitudes about the dying process and being dead which are subsumed in a single estimate of death anxiety (Neimeyer & Moore, 1994). Fears about death are characterized in the literature as more realistic reactions to

anticipated death-related circumstances that are more specific and focused than death anxiety.

Thus, both terms, death anxiety and fear of death, are used to describe reactions and attitudes toward death, which are typically negative, and that may be present on a daily basis. Neither term is meant to include reactions to immediate physical threats, traumatic experiences, or near-death experiences. Instead, the target emotions relate to thoughts and feelings about what it will mean in the future to die and to be dead. Although there are individual questions on measurement tools that explicitly assess experiences of anxiety, the term fear of death will be used here as a general term to include negative attitudes and concerns related to individual mortality. Related dependent variables used in this investigation are measures of specific fears about death, not generalized death anxiety.

An acknowledged criticism of this field is the lack of clarity with which the constructs fear of death and death anxiety are operationalized. There are discrepancies between theory-driven conceptualizations of death anxiety and the empirical dimensions that appear on scales. Furthermore, not only have the terms fear and anxiety been used interchangeably, but meta-analyses on predictors of death attitudes have combined studies measuring death anxiety and death fears. Neimeyer and Van Brunt (1995) reported that the field has changed in response to these criticisms. Unidimensional scales have been largely replaced by those measuring the multidimensionality of death attitudes and more attention is being paid to both psychometric considerations and more rigorous research design.

The Multidimensional Fear of Death Scale (Hoelter, 1979) was developed as an empirical measure of death fears. It was designed to assess unpleasantness and concern based on contemplation or anticipation of any of several facets related to death (Hoelter, 1979, p. 996). The eight scales of the MFODS were developed on the basis of factor analysis which yielded eight distinguishable factors: Fear of the Dying Process, Fear of the Dead, Fear of Being Destroyed, Fear for Significant Others, Fear of the Unknown, Fear of Conscious Death, Fear for the Body after Death and Fear of Premature Death. Based on comparisons with other theoretically relevant scales, as well as investigations examining its reliability and factor structure, the MFODS is considered an appropriate one for use in studying fear of death in older adults (Cicirelli, 1998; Neimeyer & Moore, 1994).

A second measure of attitudes toward death is the Death Attitude Profile- Revised (DAP-R; Wong, Reker, & Gesser, 1994), which assesses both positive and negative responses to thoughts about death and dying. The DAP-R focuses on death acceptance as well as fear of death. There are five subscales in the DAP-R: Fear of Death, Death Avoidance, Approach Acceptance, Escape Acceptance, and Neutral Acceptance. Studies have shown that the internal consistency and test-retest reliability of the scale fall into acceptable ranges and that it is correlated in theoretically predicted directions with other measures of death attitudes (Gesser, Wong, & Reker, 1987; Schiappa, Gregg, & Hewes, 2004; Wong, Reker, & Gesser, 1994).

The inclusion of measures of acceptance makes the DAP-R especially relevant for conducting research on older adults' attitudes about end-of-life issues. Although researchers are only beginning to study attitudes toward death and dying in older adults,

there is evidence that older adults express acceptance of death as well as fears about death. Themes of acceptance that have been identified include viewing death as an escape from a burdensome life, and those related to approach acceptance and themes about death being a natural and acceptable part of life. These themes have been reported more frequently by older adults than middle-aged adults and young adults (Cicirelli, 1997; Holcomb, Neimeyer, & Moore, 1993; Thorson & Powell, 1994). Understanding qualities associated with healthy acceptance of mortality will help differentiate older adults who approach death well from those who do suffer from excessive fear.

A third approach to understanding attitudes toward death is the Threat Index (TI; Krieger, Epting, & Hays, 1979), which is based on Kelly's (1955) psychology of personal constructs. According to this theory, individuals create the meaning of their own lives by creating theories or construct systems about different experiences they have encountered. Kelly stated that the inevitable nature of death challenges core constructs about identity and the nature of life. Individuals vary in how completely their mortality has been integrated into their conceptualization of life and how threatening they regard the prospect of death. The Threat Index provides a single measure of death threat based on individuals' ratings of their present self, their ideal self, and their death on items that are typically listed as core constructs, (e.g., Healthy–Sick, Competent–Incompetent, Predictable–Random). Research indicates that the TI measures several constructs, a common criticism of unidimensional measures (Moore & Neimeyer, 1991; Neimeyer, Moore, & Bagley, 1988).

A fourth approach to measuring attitudes is The Death Anxiety Scale (DAS; Templer, 1970) and its revision, the Death Anxiety Scale- Revised (DAS-R; Thorson &

Powell, 1994). both of which purport to measure a single, general attitude about death anxiety. The DAS-R was not used in the current study because it measures a single diffuse construct, death anxiety, which has also been shown to have a variable factor structure across studies (Thorson & Powell, 1988, 1994).

Age as a Predictor of Attitudes toward Death

The relationship between age and death attitudes is an important one to study as death attitudes may change in response to aging and drawing closer to the end of life. Previous investigations on the relationship between age and death attitudes have reported a consistent pattern of age differences. There is an inverse U-shaped pattern in levels of fears of death with middle aged adults having the highest scores, compared to both younger adults and older adults, who report the lowest levels of both fears about death and death anxiety (Neimeyer & Fortner, 1999). Negative attitudes toward death have been found to remain stable in cross-sectional examinations of older adults across the ages 61-87. There appear to be lower levels of both fear and anxiety about death in samples of older adults compared to samples of middle-aged adults. Older adults also report different concerns about dying and death than younger adults. College students typically endorse fears about extinction, the afterlife, and their death's impact on others. Older adults report thinking about death more than younger adults and are more concerned with issues related to dignity and autonomy such as loss of control (Cicirelli, 1997; Thorson & Powell, 1994).

Gender as a Predictor of Attitudes toward Death

Previous research has shown that there are differences between men and women on their self-reports of death attitudes. For example, concerning fears about death,

Neimeyer and Moore (1994) report significant gender differences in an adult sample on seven of the eight MFODS scales, with higher levels of fear reported by women except on the Fear of the Unknown scale on which men reported higher levels of fear. It appears that the gender difference in fears about death on the MFODS may not be present in late life (Fortner & Neimeyer, 1999; Neimeyer, Fortner, & Rybarczyk, 2000). There are conflicting reports about whether a gender difference in death attitudes exists across the lifespan, but the reported differences are consistent in their direction when present: women present more fears about death.

Two possible theories to account for this gender difference have been suggested in the literature. One is the emotional-expressiveness hypothesis (Stillion, 1995), which states that women are more likely than men to admit to troubling feelings in general. Another is that men avoid thoughts of death and dying to a greater extent than women (Wong, Reker, & Gesser, 1994). The emotional-expressiveness hypothesis was not confirmed in one study (Dattel & Neimeyer, 1990) and the other has yet to be evaluated.

Health as a Predictor of Attitudes toward Death

The relationships between self-reported health and death attitudes have been examined because researchers have theorized that people in poor health may feel more negatively about death. Fortner and Neimeyer (1999) found that greater physical and mental health problems were related to higher levels of death anxiety and fears about death in older adults. Other findings regarding health status have shown that specific populations who are acutely ill display higher levels of negative death attitudes (Catania, Turner, & Choi, 1992; Hintze, Templer, Cappelletty, & Frederick, 1994; Viney 1984). Neutral Acceptance on the DAP-R was positively correlated with both physical and

psychological well-being (Wong, Reker, & Gesser, 1994), indicating that, poor health is related to higher levels of negative death attitudes and that good health is related to increased acceptance of mortality.

Education as a Predictor of Attitudes toward Death

Level of education has been included in only a few of the investigations of predictors of death attitudes. Although most studies do not include education in their studies, this could be a function of the samples studied. The cohort of older adults that has been studied in the last twenty years may have less variability in terms of education as several studies report that most participants had completed high school or had only vocational training (e.g., DePaola, Griffin, Young, & Neimeyer, 2003). Studies on younger adults are typically conducted on college students. Two recent studies (Cicirelli, 2001; Fry 2001) on older adult samples with variability in educational achievement found that higher educational attainment was related to lower levels of fears about death which indicates that education may serve as a buffer against negative death attitudes.

Psychosocial Predictors of Attitudes toward Death

Underlying the search for demographic variations would seem to be important individual differences in attitudes toward death: perhaps related to personality, socialization or the interaction between the two. Erikson's (1963, 1994) theory of psychosocial development emphasizes continued growth across the lifespan and is one of the few theories to incorporate predictions about the end of life. Erikson theorized that successful psychosocial development would contribute to well-being, lower levels of fear of death and higher acceptance of mortality. Erikson's theory is epigenetic in that individuals move from one stage of development to the next and in each stage there is a

primary crisis to negotiate. Successful negotiation of each crisis will result in a favorable ratio between a positive and negative quality such that a new component of the ego develops. Qualities developed at each stage contribute to overall psychosocial development across the lifespan.

Individuals typically encounter the crises described at specific times in development but this is not necessarily the case. Encountering crises related to any stage can occur throughout the lifespan though Erikson theorized that due to environmental and biological interactions, certain crises are expected to occur at predictable points throughout development. It is expected that individuals would negotiate the first four stages (Trust vs. Mistrust, Autonomy vs. Shame and Doubt, Initiative vs. Guilt, Industry vs. Inferiority) during childhood, developing qualities related to being active in the world, interacting socially with peers and learning to initiate and complete activities. The physical and social role changes encountered in adolescence marks the typical initiation of Stage 5, Identity vs. Role Confusion, which is Erikson's most widely studied stage, in which individuals attempt to initiate and sustain a sense of personal identification, peer affiliation, and emotional maturity.

Beginning in early adulthood, individuals are expected to begin to move outside of the self in terms of their psychosocial development. The crisis in Stage 6 (Intimacy vs. Isolation) challenges the individual to invest in relationships and share with others. In Stage 7 (Generativity vs. Stagnation), moving outside of the self involves developing a sense of concern for future generations. Erikson expected that a sense of caring would develop in an individual that would indicate a widening commitment to take care of the persons, the products, and the ideas one has learned to care for (Erikson, 1994, p.

67). Erikson (1963) theorized that his seventh stage would be initiated by an awareness of mortality in middle adulthood and that the challenges to extend the self and care for the next generation are seen as responses to this realization (Tomer, 1994). If an individual fails to negotiate a crisis with a favorable ratio of the positive quality, the pathological polar quality could emerge instead. Stagnation is theorized to be marked by self-absorption, indulgence and a rejection of one's community, family, children, or self.

Even though it emerges during a very socially oriented phase of life, Erikson believed that Generativity partially had a biological basis that corresponded with parenting as a prerequisite for Generativity. This position was later revised and instead he suggested that having children was a drive and was one part of what it could mean to be generative. There is also a communal aspect to Generativity as one generates or produces or creates a product which represents an extension of the self...then one renounces ownership of the product, granting it a certain degree of autonomy and offering it up to others (McAdams, Ruetzel, & Foley, 1986, p. 802). Generativity has been defined in terms of a need, task and concern, it has been linked with behaviors, motives and values and it exists within different contexts for different people at different times throughout the lifespan (McAdams & de St. Aubin, 1992).

Generativity has been typically conceptualized as concern for the next generation that develops in adulthood. Though Generativity is expected to emerge in mid-life, Erikson (1994) stated that maintaining Generativity throughout old age until the end of life is necessary for continued psychosocial growth that is fulfilling and contributes to a sense of Ego Integrity: old people can and need to maintain a *grand-generative* function that minimum of vital involvement that is necessary for staying really alive

(p. 63). Generativity has also been described as a means of achieving symbolic immortality and contributing to something larger than the self that will persevere beyond an individual's lifetime, or outlive the self (Kotre, 1984; McAdams & de St. Aubin, 1992).

Thus, developing and maintaining a sense of Generativity can contribute to favorable outcomes at the end of life. Erikson stated that engaging in generative behaviors would increase well-being and would be prompted by an awareness of death in midlife. Being generative has been found to be crucial in conceptualizations of quality of life in old age (Cheng, Chan & Phillips, 2004). Generativity emerged as the primary component in an empirical investigation of quality of life in community-dwelling older adults and was composed of indicators relating to a) contributions to others, b) self-actualization, and c) social participation. Cheng et al (2004) theorized that those three qualities are necessary for a sense of fulfillment at the end of life. Contributing to something that will outlive the self may also lead to lower levels in negative death attitudes. This prediction has not been investigated in the literature.

Two scales that have been developed to measure Erikson's construct of Generativity are the Loyola Generativity Scale (LGS; McAdams & de St. Aubin, 1992) and the Generative Behavior Checklist (GBC; McAdams & de St. Aubin, 1992). The LGS is a scale that measures levels of general generative concern. Its use in several studies indicates that it has high internal consistency, modestly high test-retest reliability, high correlations with other self-report measures of Generativity, and high correlations with real-life generative acts displayed in the last two months (McAdams & de St. Aubin, 1992; McAdams, de St. Aubin & Logan, 1993; McAdams, Hart & Maruna, 1998). The

GBC was developed concurrently with the LGS to help distinguish between generative acts and generative concern. As the construct of Generativity is complex in both its development and presentation, multiple measurements are important to capture the intricacies of respondents' individual differences and both were used in the current study.

Both the LGS and the GBC are face-valid scales on which participants are asked to endorse qualities and report behaviors associated with Generativity. One means of assessing a scale's validity is to compare informant and respondent scores or the correlation between the two scores. The use of informants, such as parents and teachers, has been used to assess childhood psychopathology, including behavior genetics studies, behavior problems, and family dynamics. In the adult literature, informants are typically used to assess personality traits, typically measured by the Revised NEO Personality Inventory (Costa & McCrae, 1992), as well as psychopathology. Research has shown that the quality of the relationship between the participant and the informant has an effect on level of agreement (Funder & Colvin, 1988; Kurtz & Sherker, 2003; McCrae, 1993), and that informant-participant agreement is best for ratings of extraverted traits (Kolar, Funder & Colvin, 1996; McCrae, 1982; Spain, Eaton, & Funder, 2000) and for diagnosing externalizing compared to internalizing disorders (Silverman & Eisen, 1992). Informants do not provide an objective rating of the participant's personality, but they can provide valuable information about patterns in self-report.

When participants and informants have a high level of agreement, this has typically been used as an index for the validity of informant assessment (Kamphuis, Emmelkamp & de Vries, 2003, p. 103), but self-reports are not errorless measurements for either respondents or informants, nor do they necessarily suffer from the same types

of errors. When large differences between informant and respondent scores exist, the separate scores cannot both be accurate measures of the same construct. Social desirability has been found to influence self-report to create differences in participant-informant scores in child and adolescent reports of psychopathology (Dadds, Perrin, & Yule, 1998; DiBartolo, Albano, Barlow, & Heimberg, 1998; Pina, Silverman, Saavedra, & Weems, 2001) and in adult reports of personality disorders (McKeeman & Erickson, 1997). Though McAdams and de St. Aubin (1992) state that social desirability does not affect self-report of Generativity, informants have not been used in the assessment of adult Generativity with the LGS and the GBC. Examining self-report and informant convergences and differences on two widely used scales may suggest whether examining the effects of social desirability on LGS and GBC self-report is warranted. The purpose of using both reports in the current study was to obtain a separate report of Generativity to further test the construct's relationship to death attitudes. The informant reports provide a more complete account of the Generativity to assess its relationship to assess its relationship to the other relevant study variables in alternate models.

Following Generativity vs. Stagnation in Erikson's (1963) theory, the final stage of psychosocial development is Ego Integrity vs. Despair. The main tasks in this final stage are to develop the abilities to integrate both successes and failures, to tolerate and accept others, to develop a sense of being a part of a larger history that includes future and past generations, to develop a sense of gaining wisdom, to develop a healthy relationship with mortality and to possess a general satisfaction with life. Erikson also predicted that successful resolution of this stage (Ego Integrity) would result in decreased levels of anxiety and fear about death and acceptance of mortality. Failure to

resolve successfully the crisis at this stage would theoretically result in Despair which is associated with not accepting one's life course and realizing that there is not enough time to correct the mistakes of the past.

Despite the theorized link between developing Ego Integrity and end of life issues, research on this stage and its relationship with attitudes toward death has been sparse. In their meta-analysis on predictors of death attitudes in older adults, Fortner and Neimeyer (1999) reported that a relationship between death attitudes and constructs related to ego integrity had been reported across studies. However, only one study out of the twenty included in their review measured Ego Integrity with a measurement technique that was designed to measure that specific construct. In the other nineteen studies included in the meta-analysis, scales measuring life satisfaction and purpose in life were used as proxies for Ego Integrity. One study not included in the meta-analysis (Walaskay, Whitbourne, & Nehrke, 1983-84) did report a negative relationship between death attitudes and Ego Integrity using a validated measure of Ego Integrity, the Inventory of Psychosocial Development (Constantinople, 1969). Their results indicated that more favorable resolution of Ego Integrity was associated with lower levels of Death Anxiety as measured by the Death Anxiety Scale in a sample of community-dwelling older adults.

It is also important to consider that favorable psychosocial development throughout adulthood would be related to more positive attitudes regarding death and dying. In Erikson's (1963) theory of psychosocial development, successful resolution across the lifespan is a cumulative process and dependent upon successful resolution of previous stages. While previous studies have concluded that higher levels of Ego

Integrity are correlated with lower levels of fear about death. Generativity has been overlooked as a variable that may contribute to the development and maintenance of death attitudes. However, given that Ego Integrity was proposed by Erikson to reflect acceptance of mortality, this stage should have particular relevance. Thus, resolution of both adulthood stages in tandem (Stage 7 Generativity vs. Stagnation and Stage 8 Ego Integrity vs. Despair) may play an important role in the presentation of attitudes toward death. Specifically, successful resolution of Stage 7 may predict death attitudes but only if a strong sense of Ego Integrity has developed as well. A test of the effects of successive stages from Erikson's theory of psychosocial development to predict death attitudes has not been reported in the research literature.

Hypotheses

Generativity was assessed at the attitudinal and behavioral levels by participants and by informants, people who knew the participants well enough to rate them on relevant scales. It was expected that higher levels of Generativity would predict lower levels of the MFODS subscales Fear for Significant Others, Fear of the Unknown and Fear of Premature Death. On the DAP-R subscales, it was expected that higher levels of Generativity would predict lower levels of Fear of Death and higher levels of Neutral Acceptance. Generative Concern was expected to be the most salient predictor of these death attitudes compared to the effects of relevant demographic variables (i.e., age, gender, health, and education) and Ego Integrity. Examining the relationship between Generativity and death attitudes in models that included Ego Integrity allowed for a test of the main hypothesis while controlling for Ego Integrity. Due to the theorized linear

and epigenetic nature of the Eriksonian variables, the current study also allowed for an examination of both Ego Integrity and Generativity on death attitudes concurrently.

CHAPTER II

METHODS

Participants

Ninety-four individuals participated in this study. The sample was 29% men (n=27) and 71% women (n=67). The mean age of participants was 71 years; the range in ages was 60-94. The majority of the sample identified as Caucasian. The sample is described further in Table 1 and Table 2.

Informants were individuals who the participants knew well and were recommended by participants to complete questionnaires assessing Generativity parallel to those administered to the participants. Of the 94 participants, 80 recommended an informant (85%). Five of the recommended informants did not return their questionnaire packets. Of the 75 informants, 74 reported their relationship to the study participant as being a spouse, sibling, child or friend. Demographic information for the informants is summarized in Table 3 and Table 4.

For the remainder of the paper, initial respondents will be referred to as participants and additional participants will be referred to as informants.

Procedure

Participants in this study were solicited from a database of potential research participants collected by the Personality and Aging Laboratory (PAL) at the University of Massachusetts, Amherst. The database was initially amassed by means of a newspaper advertisement in local papers and a community newsletter calling for older adults to take part in research studies. All participants in this study were community-dwelling adults

over the age of 60 who had consented to being contacted for participation in ongoing research by members of the PAL and were drawn primarily from the Pioneer Valley area of Western Massachusetts. Participants were initially contacted by mail and given the opportunity to volunteer for a research study on normative aging to assess their thoughts and feelings about the aging process. Potential participants were instructed to call the primary investigator to have a questionnaire packet sent to them or to pick up a questionnaire packet at the Amherst Senior Center. Return envelopes were included for all participants to mail back the questionnaires once they had been completed.

Once participants had acquired a questionnaire packet, they were asked as part of the study to supply the name, address and phone number of someone who they knew well for additional participation in the study. It was explained that this additional participant would play an important role in the study and that the researcher would be asking the person to fill out a questionnaire about how the participant has negotiated the aging process.

Each informant's name, address and phone number was returned to the researcher in the participants' packets along with a form letter to the informant on which the participant had completed the salutation and had signed the letter. The researcher, when sending the questionnaire packet out to each informant, also signed the form letter.

Measures

Measures for the current study are listed in Appendix B (participant packet) and Appendix C (informant packet). The reliability estimates for all scales are summarized in Table 5.

Demographic Information

Participants completed a demographics questionnaire which included measurements of race, gender, self-reported health status, educational attainment, and age. Health status was assessed using three scales. The first asked participants to select from a list the diagnoses that they had been given by a medical professional in the past year. The second scale asked participants to select from a list which symptoms they had experienced in the past year. The third scale asked participants to rate their own health on a five-point scale (4=Excellent, 3=Very good, 2=good, 1=fair, 0=poor). Self-reported health was chosen for use in the current study over the other two measurements of health because the participants' impressions of their health regardless of diagnosed health conditions and symptoms over the past year, which may have remitted or may have been well-managed at the time of study participation, was considered more important. Participants indicated their level of educational attainment by selecting the highest degree attained from a list. Race was not entered into any regression equations because the sample is almost exclusively Caucasian. The scale used to assess these sample characteristics is available in Appendix B.

Informants were asked to provide their age, relation to the participant and asked to rate how well they knew the participant who recruited them for the study on a 5-point scale from 1 (*Not very well*) to 5 (*Very well*).

Attitudes toward Death

The Multidimensional Fear of Death Scale

The 42-item Multidimensional Fear of Death Scale (MFODS; Hoelter, 1979) was used to assess fears about death. Respondents are asked to indicate their agreement with each statement on a 5-point response scale from 1 (*Strongly Agree*) to 5 (*Strongly*

Disagree). Scores for each subscale were sums of the items; lower scores on each of the eight subscales reflect higher fears of death after some items are reverse-scored.

Over a three-week period, the eight scales of the MFODS demonstrated reliability coefficients ranging from .61 to .81 (Neimeyer & Moore, 1994). Three subscales from the MFODS were used in the current study: Fear for Significant Others, Fear of the Unknown and Fear of Premature Death. In the current study, the subscales Fear for Significant Others ($\alpha=.73$) and Fear of Premature Death ($\alpha=.65$) displayed acceptable reliability estimates while the Fear of the Unknown subscale displayed marginal reliability ($\alpha=.57$).

The Death Attitude Profile - Revised

The Death Attitude Profile - Revised (DAP-R; Wong, Reker, & Gesser, 1994) is a 32-item scale on which respondents are asked to indicate their level of agreement to a statement on a 7-point scale ranging from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*). Subscales were computed by summing the responses from each item and dividing by the number of items forming a scale.

Estimates of reliability have been previously reported as .64 to .95 at a four-week retest (1994). Two scales, Fear of Death and Neutral Acceptance, were selected from the DAP-R for the current study. These subscales best capture issues related to social aspects of dying, existential issues related to dying, and issues related to dying that may be related to regrets about dying too soon. The Neutral Acceptance subscale purports to measure acceptance about death as an integral part of life and a part of life that becomes non-threatening to an individual. In the current study, Fear of Death displayed an acceptable reliability estimate ($\alpha = .81$) and the Neutral Acceptance subscale displayed

marginal reliability ($\alpha = .45$). Previous research indicates that the Neutral Acceptance subscale is not as reliable as the other subscales of the DAP-R (Wong, Reker, & Gesser, 1994). Despite its low reliability, this scale was still used as an outcome variable in the current study. It is the only acceptance scale on the DAP-R theoretically related to healthy integration of death into one's conception of life, an expected result of negotiating Erikson's (1963) stages of psychosocial development. The other two scales measuring acceptance are based on a religious acceptance of death (Approach Acceptance) and a release from misery (Escape Acceptance).

Psychosocial Development

Ego Integrity

Participants completed the Inventory of Psychosocial Development (IPD; Constantinople, 1969; Walaskay, Whitbourne, & Nehrke, 1983-1984). The 80-item IPD is a measure of Erikson's eight-stage theory of psychosocial development. The IPD yields eight stage scores with five positive items and five negative items contributing to each score. Respondents are asked to indicate how characteristic or uncharacteristic a given item is of them on a 7-point response scale (1 = Definitely most uncharacteristic of you, 7 = Definitely most characteristic of you). Difference scores are obtained for each stage score by subtracting the summed score of the negative items from the summed score of the positive items. For each stage, the range of possible scores is from -30 to +30. Only the subscale related to Stage 8, Ego Integrity vs. Despair, was used in the current study. Sample items from Stage 8 include the following: Think about my failures. Reached my goals. Take responsibility for my actions). The subscale measuring resolution of Stage 7 (Generativity vs. Stagnation) was not used in the current

study due to its overlap with the Ego Integrity scale as reported in previous studies (Whitbourne, Zuschlag, Elliot, & Waterman, 1992). A previous report of reliability for Stage 8 indicated that the scale demonstrated acceptable reliability ($\alpha = .76$; Walaskay, Whitbourne, & Nehrke, 1983-1984). In the current study, Stage 8 Ego Integrity vs. Despair demonstrated adequate reliability ($\alpha = .67$).

Generativity

Loyola Generativity Scale

The LGS is a 20-item scale on which participants indicate how often statements apply to them on a four-point scale from 0 the statement *never applies* to them to 3 the statement applies to them *very often or nearly always*. Sample items from the LGS include the following: I feel as though I have made a difference to many people, .

People come to me for advice, and Other people say that I am a very productive person. McAdams and de St. Aubin (1992) reported that the scale demonstrated acceptable reliability ($\alpha=.83$). In the current study the LGS also demonstrated acceptable reliability ($\alpha=.86$).

Generativity Behavior Checklist

The GBC scale is a 50-item scale on which participants report how often they had performed a particular behavior in the last two months on a three point rating scale from 0 *have not performed the behavior in the past two months* to 2 *have performed the behavior more than once during the past two months*. Sample items include: Served as a role model for a young person. Did volunteer work for a charity, and Produced a piece of art or craft. In the current study the GBC demonstrated acceptable reliability ($\alpha = .86$).

Informants were asked to rate the level of generative concern and the number of generative behaviors of the participant who recommended them for the study. Informant reports of participant Generativity on both the LGS ($\alpha = .83$) and the GBC ($\alpha = .87$) both demonstrated acceptable reliability.

Statistical Design and Analysis

Structural regression models, using LISREL 8.71 (Joreskog & Sorbom, 2004), were used to determine the relationship between relevant demographic variables, participant reports of Generativity, informant reports of Generativity, Ego Integrity and death attitude variables. First, measurement models for latent Generativity variables and a latent death attitude variable were developed. Next, four structural models were tested. The first incorporated participant Generativity (LGSGEN, GBC), Ego Integrity (EI) and the latent death attitude construct (DA). The second incorporated informant Generativity (InfLGS, InfGBC), Ego Integrity and the latent death attitude construct. The third model incorporated both participant and informant Generativity, Ego Integrity and the latent death attitude construct. The fourth model incorporated four demographic variables (age, gender, education and health), both participant and informant reports of Generativity, Ego Integrity and the latent death attitude construct.

These analyses allowed for a test of the predictive ability of a latent Generativity construct on death attitudes, and a test of the mediational role of Ego Integrity in the relationship between Generativity and death attitudes while controlling for relevant demographic variables. Maximum likelihood estimation was used to fit data to the structural regression models which consisted of measurement model and regressions among the latent variables. Relevant demographic variables and Generativity were

specified as exogenous variables. Ego Integrity and the latent death attitude construct were specified as endogenous variables, each with a direct path from Generativity. A direct path between endogenous variables was specified from Ego Integrity to the latent death attitude construct.

Five indices were used to assess goodness of fit for all models: The Minimum Fit Function Chi-square (values >0.05 are desirable), the Normed Fit Index (NFI; values >0.95 are desirable), the Comparative Fit Index (CFI; values >0.95 are desirable), the Standardized root-mean-square residual (SRMR; values of 0.08 or less are desirable) and the Root-Mean-Square Error of Approximation (RMSEA; values of 0.06 or less are desirable). Tests of mediation were conducted by assessing the significance of the indirect effects in the model. Indirect effects are defined as the product of the path coefficients between the predictor variables and the outcome variable. The total effect is the sum of the indirect and direct effects. A chi-square difference test was used to compare nested models. All reported path coefficients are standardized and significance levels for paths are reported at $p < .05$. The basic model involving both reports of Generativity being tested is shown in Figure 1.

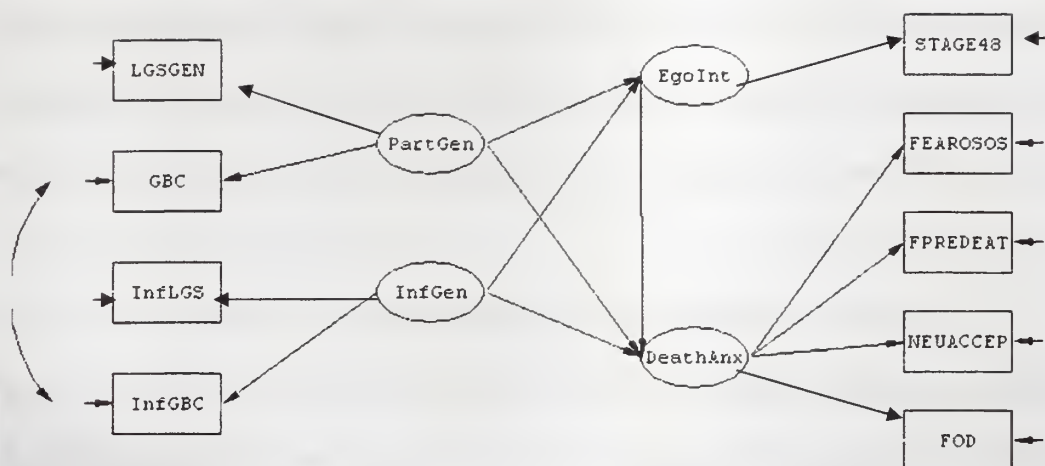


Figure 1. Basic model with both participant and informant reports of Generativity
 Note. LGS = Participant LGS. GBC = Participant GBC. PartGen = Latent participant Generativity construct, InfLGS = Informant LGS, InfGBC = Informant GBC, InfGen = Latent informant Generativity construct. Stage48 = IPD Stage 8 observed score. FEAROSOS = Fear for Significant Others. FPREDEAT = Fear of Premature Death, NEUACCEP = Neutral Acceptance, FOD = Fear of Death.

CHAPTER III

RESULTS

Descriptive Data

Overall mean scores, standard deviations and distribution statistics, as well as mean scores and standard deviations by gender, for key study variables are reported in Table 6. Data were checked for normality, which is a critical assumption underlying the maximum likelihood procedures used in this study. Results indicated univariate normality within acceptable limits for all measured variables.

Correlations

Intercorrelations of all key study variables are reported in Table 7. The two Generativity subscales, the LGS and the GBC, were significantly correlated with one another as well as with Ego Integrity. There were also expected correlations between the five dependent variables. Two of the death attitudes were significantly correlated with age: Fear for Significant Others ($r = .26, p < .05$) and Fear of Premature Death ($r = .31, p < .01$). The demographic variable self-reported health was significantly and negatively correlated with the other two measures of health (number of medical diagnoses and number of symptoms in the past year) as reported in Table 8.

Predictors of Generativity

As a number of demographic variables were correlated with both of the participant Generativity measures, a regression analysis was run separately for each Generativity measure containing all of the demographic variables used in the regressions predicting the death attitudes. All possible 2-way interactions were entered separately to

test for effect moderation. Self-reported health was the only significant predictor of LGS scores ($\beta = .22, p < .05$). There were three significant predictors of GBC scores: Age ($\beta = -.21, p < .05$), Gender ($\beta = .21, p < .05$), and Education ($\beta = .21, p < .05$).

Informant Data

Informants rated how well they knew the participant who recommended them for the study (see Table 9). Informants rated their participant's Generativity on both the LGS and the GBC. A repeated measures MANOVA, $F = 1344.86 (2, 73), p < .001$, indicated significant differences between the reports. Specifically, informant's reports of participant's generative concern ($M = 33.92, SD = 6.51$) is significantly lower than the participant's own report of generative concern ($F = 47.61; p < .01$) as shown in Table 10. Informants' estimates of participant's Generative Behaviors ($M = 30.32, SD = 12.04$) is not significantly different than participant's estimates of their own Generative Behaviors (see Table 10). Informants' and participants' reports on both measures were significantly correlated (see Table 11).

Structural Regression Models

Five models were tested to create the latent Generativity construct. As estimated measurement error was not significant for the participant LGS scores, a fixed measurement error, calculated from the reliability of the LGS scale, was used in the model. The maximum likelihood estimate of the path coefficient between LGS and the Generativity construct was fixed to a value of 1 to allow scaling of the remaining path coefficient. The measurement error for GBC scores and the path coefficients between the GBC and the latent Generativity construct were free to be estimated. Generativity model 1 was specified such that all four indicators loaded on one latent Generativity construct

($\chi^2 = 121.274$, $df=4$, $p=0.000$; Normed $\chi^2=30.431$; RMSEA=1.022; NFI=-1.468; CFI=0.000; SRMR=0.203). As the estimated measurement error for the informant scores on the LGS and the GBC was not significant, measurement error for the informant scores was fixed using the scale reliabilities in this and all subsequent models. Generativity model 2 was specified such that participant and informant LGS scores loaded on a single latent construct conceptualized as Attitudinal Generativity and the GBC scores as reported by both the participant and the informant loaded on a single latent construct conceptualized as Behavioral Generativity ($\chi^2=28.170$, $df=3$, $p=0.000$; Normed $\chi^2=9.57$; RMSEA=0.309; NFI=0.416; CFI=0.404; SRMR=0.162). The latent constructs were specified to be correlated so that the factors were non-orthogonal. In Generativity model 2a, a correlation was specified between the measurement error for participant and informant Behavioral Generativity ($\chi^2=28.076$, $df=2$, $p=0.000$; Normed $\chi^2=14.038$; RMSEA=0.380; NFI=0.429; CFI=0.395; SRMR=0.166). Generativity model 3 was specified such that the participant's reports were used as observed indicators for a latent construct called participant report of Generativity (PartGen), and the informant reports were used as indicators for the latent construct called informant reports of Generativity (InfGen) ($\chi^2=7.812$, $df=3$, $p=0.050$; Normed $\chi^2=2.604$; RMSEA=0.135; NFI=0.841; CFI=0.888; SRMR=0.056). Factors were once again specified as non-orthogonal. Generativity model 3a was specified such that the measurement error between participant and informant GBC reports was correlated ($\chi^2=3.261$, $df=2$, $p=0.196$; Normed $\chi^2=1.631$; RMSEA=0.090; NFI=0.934; CFI=0.971; SRMR=0.057).

Generativity model 3a had the best fit indices, offering empirical support for specifying latent Generativity variables in terms of participant and informant report.

These latent variables were used in subsequent structural regression models to assess the relationship between all four indicators and the other variables: Ego Integrity and death attitudes. As a result, the factor loadings and correlations (standardized path coefficients) for only this model are reported. Participant LGS and GBC scores both loaded significantly on the latent Participant Generativity construct (0.60 and 0.91 respectively), while informant LGS and GBC reports both loaded significantly on the latent Informant Generativity construct (0.40 and 0.93 respectively). The correlation between the latent constructs was not significant whereas there is a significant correlation ($r=.25, p<.05$) between the measurement errors for participant and informant GBC indicators. As neither measurement error nor unexplained variance were factored into the correlation between the latent Generativity constructs, the relationship between the two was not significant. There was one observed variable for Ego Integrity (IPD Stage 8 scores) with fixed measurement error.

Three confirmatory factor analyses were run to assess the relationship between the five death attitude variables and a common factor. Due to the fact that each additional path in a model constrains degrees of freedom, the most parsimonious model with a significant change in chi-square is desirable. Factors involving a small number of variables were tested first and the measurement error for FOD was fixed throughout the three factor analyses to set the metric for the models. In the first Death Attitude model (DA), Fear of Premature Death (FPD), Fear of Death (FOD) and Neutral Acceptance (NA) were specified to load onto the latent Death Attitude (DA) variable ($\chi^2=28.03, df=7, p=0.0002, RMSEA=0.183$). All factor loadings (path coefficients) were significant. In the second Death Attitude model, a path from Fear for Significant Others (FFSO) to DA

was included ($\chi^2=12.48$, $df=5$, $p=0.0520$, RMSEA=0.110). Once again, all loadings were significant. A test of the difference in model chi square affirmed that the second model showed better fit than the first ($\Delta\chi^2=17.206$, $\Delta df=1$, $p<0.001$). In the third Death Attitude model, a path was included from Fear of the Unknown (FOU) to DA. This model showed similar fit to the second model ($\chi^2=10.49$, $df=5$, $p=0.05248$, RMSEA=0.110), however a chi square difference test failed to indicate that Model 3 was statistically superior to Model 2. Also, all factor loadings were significant except for the path coefficient between FOU and DA. Fear of the Unknown was therefore omitted from the model, and Model 2 served as the final measurement model for the latent DA construct.

Three models were tested that predicted a latent death attitude construct made up of four of the five death attitude scales used in the present study (Fear for Significant Others, Fear of Premature Death, Fear of Death and Neutral Acceptance). Death Attitude model 1 utilized participant reports of Generativity. DA Model 2 utilized informant reports of participants' Generativity. Model 3 utilized both participant and informant reports of participants' Generativity. A fourth model was tested adding four demographic variables (age, gender, education and self-reported health) in addition to both reports of Generativity, Ego Integrity and the latent DA variable.

DA Model 1 (see Figure 2), which utilized participant reports of Generativity, showed poor fit ($\chi^2=32.324$, $df=13$, $p=0.00215$; Normed $\chi^2=2.486$; RMSEA=0.126; NFI=0.839; CFI=0.892; SRMR=0.105). This model accounted for 32% of the variance in the latent death attitude construct (DA). There was no significant effect of Generativity on DA. There was a direct effect of Generativity on Ego Integrity with a standardized path coefficient of 0.595. There was also a significant direct effect of Ego

Integrity on the latent DA construct with a standardized path coefficient of -0.648. There was a significant indirect effect of participant Generativity on DA, as mediated by Ego Integrity, with a standardized indirect effect of -0.385. There was not a significant total effect of Generativity on DA. All reported direct paths are significant $p < .05$.

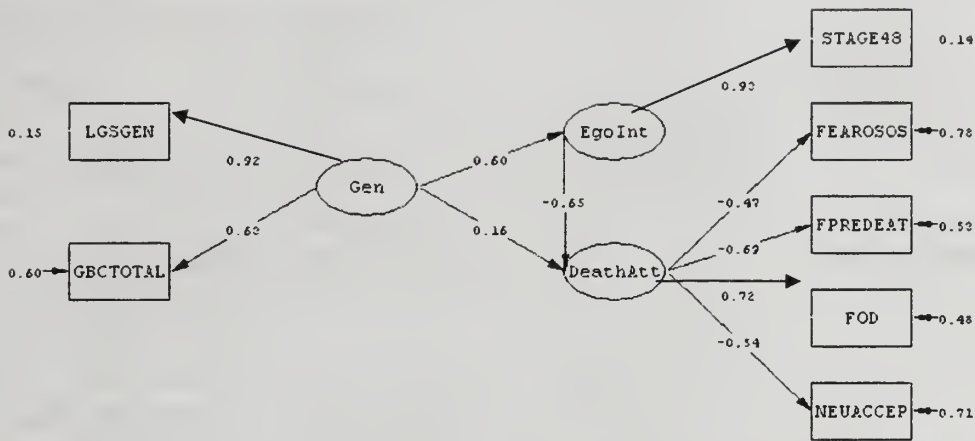


Figure 2. DA Model 1

Note: $\chi^2=32.324$, $df=13$, $p=0.00215$, $RMSEA=0.126$; LGS = Participant LGS. GBC = Participant GBC, Gen = Latent Generativity Construct. Stage48 = IPD Stage 8 observed score. EgoInt = Latent Ego Integrity construct. FEAROSOS = Fear for Significant Others. FPREDEAT = Fear of Premature Death. NEUACCEP = Neutral Acceptance, FOD = Fear of Death.

DA Model 2 (see Figure 3), which utilized only informant reports of participants Generativity, showed good fit ($\chi^2=16.061$, $df=13$, $p=0.246$; Normed $\chi^2=1.235$; $RMSEA=0.0535$; $NFI=0.870$; $CFI=0.970$; $SRMR=0.0721$). This model accounted for 41.9% of the variance in the latent death attitude construct (DA). There was no significant direct effect of informant Generativity on DA. There was a significant direct effect of informant Generativity on Ego Integrity with a standardized path coefficient of 0.333. There was also a significant direct effect of Ego Integrity on DA with a standardized path coefficient of -0.602. There was a significant indirect effect of informant s Generativity on DA, as mediated by Ego Integrity, with a standardized indirect effect of -0.201. There was also a significant total effect of informant Generativity on DA with a standardized total effect of -0.311. All reported direct paths are significant $p<.05$.

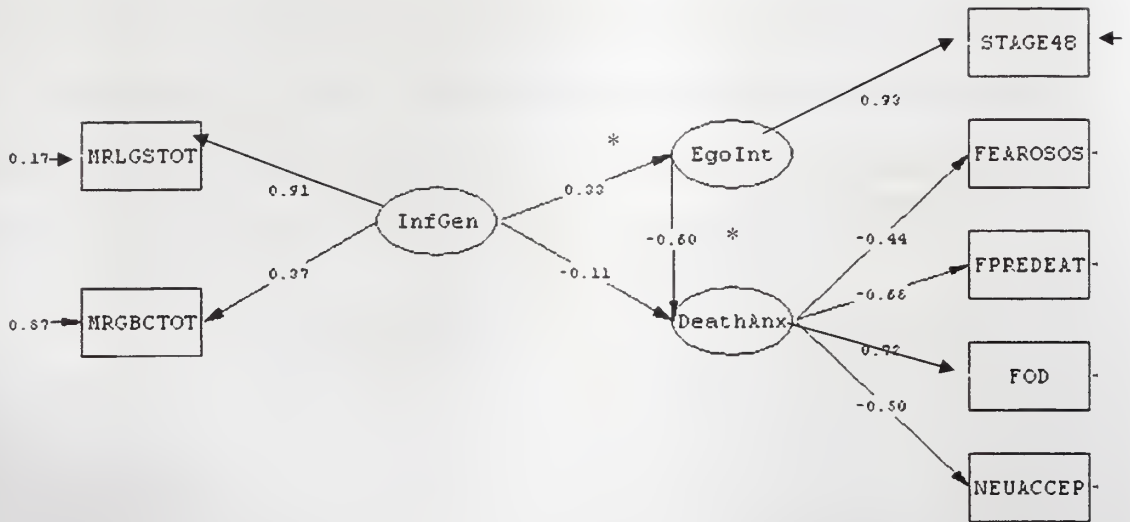


Figure 3. DA Model 2

Note: $\chi^2=16.061$, $df=13$, $p=0.246$, $RMSEA=0.0535$; MRLGSTOT = Informant LGS. MRGBCTOT = Informant GBC. InfGen = Latent informant Generativity construct. Stage48 = IPD Stage 8 observed score. EgoInt = Latent Ego Integrity construct. FEAROSOS = Fear for Significant Others. FPREDEAT = Fear of Premature Death. NEUACCEP = Neutral Acceptance. FOD = Fear of Death. DeathAtt = Latent death attitude construct.

DA Model 3 (see Figure 4), which utilized both respondent and informant reports of participants' Generativity, showed a poor fit ($\chi^2=42.223$, $df=23$, $p=0.00855$; Normed $\chi^2=1.836$; $RMSEA=0.0981$; $NFI=0.814$; $CFI=0.899$; $SRMR=0.103$). This model accounted for 41.1% of the variance in the latent death attitude (DA) construct. There was no significant direct effect of informant Generativity on either exogenous variable. There was a significant direct effect of participant Generativity on Ego Integrity with a standardized path coefficient of 0.572. There was also a significant direct effect of Ego Integrity on DA with a standardized path coefficient of -0.536. There was a significant total effect of participant Generativity on DA with a standardized total effect of -0.399. There was also a significant indirect effect of participant Generativity on DA, as

mediated by Ego Integrity, with a standardized indirect effect of -0.307. All reported direct paths are significant $p < .05$.

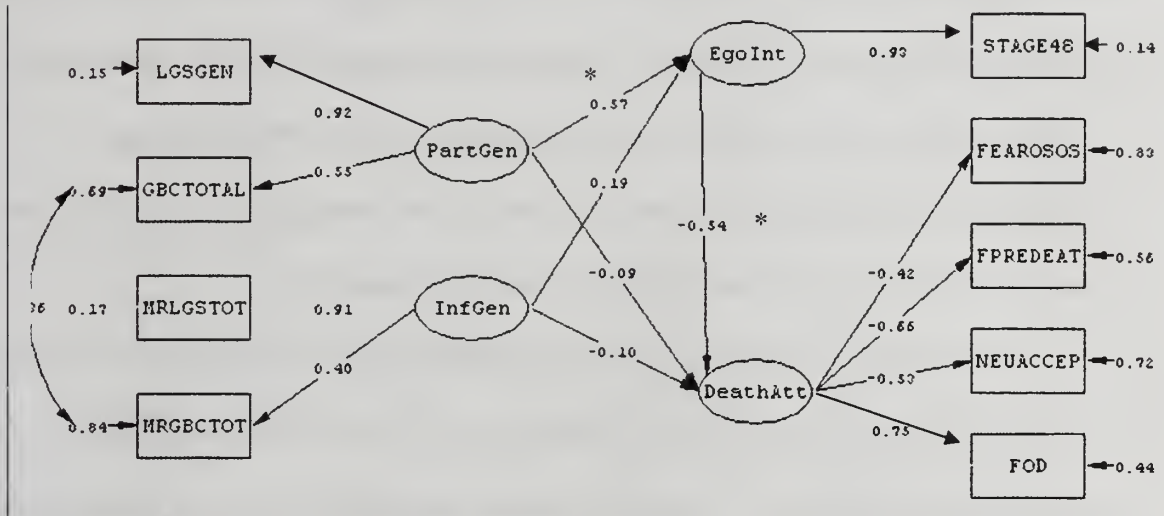


Figure 4. DA Model 3

Note: $\chi^2=42.223$, $df=23$, $p=0.00855$, $RMSEA=0.0981$; LGSGEN = Participant LGS, GBCTOTAL = Participant GBC, PartGen = Participant latent Generativity construct, MRLGSTOT = Informant LGS, MRGBCTOT = Informant GBC, InfGen = Informant latent Generativity Construct, Stage48 = IPD Stage 8 observed score, EgoInt = Latent Ego Integrity construct, FEAROSOS = Fear for Significant Others, FPREDEAT = Fear of Premature Death, NEUACCEP = Neutral Acceptance, FOD = Fear of Death, DeathAtt = Latent death attitude construct.

The final model tested included all demographic variables, both participant and informant LGS and GBC scores on the endogenous side of the model and Ego Integrity and a latent construct for death attitude on the exogenous side of the model. The model was specified such that participant LGS and GBC were observed indicators of a participant Generativity latent construct, and informant LGS and GBC were specified as observed indicators of the informant Generativity latent construct. On the endogenous side of the model the measurement error for the demographic variables were set to 0, creating an identity between the observed and latent construct. The latent constructs for health, education and age were specified to covary with each of the latent Generativity

constructs, and the latent Generativity constructs were specified to covary with each other. On the exogenous side of the model, the measurement error for Ego Integrity was fixed using the reliability of the observed Ego Integrity scale. Each of the death attitude indicators was specified to load onto the death attitude latent construct, with the path coefficient between Fear of Death and DA set to 1 to scale the remaining path coefficients. Direct paths were specified between each endogenous variables and each exogenous variable, with a mediating path between EI and DA.

Overall, DA model 5 showed poor fit as assessed by the fit indices ($\chi^2=109.868$, $df=51$, $p<0.001$; Normed $\chi^2=2.073$; RMSEA=0.109; NFI=0.689; CFI=0.786; SRMR=0.122; see Figure 5). Regarding the relationship between endogenous variables and EI, there were significant paths from participant Generativity (0.513), Age (0.271) and Health (0.270). There was a significant path between Gender and DA (0.296). There was no significant path from either informant or participant Generativity to DA. The path from EI to DA was significant (-0.482). The indirect effect of Participant Generativity on DA, as mediated by Ego Integrity, was significant (-0.247). The total effects of Participant Generativity (-0.398) and Gender (0.288) on DA were also significant. All reported direct paths are significant $p<.05$.

Additional models were tested that included interactions between demographic variables and generative concern and behaviors in predicting the latent constructs of specific death attitudes. Only models predicting a global death attitude construct are reported here in which multiple indicators of death attitudes are represented in a single latent variable.

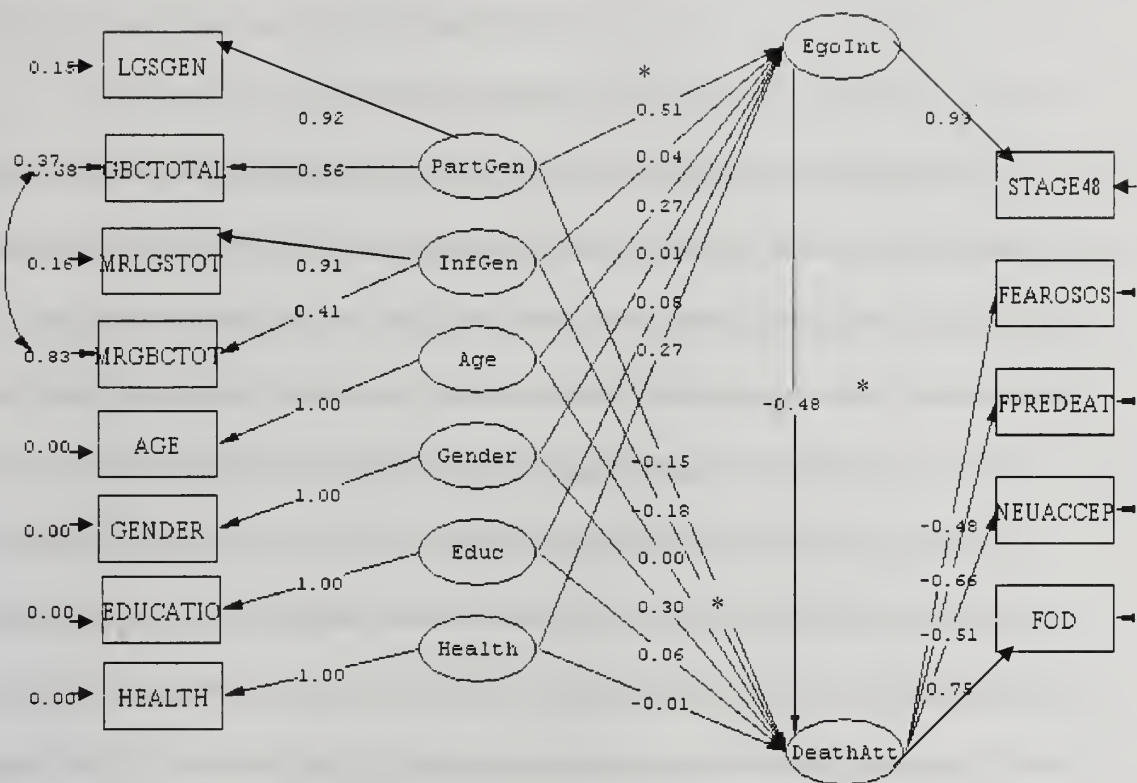


Figure 5. DA Model 4

Note: $\chi^2=109.868$, $df=51$, $p<.001$, RMSEA=0.109; Age = Chronological age, Gender = Gender. EDUCATIO = Education. Health = Self-reported health. LGSGEN = Participant LGS. GBCTOTAL = Participant GBC. PartGen = Participant latent Generativity construct. MRLGSTOT = Informant LGS. MRGBCTOT = Informant GBC. InfGen = Informant latent Generativity Construct, Stage48 = IPD Stage 8, EgoInt = Latent Ego Integrity construct, FEAROSOS = Fear for Significant Others, FPREDEAT = Fear of Premature Death, NEUACCEP = Neutral Acceptance, FOD = Fear of Death, DeathAtt = Latent death attitude construct

CHAPTER IV

DISCUSSION

Erikson (1963) theorized that successful psychosocial development in old age would lead to lower levels of negative attitudes toward death and a greater sense of acceptance of mortality. The current study examined the hypothesized role of Generativity in the expression of death attitudes in a sample of community-dwelling older adults. Generativity has a theorized role in the development of death attitudes and has been implicated in conceptualizations of well-being in older adults. The hypothesis that Generativity would be the strongest predictor of both death attitudes compared with demographic variables and Ego Integrity was not confirmed. Generativity's effect on death attitudes appears to be indirect and mediated by Ego Integrity. The indirect effect was demonstrated in models utilizing participant Generativity and informants' reports of participant's Generativity predicting a latent death attitude construct indicating that higher levels of both psychosocial variables predict lower levels of fear about death. When both reports of Generativity were entered into the same model, only participant reports of Generativity demonstrated an effect on the latent death attitude construct as mediated by Ego Integrity. Based on the factor loadings of the four death attitude variables, Generativity's effect on death attitudes indicates that higher levels of Generativity predict low levels of fear about death and higher acceptance of death. When added to the model, gender also demonstrated an effect on the latent death attitude construct, in addition to the indirect effect of participant reports of Generativity. The

observed gender difference is consistent with previous research. in addition to the indirect effect of participant reports of Generativity.

In all four models involving the latent death attitude construct, Ego Integrity mediated the relationship between Generativity and death attitudes indicating that higher levels of both psychosocial variables predict lower levels of fear about death and higher acceptance of death. These results are consistent with the analysis that integrating life experiences, coming to terms with both successes and failures and developing what Erikson (1963) deemed wisdom are indeed fundamental for coming to terms with mortality. That Ego Integrity was a direct predictor of death attitudes extends the findings reported by Walaskay, Whitbourne, and Nehrke (1983-1984) using different outcome measures and also supports conclusions drawn by other researchers who have used constructs related to Ego Integrity to examine the relationship between Erikson s theory and death attitudes (Fortner & Neimeyer, 1999).

The mediating role of Ego Integrity indicates that it acts as a mechanism between Generativity and the expression of death attitudes. This pattern of findings is in line with Erikson s (1963) epigenetic theory of psychosocial development in which ego development is conceptualized as a cumulative process throughout the lifespan. The resolution of each crisis is, to some extent, a product of the strengths developed at previous developmental stages. Thus, the finding involving Generativity s indirect effect on death attitudes as mediated by Ego Integrity provides support for the supposition that Generativity lays the foundation for Ego Integrity, is a precursor for it, and has its subsequent influence on death attitudes in an elderly population by means of Ego Integrity.

This study allowed for an investigation of the role that Eriksonian personality variables have in the expression of death attitudes while concurrently examining the effects of relevant demographic variables. The findings involving demographic variables are in line with previous research on the death attitudes in question and highlight the role that they play in the expression of specific attitudes toward death. Being female was a predictor of more fear of death and less acceptance of death. Previous research has demonstrated women consistently report higher levels of fear about death than men do, though this pattern has not been adequately explained. Previous investigations into this gender difference have revealed that women present with higher fear even when gender differences in self-disclosure and social desirability are controlled (Dattel & Neimeyer, 1990). This finding is also consistent across cultures (Lonetto et al., 1980; McMordie & Kumar, 1984).

Informant Results

The best empirical fit for the four reports of Generativity (Participant LGS, Participant GBC, Informant LGS, and Informant GBC) involved a model with the latent constructs (a) Participant Generativity and (b) Informant Generativity and not attitudinal Generativity vs. behavioral Generativity or a single Generativity latent construct. This empirical distinction suggests that informants are providing a different perspective on the respondent's personality, and that the variability due to perspective is greater than the distinction between the attitudinal and behavioral components of Generativity. This is not to say that the attitudinal and behavioral distinction is irrelevant. The finding that the informants' responses had stronger association with participants' responses for behavioral, compared to attitudinal Generativity, supports the importance of the

conceptual distinction. Additionally, in regression analyses, different variables predicted LGS and GBC scores. While the differences in predictors between the two different expressions of Generativity may be due to sample characteristics, this finding implies that unique factors may influence the development and expression of attitudinal Generativity and behavioral Generativity.

In models involving both the latent death attitude construct and also the individual death attitude scales, participant reports of Generativity emerged as better predictors of participant death attitudes than informant reports of Generativity. When entered alone into a model predicting the latent death attitude construct, informant Generativity demonstrated the same indirect effect on the death attitudes that participant Generativity did and that model demonstrated the best fit indices of the three models presented. However, in the two models involving both reports, participant Generativity was the better predictor of death attitudes. Furthermore the indices of fit are numerous, not specified in terms of which should be reported in empirical investigations, and somewhat subjective, particularly given the small sample size, and should not influence interpretation of the path coefficients which were consistent regardless of the fit indices. The fit indices are somewhat subjective and controversial because they do not establish whether paths within the model are significant, they determine whether models should be interpreted. There are different opinions on which fit indices to report, and under which circumstances to let them govern model interpretation. Bollen (1989) stated that fit indices are arbitrary and that a model's fit should not necessarily be compared to the criteria listed, but instead with other models that have been reported on similar phenomena.

Overall, it is not surprising that there was an observed discrepancy between the self-reports and the informant reports. The low level of agreement between informants and participants on the LGS may be a function of the presumed difficulty in an informant reporting on an inner state of someone else compared to a report that is more firmly anchored in observable behaviors. That informants and participants were in less agreement about Generative Concern than Generative Behaviors is in line with previous research that has consistently shown that informants are better at reporting on behaviors than inner experiences (Spain, Eaton & Funder, 2000, Kurtz & Sherker, 2003). Similarly, based on both the observed discrepancies between the two reports and the finding that self-report Generativity is a better predictor of death attitudes than informant report of Generativity, the informant report may be less accurate than self-reports and the use of informants with these instruments may not be fruitful for future research.

Limitations of the Study

The primary limitation of the current study is a lack of statistical power, particularly for the models involving informant data. Kline (2005) specified that structural regression models should not be run with fewer than 100 participants. Additionally, introducing increasing variables (paths) into a model increases error variance and subsequently the likelihood of a Type II error. Thus, all results involving informant data should be interpreted cautiously.

The participants were almost exclusively Caucasian, and predominantly female. The sample was fairly representative of a wide range of educational backgrounds and self-reported appraisals of health. Despite this, the generalizability of the current findings is limited by the homogenous sample. Though most of the findings are consistent with

previous research and theory-driven hypotheses, replications of these findings are required with larger, ethnically diverse sample with equal numbers of male and female participants to confirm further the relationship between Eriksonian predictor variables and death attitudes and to examine fully the influence of moderating variables.

Social desirability may also play a role in the completion of measures on attitudes about death and dying. Fry (2003) notes that young-old adults may suppress thoughts about death from conscious awareness and old-old adults may report lower levels of fear about nonexistence and the unknown because in efforts to look wise (p. 484). Both Fry and Neimeyer (1994) have recommended that researchers utilize interview-based techniques and reliable content analysis techniques to supplement the use of questionnaires in order to obtain more specific data on personal constructs about death and what initiates fears about death and dying. There were additional measurement issues associated with the research. Several of the scales had marginal or unacceptable coefficient alphas and there is a question about the nature of the construct being measured by the FFSO scale. Further research to clarify any of the findings of this research will proceed only to the extent that scales with good psychometric characteristics are available to researchers.

Though there were measurement issues associated with the individual scales of death attitudes, the marginal reliability estimates in the current study mirror previous reports of the scales (Neimeyer & Moore, 1994; Wong, Reker, & Gesser, 1994). The conceptualization of death attitudes as multidimensional is relatively new, particularly the inclusion of measures of acceptance of death. This is an important development, but one that is ongoing. The scales used in the current study represent the state of the art in

conceptualizing attitudes toward death as multidimensional but they are clearly not as well developed as they could be. Specifically, the Neutral Acceptance scale has been identified as less reliable than other scales on the Death Attitude Profile-Revised. That older adults experience more than just fear about death has been observed clinically, but this scale is in need of further development so that researchers can better understand the experience of acceptance of death in old age.

Implications

Erikson's (1963) theory of psychosocial development provided Butler (1961) with the impetus for both describing reminiscence as a behavior and developing an intervention that involves revisiting both pleasant and unpleasant events and unresolved conflicts and integrating them into one's consciousness. The term reminiscence therapy has since been applied to a number of loosely-defined therapeutic techniques involving active memory recall about significant past experiences aimed primarily at increased socialization, self-esteem and life satisfaction. While the goal of life review is Ego Integrity, Lin, Dai, and Hwang (2003) describe the process of life review as intrapersonal, not interpersonal. Reminiscence can likely facilitate life review, but life review has been explicitly defined as an introspective process.

One study has demonstrated the relationship between reminiscence and Ego Integrity. Boylin, Gordon and Nehrke (1976) showed that the frequency of reminiscence was positively correlated with ego integrity in a sample of institutionalized older adults. Very few experimental or quasi-experimental studies have evaluated the effects of reminiscence-based therapeutic interventions for older adults. Ten studies reviewed by Lin, Dai, and Hwang (2003) used a variety of outcome variables including measures of

depression, self-esteem, life satisfaction, and indices of self-care. Four studies out of ten studies reviewed reported a significant improvement on the outcome measures used following a trial of reminiscence group therapy for older adults (65-88) in long-term care settings compared with residents in control groups receiving supportive group therapy. The other studies included in the review failed to find reminiscence therapy as beneficial for older adults, but many of the studies contained methodological problems such as lack of control groups, large dropout rates, and small sample sizes (Lin, Dai, & Hwang, 2003).

The results of these studies suggest that interventions designed to promote the development of Ego Integrity demonstrate favorable outcomes in older adults. The current study provides empirical support for therapeutic efforts to promote psychosocial resolution throughout adulthood. Participants in the current study whose Generativity and Ego Integrity self-reports were positively related reported lower levels of fears about death and higher acceptance of their own mortality. These findings provide support for research efforts aimed at evaluating the role that Eriksonian constructs play in reminiscence-based therapy for older adults.

Future Directions

Neimeyer and Van Brunt (1995) outline regressive vs. progressive trends in research on death attitudes. The current study meets many of the criteria for a progressive study. Specifically, the current study utilized a multidimensional assessment of death attitudes, focuses on a range of predictor variables, considers factor-analytic clustering of death attitudes and was theory-guided. Previous research has failed to assess Ego Integrity adequately and a reliable and valid measurement of Eriksonian personality variables was used in this study. Although the results of the current study

confirm previously held beliefs about the relationship between Ego Integrity and death attitudes, the main contribution of this study involves the inclusion of Generativity. The mediating role that Ego Integrity plays between Generativity and death attitudes provides a much richer account of the expression of death attitudes that is consistent with Erikson's (1963) theory of psychosocial development. The finding suggests that ongoing psychosocial development throughout adulthood is crucial for outcomes at the end of life, though studies which employ longitudinal designs are needed to test this possibility.

The conceptual nature of different aspects of Generativity (i.e., behavioral, attitudinal) was also considered and the novel step of comparing these measures to those attained from an informant who knew the participant well was also included. In short, the self-reports were much more useful in predicting the study's outcome variables. The observed differences between self-reports and informant reports are in line with previous research on informant reports. The results of the current study also indicate that the distinction between attitudinal self-reports and the behavioral expression of Generativity is an important one and one that has not been addressed extensively in the literature.

To the extent that Generativity and Ego Integrity are the culmination of successful psychosocial development, the results of this study suggest that personality growth and maturity in old age are related to favorable outcomes in how older adults conceptualize their own mortality. This study contributes to a body of literature on death attitudes as well as on processes central to development in old age.

APPENDIX A

TABLES

Table 1

Age and Gender

Variable	<i>n</i>	%
Age		
60-74	63	67
75-84	22	23.4
85+	9	9.6
Gender		
Female	67	71.3
Male	27	28.7

Table 2

Participant Health, Educational Attainment and Ethnicity

Variable	<i>n</i>	%
Self Reported Health		
Poor	0	0
Fair	4	4.3
Good	20	21.3
Very Good	36	38.3
Excellent	34	36.2
Educational Attainment (N=94)		
No HS diploma	2	2.1
HS diploma	19	20.2
Some college/Assoc. degree	9	9.6
Bachelor s degree	26	27.7
Master s degree	25	26.6
Ph.D. or professional degree	13	13.8
Ethnicity (n=86)		
Caucasian/European	82	87.2
African	2	2.1
Caribbean	0	0
Hispanic/Latino	0	0
Biracial	1	1.1
Asian	1	1.1

Table 3

Informants Relationships and Gender

Variable	<i>n</i>	%
Relationship (n=74)		
Child	11	14.9
Sibling	7	9.5
Parent	0	0
Other relative	3	4.1%
Friend	40	54.1
Spouse	13	17.6
Gender (n=75)		
Female	53	70.6
Male	22	29.3

Table 4

Descriptive Data: Informant Age

	Mean	
Variable	Males (n=22)	Females(n=50)
Age	64.4	61.5

Table 5

Reliability Estimates for relevant study variables

Variable	Cronbach's α
Participant LGS	.86
Participant GBC	.86
Informant LGS	.83
Informant GBC	.87
IPD Stage 8 (Ego Integrity vs. Despair)	.67
Fear for Significant Others	.73
Fear of the Unknown	.57
Fear of Premature Death	.65
Fear of Death	.81
Neutral Acceptance	.45

Table 6

Overall Mean Scores (and Standard Deviations) and Distribution for Key Participant Study Measures: Mean Scores by Gender.

Variable	Overall Mean (SD)	Skewness	Kurtosis	Males (n=27)	Females (n=67)	<i>t</i>
IPD						
St 8	9.3 (8.2)	-.29	-.24	8.7 (7.6)	9.5 (8.5)	-.47
LGS	41.9 (9.5)	-.28	-.61	40.6 (9.0)	42.4 (9.6)	-.82
GBC	28.3 (11.7)	.20	-.30	25.1 (11.1)	29.6 (11.8)	-1.69
MFODS						
FFSO	15.5 (4.9)	.26	-.21	17.7 (4.6)	14.6 (4.8)	2.92*
FPD	15.8 (3.5)	-.64	-.01	16.3 (3.0)	15.6 (3.6)	.88
FOU	15.4 (4.1)	-.58	.06	15.0 (5.2)	15.6 (3.7)	-.61
DAP-R						
FOD	19.2 (8.5)	.98	.92	17.2 (7.2)	20.0 (8.9)	1.45
NA	30.4 (3.4)	-.47	-.79	30.6 (3.2)	30.3 (3.4)	.308

Note. FFSSO = MFODS Fear for Significant Others; FOU = MFODS Fear of the Unknown; FOPD = MFODS Fear of Premature Death; FOD = DAP-R Fear of Death; NA = DAP-R Neutral Acceptance. Independent-sample *t* tests to test for gender differences on mean scores were performed using *df* = 92.

$p < .10$. ** $p < .05$

Table 7

Intercorrelations of All Key Participant Study Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	-	-.02	.02	-.14	-.21 [*]	-.05	.19	.26	-.15	.31 [*]	-.04	.05
2. Gen		-	.02	-.14	.17	.09	.05	-.29 ^{**}	.06	.09	.15	.03
3. Ed.			-	.31 ^{**}	.22 [*]	.24 [*]	.28 ^{**}	-.08	-.15	.18	-.22 [*]	.15
4. Hlth				-	.10	.25 [*]	.34 ^{**}	.11	-.05	.19	-.28 ^{**}	.29 ^{**}
5. GBC					-	.61 ^{***}	.27 ^{**}	-.32 [*]	-.01	.07	-.05	.03
6. LGS						-	.50 ^{**}	-.19	-.09	.20	-.21 [*]	.23 [*]
7. St. 8							-	.12	-.08	.49 [*]	-.30 [*]	.26 [*]
8. FFSO								-	.01	.29 ^{**}	-.38 ^{**}	.24 [*]
9. FOU									-	.12	-.23 [*]	-.14
10. FPD										-	-.47 ^{**}	.30 ^{**}
11. FOD											-	-.47 ^{**}
12. NA												-

Note. FFSO = MFODS Fear for Significant Others; FOU = MFODS Fear of the Unknown; FPD = MFODS Fear of Premature Death; FOD = DAP-R Fear of Death; NA = DAP-R Neutral Acceptance.

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

Table 8

Intercorrelations between Measurements of Health

Variables	1	2	3
1. Self-Reported Health	-	-.509**	-.426**
2. Medical Diagnoses		-	.547**
3. Symptoms in Past Year			-

** $p < .01$

Table 9

Informants Ratings: How Well They Know the Participant Who Referred Them ($n=75$)

Variable	<i>n</i>	%
1 Not Very Well	0	0
2	1	1.3
3 Somewhat Well	3	4
4	13	17.3
5 Very Well	58	77.3

Table 10

Comparison of Participant and Informant Ratings of Participant Generative Concern Using Repeated Measures MANOVA ($n=75$)

Variable	Participant <i>M(SD)</i>	Informant <i>M(SD)</i>	<i>df</i>	<i>F</i>	<i>p</i>
LGS Generative Concern	41.89 (9.45)	33.92 (6.51)	1	47.61***	.000
GBC Generative Behaviors	28.27 (11.71)	30.32 (12.04)	1	2.28	.135
Error			74		

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

Table 11

Correlations between Participant and Informant Ratings of Participant Generative Concern and Generative Behaviors ($n=75$)

Variables	1	2	3	4
1. Participant LGS		.614**	.232*	.200
2. Participant GBC			.085	.435***
3. Informant LGS				.349*
4. Informant GBC				

= $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$

APPENDIX B
PARTICIPANT PACKET

Informed Consent

Thank you for agreeing to volunteer for this study. The following is a series of questionnaires that have been designed to assess your thoughts and feelings about the aging process. There are no inherent risks to participating in the study. After completing these questionnaires, you will be given ample opportunities to contact the researchers to discuss any comments or questions you may have about the material covered in the questionnaires, the purpose of the research, the methods used or any personal concerns you may have about having participated in this study.

Once you begin to fill out these questionnaires, you are not obligated to complete them; you may stop participating in this study at any time. Once you have completed this study you may contact the researchers at any time if you are uncomfortable about having participated in this study and we will destroy the questionnaires you have completed and not use your data in our research.

Similarly, once you have completed the questionnaires, your name will not be associated with your data; your data will be associated with an identification number instead. All the information we collect from you will be kept confidential in the sense that no one will know that you have participated in this research project. Once completed, the questionnaires you fill out will be kept in a locked cabinet in a secure laboratory at the University of Massachusetts, Amherst.

Should you have any questions about this study before, during or after participating in it, you may contact the primary investigators by telephone or email. Joshua Bringle, M.S. can be reached by email at bringle@psych.umass.edu and by telephone at (413) 545-4382. Susan K. Whitbourne, Ph.D. can be reached by email at swhitbo@psych.umass.edu and by telephone at (413) 545-4306. You may also contact additional representatives of Psychology Department and the University of Massachusetts, Amherst should you have any questions or concerns about research conducted at this University. The Chair of the Psychology Department at the University of Massachusetts, Amherst is Melinda Novak, Ph.D. She can be reached by email at mnovak@psych.umass.edu and by telephone at (413) 545-2387. If there are any complaints or comments regarding the study, you can contact the Human Subjects Review Board by email at HumanSubjects@ora.umass.edu and by telephone at (413) 545-3428.

You are entitled to receive a copy of the completed research. Should you wish to remain updated on the results of this study, please contact Joshua Bringle, M.S.

As part of this study on the aging process, we are interested in contacting someone who you know very well and asking them to participate in the study as well. You will be asked to supply us with the name, address and telephone number of someone who you know well who we may contact to solicit his or her participation. Their participation will be minimal, but we will be asking them to fill out questionnaires about you and their perspectives on how you have negotiated the aging process. If you are not comfortable with supplying us with the name and contact information of someone who you know well, you do not have to do so and you will still be allowed to participate in this study.

Again, thank you very much for volunteering for this study. Your participation is essential to the success of the study and will contribute to a growing body of empirical research on normative processes in aging. By signing this informed consent and completing the attached questionnaires, you are agreeing to allow the researchers to use your data for the research study described above.

Participant Name Printed

Participant Signature

Date

Instruction Sheet

Thank you for agreeing to participate in this study. There are TWO parts to this study. The questionnaires in this packet comprise the first part. Please complete this packet and return it to Nancy Pagano or Joshua Bringle. The second part of this study involves an additional person, someone whom you know well and whom you recommend to us, filling out two questionnaires about you. The next sheet in this packet has space for you to provide us with the **name**, **address** and **phone number** of someone whom you know well who will help us out and participate in this study. This additional person can be ANYONE as long as he or she knows you well enough to comment on how you have navigated adulthood and the aging process. The third sheet in this packet is a letter to the additional person. Please print that person's name at the top of the page and sign the letter. We will send that letter and a *brief* questionnaire packet to that person as soon as we have received this packet back from you. If you have any questions, please contact Joshua Bringle, M.S. at 545-4382 or at bringle@psych.umass.edu

Thanks for your participation!

Additional Participant

Please provide us with the name, address and phone number of someone who you know well. This person will be sent two questionnaires to complete about you. Thanks very much!

Name

Address

Phone

Dear _____.

Hello! I am taking part in a study on the aging process that is being conducted by researchers at the University of Massachusetts. I have been asked to fill out some questionnaires about myself and experiences I have had. As part of the study, they have asked me to provide the name and contact information of someone who knows me well. That's you. YOU are being asked to fill out some questionnaires about ME.

The questionnaires are brief participating should not take more than twenty minutes. Then you just mail the packet back to UMass in the provided envelope and you're done.

Thanks for helping out!

Joshua Bringle, M.S.

Demographics

Your Name: _____

Date of Birth: _____

Address: _____

Telephone: _____

Email: _____

Gender: M F

Highest educational degree attained:
(circle)

No high school diploma
High school diploma
Associate's degree
Bachelor's degree
Master's degree
Professional degree (specify)
Ph.D.

Current occupation: _____

Current marital status:
(circle)

Married
Divorced
Remarried
Widowed
Never been married

Number of children: _____
(please list)

Age Gender

Ethnicity:
(please circle)

European
African
Caribbean
Hispanic
Biracial (specify) _____

For the next three items, please circle the number that best applies to you.

1. Overall, how satisfied are you with your current household or living situation?

Very dissatisfied

Somewhat Satisfied

Very satisfied

1

2

3

4

5

2. Overall, how satisfied are you with your current work situation?

Very dissatisfied

1

Somewhat Satisfied

2

3

Very satisfied

4

5

3. Overall, how satisfied are you with your life right now? Would you say you are:

Very Dissatisfied

1

Somewhat satisfied

2

3

Very satisfied

4

5

Health Status

Please answer the questions below to the best of your abilities. If you think there is any other information we should know about your health, please indicate in the space provided on the following page.

Have you EVER been told by a doctor or other health professional that you had ...

- | | |
|--|--|
| <input type="checkbox"/> Hypertension, also called high blood pressure | <input type="checkbox"/> Multiple sclerosis |
| <input type="checkbox"/> Coronary heart disease? | <input type="checkbox"/> Parkinson s disease |
| <input type="checkbox"/> Angina, also called angina pectoris? | <input type="checkbox"/> Neuropathy |
| <input type="checkbox"/> A heart attack (also called myocardial infarction) | <input type="checkbox"/> Seizures |
| <input type="checkbox"/> Any kind of heart condition or heart disease | <input type="checkbox"/> Arthritis, rheumatoid arthritis, gout |
| <input type="checkbox"/> A stroke | <input type="checkbox"/> Cancer or a malignancy of any kind |
| <input type="checkbox"/> Emphysema | <input type="checkbox"/> Diabetes or sugar diabetes |
| <input type="checkbox"/> High cholesterol | <input type="checkbox"/> Fibromyalgia or lupus |
| <input type="checkbox"/> Poor circulation in your legs | <input type="checkbox"/> Osteoporosis or tendonitis |
| <input type="checkbox"/> Irregular heartbeats | <input type="checkbox"/> Ulcers |
| <input type="checkbox"/> Congestive heart failure | <input type="checkbox"/> Varicose veins or hemorrhoids |
| <input type="checkbox"/> Asthma | |
| <input type="checkbox"/> Prostate Problems | |
| <input type="checkbox"/> Other (list below) | |
| <input type="checkbox"/> Inflammatory bowel disease, irritable bowel, or constipation severe enough to require medication? | |

During the PAST 12 MONTHS, have you

<input type="checkbox"/> Regularly had insomnia or trouble sleeping	<input type="checkbox"/> Regularly had excessive sleepiness during the day
<input type="checkbox"/> Regularly had excessive sleepiness during the day	<input type="checkbox"/> Been frequently depressed or anxious
<input type="checkbox"/> Had recurring pain	<input type="checkbox"/> Had any severe sprains or strains
<input type="checkbox"/> Dental pain	<input type="checkbox"/> Skin problems
<input type="checkbox"/> Hay fever	<input type="checkbox"/> Sinusitis
<input type="checkbox"/> Bladder or renal problem	<input type="checkbox"/> Any kind of liver condition
<input type="checkbox"/> Any menstrual problems such as heavy bleeding, bothersome cramping, or pre-menstrual syndrome	<input type="checkbox"/> Any menopausal problems such as hot flashes, night sweats, or other menopausal symptoms
<input type="checkbox"/> Gynecologic problems such as vaginal infection, uterine fibroids, or infertility?	<input type="checkbox"/> Chronic bronchitis <input type="checkbox"/> Weak or failing kidneys

How tall are you without shoes?

Feet _____
Inches _____

How much do you weigh without shoes? _____ lbs.

Would you say your health in general is: (check one)

- ☐ Excellent
- ☐ Very good
- ☐ Good
- ☐ Fair
- ☐ Poor

OTHER HEALTH CONDITIONS:

Please indicate any other information about your health that you think might be relevant:

IPD

Following these instructions, you will find a list of 80 terms and phrases which were used by students to describe themselves. Please use the list to describe yourself as you honestly feel and believe you are. Following each phrase are numbers from 7 to 1. Circle the seven 7 for phrases that are definitely most characteristic of you, the six 6 for phrases that are very characteristic of you, etc. Circle the one 1 if the phrase is definitely most *uncharacteristic* of you. In other words, use the following scale:

- 7 = definitely most characteristic of you
- 6 = very characteristic of you
- 5 = somewhat characteristic of you
- 4 = neither characteristic nor *uncharacteristic* of you
- 3 = somewhat *uncharacteristic* of you
- 2 = very *uncharacteristic* of you
- 1 = definitely most uncharacteristic of you

Be sure when you do these ratings that you are guided by your best judgment of the way you really are. There is no need to ponder your ratings excessively; your first impressions are generally the best. Do the phrases in order and be sure to answer every item.

1. Placid and untroubled	7	6	5	4	3	2	1
2. An automatic response to all situations	7	6	5	4	3	2	1
3. Adventuresome	7	6	5	4	3	2	1
4. Can't fulfill my ambitions	7	6	5	4	3	2	1
5. Confidence is brimming over	7	6	5	4	3	2	1
6. Little regard for the rest of the world	7	6	5	4	3	2	1
7. Incapable of absorbing frustration and everything frustrates me	7	6	5	4	3	2	1
8. Value independence above security	7	6	5	4	3	2	1
9. Sexually blunted	7	6	5	4	3	2	1
10. Conscientious and hardworking	7	6	5	4	3	2	1
11. A poseur, all façade and pretense	7	6	5	4	3	2	1
12. Candid, not afraid to expose myself	7	6	5	4	3	2	1
13. Accessible to new ideas	7	6	5	4	3	2	1
14. Meticulous and over-organized	7	6	5	4	3	2	1
15. Dynamic	7	6	5	4	3	2	1
16. Don't apply myself fully	7	6	5	4	3	2	1
17. Natural and genuine	7	6	5	4	3	2	1
18. Preoccupied with myself	7	6	5	4	3	2	1
19. Can't share anything	7	6	5	4	3	2	1
20. Free and spontaneous	7	6	5	4	3	2	1
21. Afraid of impotence	7	6	5	4	3	2	1

7=definitely most characteristic of you 1=definitely most uncharacteristic of you							
22. Interested in learning and like to study	7	6	5	4	3	2	1
23. Spread myself thin	7	6	5	4	3	2	1
24. Warm and friendly	7	6	5	4	3	2	1
25. Imperturbable optimist	7	6	5	4	3	2	1
26. Cautious, hesitant, doubting	7	6	5	4	3	2	1
27. Ambitious	7	6	5	4	3	2	1
28. Fritter away my time	7	6	5	4	3	2	1
29. Poised	7	6	5	4	3	2	1
30. Very lonely	7	6	5	4	3	2	1
31. Pessimistic, with little hope	7	6	5	4	3	2	1
32. Stand own my own two feet	7	6	5	4	3	2	1
33. Think too much about the wrong things	7	6	5	4	3	2	1
34. Serious, have high standards	7	6	5	4	3	2	1
35. Attempt to appear at ease	7	6	5	4	3	2	1
36. Have sympathetic concern for others	7	6	5	4	3	2	1
37. Able to take things as they come	7	6	5	4	3	2	1
38. Feel as if I were being followed	7	6	5	4	3	2	1
39. Inventive, delight in finding new solutions to new problems	7	6	5	4	3	2	1
40. Ineffective, don t amount to much	7	6	5	4	3	2	1
41. Know who I am and what I want out of life	7	6	5	4	3	2	1
42. Cold and remote	7	6	5	4	3	2	1
43. Dim nostalgia for lost paradise	7	6	5	4	3	2	1
44. Quietly go my own way	7	6	5	4	3	2	1
45. Big smoke but no fire	7	6	5	4	3	2	1
46. Accomplish much, truly productive	7	6	5	4	3	2	1
47. Never know how I feel	7	6	5	4	3	2	1
48. Tactful in personal relations	7	6	5	4	3	2	1
49. Deep, unshakable faith in myself	7	6	5	4	3	2	1
50. Always in the wrong, apologetic	7	6	5	4	3	2	1
51. Sexually aware	7	6	5	4	3	2	1
52. A playboy/playgirl, always hacking around	7	6	3	4	3	2	1
53. Pride in my own character and values	7	6	5	4	3	2	1
54. Secretly oblivious to the opinions of others	7	6	5	4	3	2	1
55. Never get what I really want	7	6	5	4	3	2	1
56. Good judge of when to comply and when to assert myself	7	6	5	4	3	2	1
57. Inhibited and self-restricted	7	6	5	4	3	2	1
58. Excel in my work	7	6	5	4	3	2	1
59. Afraid of commitment	7	6	5	4	3	2	1
60. Comfortable in intimate relationships	7	6	5	4	3	2	1
61. Want to be remembered	7	6	5	4	3	2	1
62. Think about my failures	7	6	5	4	3	2	-1
63. Concerned about my health	7	6	5	4	3	2	1

7=definitely most characteristic of you 1=definitely most uncharacteristic of you							
64. Reached my goals	7	6	5	4	3	2	1
65. Like to care for others	7	6	5	4	3	2	1
66. Afraid of getting old	7	6	5	4	3	2	1
67. Enjoy spending time by myself	7	6	5	4	3	2	1
68. Proud of what I've done	7	6	5	4	3	2	1
69. Feel productive in my work	7	6	5	4	3	2	1
70. Regret the mistakes I've made	7	6	5	4	3	2	1
71. Bored by work	7	6	5	4	3	2	1
72. Satisfied with my life so far	7	6	5	4	3	2	1
73. Creative	7	6	5	4	3	2	1
74. Don't have enough time to do what I want to	7	6	5	4	3	2	1
75. Have little interest in family affairs	7	6	5	4	3	2	1
76. Take responsibility for my actions	7	6	5	4	3	2	1
77. Enjoy making plans for the future	7	6	5	4	3	2	1
78. Wish I could change myself	7	6	5	4	3	2	1
79. More concerned about myself than about others	7	6	5	4	3	2	1
80. Wouldn't change my life if I lived it over	7	6	5	4	3	2	1

Instructions. For each of the following statements, please indicate how often the statement applies to you, by marking either a "0," "1," "2," or "3" in the space in front.

Mark "0" if the statement never applies to you.

Mark "1" if the statement only occasionally or seldom applies to you.

Mark "2" if the statement applies to you fairly often.

Mark "3" if the statement applies to you very often or nearly always.

____ 1. I try to pass along the knowledge I have gained through my experiences.

____ 2. I do not feel that other people need me.

____ 3. I think I would like the work of a teacher.

____ 4. I feel as though I have made a difference to many people.

____ 5. I do not volunteer to work for a charity.

____ 6. I have made and created things that have had an impact on other people.

____ 7. I try to be creative in most things that I do.

____ 8. I think that I will be remembered for a long time after I die.

____ 9. I believe that society cannot be responsible for providing food and shelter for all homeless people.

____ 10. Others would say that I have made unique contributions to society.

____ 11. If I were unable to have children of my own, I would like to adopt children.

____ 12. I have important skills that I try to teach others.

____ 13. I feel that I have done nothing that will survive after I die.

____ 14. In general, my actions do not have a positive effect on other people.

____ 15. I feel as though I have done nothing of worth to contribute to others.

____ 16. I have made many commitments to many different kinds of people, groups, and activities in my life.

0-Never applies. **1**-seldom applies. **2**-fairly often applies. **3**-very often or always applies

____ 17. Other people say that I am a very productive person.

____ 18. I have a responsibility to improve the neighborhood in which I live.

____ 19. People come to me for advice.

____ 20. I feel as though my contributions will exist after I die.

MFODS

Instructions: Listed below are death-related events and circumstances that some people find to be fear-evoking. Indicate the extent to which you agree or disagree with each statement by circling one number for each item. Do not skip any items if you can avoid it.

- 1 = Strongly Agree
 2 = Mildly Agree
 3 = Neither Agree nor Disagree
 4 = Mildly Disagree
 5 = Strongly Disagree

1	2	3	4	5	1. I am afraid of dying very slowly.
1	2	3	4	5	2. I dread visiting a funeral home.
1	2	3	4	5	3. I would like to donate my body to science.
1	2	3	4	5	4. I have a fear of people in my family dying.
1	2	3	4	5	5. I am afraid that there is no afterlife.
1	2	3	4	5	6. There are probably many people pronounced dead that are still alive.
1	2	3	4	5	7. I am afraid of having my body disfigured when I die.
1	2	3	4	5	8. I have a fear of not accomplishing my goals in life before dying.
1	2	3	4	5	9. I am afraid of meeting my creator.
1	2	3	4	5	10. I am afraid of being buried alive.
1	2	3	4	5	11. I dread the thought of my body being embalmed some day.
1	2	3	4	5	12. I am afraid I will not live long enough to enjoy my retirement.
1	2	3	4	5	13. I am afraid of dying in a fire.
1	2	3	4	5	14. Touching a corpse would not bother me.
1	2	3	4	5	15. I do not want medical students using my body for practice after I die.
1=Strongly agree, 2=mildly agree, 3=neither, 4=mildly disagree, 5=strongly disagree					
1	2	3	4	5	16. If the people I am very close to were to die suddenly, I would suffer for a long time.

1	2	3	4	5	17. If I were to die tomorrow, my family would be upset for a long time.
1	2	3	4	5	18. I am afraid that death is the end of one's existence.
1	2	3	4	5	19. People should have autopsies to ensure that they are dead.
1	2	3	4	5	20. The thought of my body being found after I die scares me.
1	2	3	4	5	21. I am afraid I will not have time to experience everything I want to.
1	2	3	4	5	22. I am afraid of experiencing a great deal of pain when I die.
1	2	3	4	5	23. Discovering a dead body would be a horrifying experience.
1	2	3	4	5	24. I do not like the thought of being cremated.
1	2	3	4	5	25. Since everyone dies, I won't be too upset when my friends die.
1	2	3	4	5	26. I would be afraid to walk through a graveyard, alone, at night.
1	2	3	4	5	27. I am afraid of dying of cancer.
1	2	3	4	5	28. It doesn't matter whether I am buried in a wooded box or a steel vault.
1	2	3	4	5	29. It scares me to think I may be conscious while lying in a morgue.
1	2	3	4	5	30. I am afraid that there may not be a Supreme Being.
1	2	3	4	5	31. I have a fear of suffocating (including drowning)
1	2	3	4	5	32. It would bother me to remove a dead animal from the road.
1	2	3	4	5	33. I do not want to donate my eyes after I die.
1	2	3	4	5	34. I sometimes get upset when acquaintances die.
1	2	3	4	5	35. The thought of being locked in a coffin after I die scares me.
1	2	3	4	5	36. No one can say, for sure, what happens after death.
1=Strongly agree, 2=mildly agree, 3=neither, 4=mildly disagree, 5=strongly disagree					
1	2	3	4	5	37. If I die, my friends would be upset for a long time.
1	2	3	4	5	38. I hope more than one doctor examines me

					before I am pronounced dead.
1	2	3	4	5	39. I am afraid of things which have died.
1	2	3	4	5	40. The thought of my body decaying after I die scares me.
1	2	3	4	5	41. I am afraid I may never see my children grow up.
1	2	3	4	5	42. I have a fear of dying violently.

GBC

Instructions. Below is a list of specific behaviors or acts. Over the past two months, it is likely that you may have performed some of these behaviors. It is also likely that you have not performed many of them as well during this time. Please consider each behavior to determine whether or not you have performed the behavior during the past two months. If you have performed the behavior, please try to determine how many times you have performed it during the past two months. For each behavior, provide one of the following ratings:

Write a "0" in the blank before the behavior if you have not performed the behavior during the past two months.

Write a "1" in the blank if you have performed the behavior one time during the past two months.

Write a "2" in the blank if you have performed the behavior more than once during the past two months.

- ___ 1. Taught somebody a skill.
- ___ 2. Served as a role model for a young person.
- ___ 3. Won an award or contest.
- ___ 4. Went to see a movie or play.
- ___ 5. Gave money to a charity.
- ___ 6. Did volunteer work for a charity.
- ___ 7. Listened to a person tell me his or her personal problems.
- ___ 8. Purchased a new car or major appliance (e.g., dishwasher, television set).
- ___ 9. Taught Sunday School or provided similar religious instruction.
- ___ 10. Taught somebody about right and wrong, good and bad.
- ___ 11. Told somebody about my own childhood.
- ___ 12. Read a story to a child.

- ___ 13. Babysat for somebody else's children.
- ___ 14. Participated in an athletic sport.
- ___ 15. Gave clothing or personal belongings to a not-for-profit organization (such as the "Good Will," "Salvation Army," etc.).
- ___ 16. Was elected or promoted to a leadership position.
- ___ 17. Made a decision that influenced many people.
- ___ 18. Ate dinner at a restaurant.
- ___ 19. Produced a piece of art or craft (such as pottery, quilt, woodwork, painting, etc.).
- ___ 20. Produced a plan for an organization or group outside my own family.
- ___ 21. Visited a nonrelative in a hospital or nursing home.
- ___ 22. Read a novel.
- ___ 23. Made something for somebody and then gave it to them.
- ___ 24. Drew upon my past experiences to help a person adjust to a situation.
- ___ 25. Picked up garbage or trash off the street or some other area that is not my property.
- ___ 26. Gave a stranger directions on how to get somewhere.
- ___ 27. Attended a community or neighborhood meeting.
- ___ 28. Wrote a poem or story.
- ___ 29. Took in a pet.
- ___ 30. Did something that other people considered to be unique and important.
- ___ 31. Attended a meeting or activity at a church (not including conventional worship service such as Mass, Sunday morning service, etc.).
- ___ 32. Offered physical help to a friend or acquaintance (e.g., helped them move, fix a car, etc.).
- ___ 33. Had an argument with a friend or family member.

- ____ 34. Contributed time or money to a political or social cause.
- ____ 35. Planted or tended a garden, tree, flower, or other plant.
- ____ 36. Wrote a letter to a newspaper, magazine, Congressman, etc. about a social issue.
- ____ 37. Cooked a meal for friends (nonfamily members).
- ____ 38. Donated blood.
- ____ 39. Took prescription medicine.
- ____ 40. Sewed or mended a garment or other object.
- ____ 41. Restored or rehabbed a house, part of a house, a piece of furniture, etc.
- ____ 42. Assembled or repaired a child's toy.
- ____ 43. Voted for a political candidate or some other elected position.
- ____ 44. Invented something.
- ____ 45. Provided first aid or other medical attention.
- ____ 46. Attended a party.
- ____ 47. Took an afternoon nap.
- ____ 48. Participated in or attended a benefit or fund-raiser.
- ____ 49. Learned a new skill (e.g., computer language, musical instrument, welding, etc.).
- ____ 50. Became a parent (had a child, adopted a child, or became a foster parent).

DAP-R

This questionnaire contains a number of statements related to different attitudes toward death. Read each statement carefully, and then indicate the extent to which you agree or disagree. For example, an item might read: "Death is a friend." Indicate how well you agree or disagree by circling one of the following: SA = strongly agree; A = agree; MA = moderately agree; U = undecided; MD = moderately disagree; D = disagree; and SD = strongly disagree. **Note** that scales run both from *strongly agree* to *strongly disagree* and from *strongly disagree* to *strongly agree*.

If you strongly agreed with the statement, you would circle SA. If you strongly disagreed you would circle SD. If you are undecided, circle U. However, try to use the undecided category sparingly.

It is important that you work through the statements and answer each one. Many of the statements will seem alike, but all are necessary to show slight differences in attitudes.

1. Death is no doubt a grim experience.	SD	D	MD	U	MA	A	SA
2. The prospect of my own death arouses anxiety in me	SA	A	MA	U	MD	D	SD
3. I avoid death thoughts at all costs.	SA	A	MA	U	MD	D	SD
4. I believe that I will be in heaven after I die.	SD	D	MD	U	MA	A	SA
5. Death will bring an end to all my troubles.	SD	D	MD	U	MA	A	SA
6. Death should be viewed as a natural, undeniable, and unavoidable event.	SA	A	MA	U	MD	D	SD
7. I am disturbed by the finality of death.	SA	A	MA	U	MD	D	SD
8. Death is an entrance to a place of ultimate satisfaction.	SD	D	MD	U	MA	A	SA
9. Death provides an escape from this terrible world.	SA	A	MA	U	MD	D	SD
10. Whenever the thought of death enters my mind, I try to push it away.	SD	D	MD	U	MA	A	SA
11. Death is deliverance from pain and suffering	SD	D	MD	U	MA	A	SA
12. I always try not to think about death.	SA	A	MA	U	MD	D	SD
13. I believe that heaven will be a much better place than this world.	SA	A	MA	U	MD	D	SD
14. Death is a natural aspect of life.	SA	A	MA	U	MD	D	SD
15. Death is a union with God and eternal bliss.	SD	D	MD	U	MA	A	SA

16. Death brings a promise of a new and glorious life.	SA	A	MA	U	MD	D	SD
17. I would neither fear death nor welcome it.	SA	A	MA	U	MD	D	SD
18. I have an intense fear of death.	SD	D	MD	U	MA	A	SA
19. I avoid thinking about death altogether.	SD	D	MD	U	MA	A	SA
20. The subject of life after death troubles me greatly.	SA	A	MA	U	MD	D	SD
21. The fact that death will mean the end of everything as I know it frightens me.	SA	A	MA	U	MD	D	SD
22. I look forward to a reunion with my loved ones after I die.	SD	D	MD	U	MA	A	SA
23. I view death as a relief from earthly suffering.	SA	A	MA	U	MD	D	SD
24. Death is simply a part of the process of life.	SA	A	MA	U	MD	D	SD
25. I see death as a passage to an eternal and blessed place.	SA	A	MA	U	MD	D	SD
26. I try to have nothing to do with the subject of death.	SD	D	MD	U	MA	A	SA
27. Death offers a wonderful release of the soul.	SD	D	MD	U	MA	A	SA
28. One thing that gives me comfort in facing death is my belief in the afterlife.	SD	D	MD	U	MA	A	SA
29. I see death as a relief from the burden of this life.	SD	D	MD	U	MA	A	SA
30. Death is neither good nor bad.	SA	A	MA	U	MD	D	SD
31. I look forward to life after death.	SA	A	MA	U	MD	D	SD
32. The uncertainty of not knowing what happens after death worries me.	SD	D	MD	U	MA	A	SA

Debriefing Form

Thank you for participating in this study. By participating, you have contributed to ongoing research efforts to understand normative aging processes, specifically those related to how older adults feel and think about the end of their own lives.

Should you have any questions about this study before, during or after participating in it, you may contact the primary investigators by telephone or email. Joshua Bringle, M.S. can be reached by email at bringle@psych.umass.edu and by telephone at (413) 545-4382. Susan K. Whitbourne, Ph.D. can be reached by email at svhitbo@psych.umass.edu and by telephone at (413) 545-4306. You may also contact additional representatives of Psychology Department and the University of Massachusetts, Amherst should you have any questions or concerns about research conducted at this University. The Chair of the Psychology Department at the University of Massachusetts, Amherst is Melinda Novak, Ph.D. She can be reached by email at mnovak@psych.umass.edu and by telephone at (413) 545-2387. If there are any complaints or comments regarding the study, you can contact the Human Subjects Review Board by email at HumanSubjects@ora.umass.edu and by telephone at (413) 545-3428.

Should you have any further questions about the study, please feel free to contact the primary investigator, Joshua Bringle, M.S. You are also entitled to receive a copy of the completed research. Should you wish to be updated on the results of the study, please contact the primary investigator. Thanks again for your participation!

APPENDIX C
INFORMANT PACKET

Informed Consent

You have been selected by a friend/relative to volunteer to participate in a research study on the aging process being conducted by researchers at the University of Massachusetts. Your participation is voluntary; you may choose not to participate. The questionnaires that you will fill out will be about the friend/relative who is taking part in the main part of our study. Please answer them honestly and return them in the envelope provided.

Once you have completed the questionnaires, your name will not be associated with your data; your data will be associated with an identification number instead. All the information we collect from you will be kept confidential in the sense that no one will know that you have participated in this research project. Once completed, the questionnaires you fill out will be kept in a locked cabinet in a secure laboratory at the University of Massachusetts, Amherst.

Should you have any questions about this study before, during or after participating in it, you may contact the primary investigators by telephone or email. Joshua Bringle, M.S. can be reached by email at bringle@psych.umass.edu and by telephone at (413) 545-4382. Susan K. Whitbourne, Ph.D. can be reached by email at swhitbo@psych.umass.edu and by telephone at (413) 545-4306. You may also contact additional representatives of Psychology Department and the University of Massachusetts, Amherst should you have any questions or concerns about research conducted at this University. The Chair of the Psychology Department at the University of Massachusetts, Amherst is Melinda Novak, Ph.D. She can be reached by email at mnovak@psych.umass.edu and by telephone at (413) 545-2387. If there are any complaints or comments regarding the study, you can contact the Human Subjects Review Board by email at HumanSubjects@ora.umass.edu and by telephone at (413) 545-3428. You are entitled to receive a copy of the completed research. Should you wish to remain updated on the results of this study, please contact Joshua Bringle, M.S. Thank you very much for volunteering for this study. Your participation is essential to the success of the study and will contribute to a growing body of empirical research on normative processes in aging. By signing this informed consent and completing the attached questionnaires, you are agreeing to allow the researchers to use your data for the research study described above.

Participant Name Printed _____

Participant Signature

Date

Demographics

Name: _____ Date of Birth: _____

Gender: M F _____

What is your relationship to the person who asked you to participate in this study?

How well do you know the individual who asked you to participate in this study?

<i>Not very well</i>		<i>Somewhat well</i>		<i>Very well</i>
1	2	3	4	5

LGS

Instructions: For each of the following statements, please indicate how often the statement applies to **your friend/relative**, by marking either a "0," "1," "2," or "3" in the space in front.

Mark "0" if the statement never applies to him/her.

Mark "1" if the statement only occasionally or seldom applies to him/her.

Mark "2" if the statement applies to him/her fairly often.

Mark "3" if the statement applies to him/her very often or nearly always.

- ____ 1. He/She tries to pass along the knowledge He/She has gained through his/her experiences.
- ____ 2. He/She does not feel that other people need him/her.
- ____ 3. He/She thinks He/She would like the work of a teacher.
- ____ 4. He/She feels as though He/She has made a difference to many people.
- ____ 5. He/She does not volunteer to work for a charity.
- ____ 6. He/She has made and created things that have had an impact on other people.
- ____ 7. He/She tries to be creative in most things that He/She does.
- ____ 8. He/She thinks that He/She will be remembered for a long time after He/She dies.
- ____ 9. He/She believes that society cannot be responsible for providing food and shelter for all homeless people.
- ____ 10. Others would say that He/She has made unique contributions to society.
- ____ 11. If He/She were unable to have children of his/her own, He/She would like to adopt children.
- ____ 12. He/She has important skills that He/She tries to teach others.
- ____ 13. He/She feel that He/She has done nothing that will survive after He/She dies.
- ____ 14. In general, his/her actions do not have a positive effect on other people.

0 = Never. 1 = Occasionally/Seldom. 2 = Fairly Often, 3 = Very Often/Nearly Always

____ 15. He/She feel as though He/She has done nothing of worth to contribute to others.

____ 16. He/She has made many commitments to many different kinds of people, groups, and activities in his/her life.

____ 17. Other people say that He/She is a very productive person.

____ 18. He/She has a responsibility to improve the neighborhood in which He/She lives.

____ 19. People come to him/her for advice.

____ 20. He/She feels as though his/her contributions will exist after He/She dies.

GBC

Instructions: Below is a list of specific behaviors or acts. Over the past two months, it is likely that **your friend/relative** may have performed some of these behaviors. It is also likely that **your friend/relative** has not performed many of them as well during this time. Please consider each behavior to determine whether or not **your friend/relative** has performed the behavior during the past two months. If **he/she** has performed the behavior, please try to determine how many times **your friend/relative** has performed it during the past two months. For each behavior, provide one of the following ratings:

Write a "0" in the blank before the behavior if **your friend/relative** has not performed the behavior during the past two months.

Write a "1" in the blank if **your friend/relative** has performed the behavior one time during the past two months.

Write a "2" in the blank if **your friend/relative** has performed the behavior more than once during the past two months.

- ____ 1. Taught somebody a skill.
- ____ 2. Served as a role model for a young person.
- ____ 3. Won an award or contest.
- ____ 4. Went to see a movie or play.
- ____ 5. Gave money to a charity.
- ____ 6. Did volunteer work for a charity.
- ____ 7. Listened to a person tell me his or her personal problems.
- ____ 8. Purchased a new car or major appliance (e.g., dishwasher, television set).
- ____ 9. Taught Sunday School or provided similar religious instruction.
- ____ 10. Taught somebody about right and wrong, good and bad.
- ____ 11. Told somebody about his/her childhood.
- ____ 12. Read a story to a child.
- ____ 13. Babysat for somebody else's children.
- ____ 14. Participated in an athletic sport.

- ____15. Gave clothing or personal belongings to a not-for-profit organization (such as the "Good Will," "Salvation Army," etc.).
- ____16. Was elected or promoted to a leadership position.
- ____17. Made a decision that influenced many people.
- ____18. Ate dinner at a restaurant.
- ____19. Produced a piece of art or craft (such as pottery, quilt, woodwork, painting, etc).
- ____20. Produced a plan for an organization or group outside his/her own family.
- ____21. Visited a nonrelative in a hospital or nursing home.
- ____22. Read a novel.
- ____23. Made something for somebody and then gave it to them.
- ____24. Drew upon past experiences to help a person adjust to a situation.
- ____25. Picked up garbage or trash off the street or some other area that is not his/her property.
- ____26. Gave a stranger directions on how to get somewhere.
- ____27. Attended a community or neighborhood meeting.
- ____28. Wrote a poem or story.
- ____29. Took in a pet.
- ____30. Did something that other people considered to be unique and important.
- ____31. Attended a meeting or activity at a church (not including conventional worship service such as Mass, Sunday morning service, etc.).
- ____32. Offered physical help to a friend or acquaintance (e.g., helped them move, fix a car, etc.).
- ____33. Had an argument with a friend or family member.
- ____34. Contributed time or money to a political or social cause.
- ____35. Planted or tended a garden, tree, flower, or other plant.
- ____36. Wrote a letter to a newspaper, magazine, Congressman, etc. about a social issue.

- ____ 37. Cooked a meal for friends (nonfamily members).
 - ____ 38. Donated blood.
 - ____ 39. Took prescription medicine.
 - ____ 40. Sewed or mended a garment or other object.
 - ____ 41. Restored or rehabbed a house, part of a house, a piece of furniture, etc.
 - ____ 42. Assembled or repaired a child's toy.
 - ____ 43. Voted for a political candidate or some other elected position.
 - ____ 44. Invented something.
 - ____ 45. Provided first aid or other medical attention.
 - ____ 46. Attended a party.
 - ____ 47. Took an afternoon nap.
 - ____ 48. Participated in or attended a benefit or fund-raiser.
 - ____ 49. Learned a new skill (e.g., computer language, musical instrument, welding, etc.).
 - ____ 50. Became a parent (had a child, adopted a child, or became a foster parent).
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Debriefing Form

Thank you for participating in this study. By participating, you have contributed to ongoing research efforts to understand normative aging processes, specifically those related to how older adults feel and think about the end of their own lives.

Should you have any questions about this study before, during or after participating in it, you may contact the primary investigators by telephone or email. Joshua Bringle, M.S. can be reached by email at bringle@psych.umass.edu and by telephone at (413) 545-4382. Susan K. Whitbourne, Ph.D. can be reached by email at swhitbo@psych.umass.edu and by telephone at (413) 545-4306. You may also contact additional representatives of Psychology Department and the University of Massachusetts, Amherst should you have any questions or concerns about research conducted at this University. The Chair of the Psychology Department at the University of Massachusetts, Amherst is Melinda Novak, Ph.D. She can be reached by email at mnovak@psych.umass.edu and by telephone at (413) 545-2387. If there are any complaints or comments regarding the study, you can contact the Human Subjects Review Board by email at HumanSubjects@ora.umass.edu and by telephone at (413) 545-3428.

Should you have any further questions about the study, please feel free to contact the primary investigator, Joshua Bringle, M.S. You are also entitled to receive a copy of the completed research. Should you wish to be updated on the results of the study, please contact the primary investigator. Thanks again for your participation!

REFERENCES

- Becker, E. (1962). *The birth and death of meaning, a perspective in psychiatry and anthropology*. New York: Free Press of Glencoe.
- Becker, E. (1973). *The denial of death*. New York: Free Press.
- Bollen, K.A. (1989). *Structural equations with latent variables*. New York: Wiley.
- Boylin, W., Gordon, S.K., & Nehrke, M.F. (1976). Reminiscing and ego integrity in institutionalized elderly males. *Gerontologist*, 16, 118-124.
- Butler, R.N. (1961). The life review: An interpretation of reminiscence in the aged. *Psychiatry*, 26, 65-75.
- Catania, J.A., Turner, H.A., & Choi, K. (1992). Coping with death anxiety: Help-seeking and social support among gay men with various HIV diagnoses. *AIDS*, 6, 999-1005.
- Cheng, S., Chan, A.C.M., & Phillips, D.R. (2004). Quality of life in old age: An investigation of well older persons in Hong Kong. *Journal of Community Psychology*, 32, 309-326.
- Cicirelli, V. G. (1997). Relationship of psychosocial and background variables to older adults' end-of-life decisions. *Psychology & Aging*, 12, 72-83.
- Cicirelli, V.G. (1998). Personal meanings of death in relation to fear of death. *Death Studies*, 22, 713-733.

- Cicirelli, V. G. (2001). Personal meanings of death in older adults and young adults in relation to their fears of death. *Death Studies*, 25, 663-683.
- Cicirelli, V. G. (2002). Fear of death in older adults: Predictions from terror management theory. *Journals of Gerontology: Series B: Psychological Sciences & Social Sciences*, 57, P358-P366.
- Constantinople, A. (1969). An Eriksonian measure of personality development in college students. *Developmental Psychology*, 1, 357-372.
- Costa, P.T., & McCrae, R.R. (1992). Normal personality assessment in clinical practice: The NEO Personality Inventory. *Psychological Assessment*, 4, 5-13.
- Dadds, M.R., Perrin, S., & Yule, W. (1998). Social desirability and self-reported anxiety in children: An analysis of the RCMAS Lie Scale. *Journal of Abnormal Child Psychology*, 26, 311-317.
- Dattel, A. R., & Neimeyer, R. A. (1990). Sex differences in death anxiety: Testing the emotional expressiveness hypothesis. *Death Studies*, 14, 1-11.
- DePaola, S. J., Neimeyer, R. A., Lupfer, M. B., & Fiedler, J. (1992). Death concern and attitudes toward the elderly in nursing home personnel. *Death Studies*, 16, 537-555.
- DiBartolo, P.M., Albano, A.M., Barlow, D.H., & Heimberg, R.G. (1998). Cross-informant agreement in the assessment of social phobia in youth. *Journal of Abnormal Child Psychology*, 26, 213-220.
- Erikson, E. H. (1963). *Childhood and society* (2nd Ed.). New York: W. W. Norton.

- Erikson, E. H. (1994). *The life cycle completed: A review*. New York: W. W. Norton.
- Fortner, B. V., & Neimeyer, R. A. (1999). Death anxiety in older adults: A quantitative review. *Death Studies*, 23, 387-411.
- Fortner, B.V., Neimeyer, R.A., & Rybarczyk, B. (2000). Correlates of death anxiety in older adults: A comprehensive review. In A. Tomer (Ed.) *Death attitudes and the older adult: Theories, concepts and applications* (pp. 95-108). Philadelphia: Taylor & Francis.
- Fry, P. S. (2003). Perceived self-efficacy domains as predictors of fear of the unknown and fear of dying among older adults. *Psychology & Aging*, 18, 474-486.
- Funder, D.C., & Colvin, C.R. (1988). Friends and strangers: Acquaintanceship, agreement and the accuracy of personality judgment. *Journal of Personality and Social Psychology*, 55, 149-158.
- Gesser, G., Wong, P. T.P., & Reker, G. T. (1987). Death attitudes across the life-span: The development and validation of the death attitude profile (DAP). *Omega: Journal of Death & Dying*, 18, 113-128.
- Glaser, B. F., & Strauss, A. L. (1965). Temporal aspects of dying as a non-scheduled status passage. *American Journal of Sociology*, 71, 48-59.
- Hintze, J., Templer, D.I., Cappelletty, G.G., & Frederick, W. (1994). Death depression and death anxiety in HIV-infected males. In R. A. Neimeyer (Ed.), *Death anxiety*

- handbook: Research, instrumentation, and application* (pp. 193-200). Philadelphia: Taylor & Francis.
- Hoelter, J. W. (1979). Multidimensional treatment of fear of death. *Journal of Consulting & Clinical Psychology*, 47, 996-999.
- Holcomb, L. E., Neimeyer, R. A., & Moore, M. K. (1993). Personal meanings of death: A content analysis of free-response narratives. *Death Studies*, 17, 299-318.
- Hoyert, D.L., Kochanek, K.D., & Murphy, S.L. (1999). Deaths: Final data for 1997. *National Vital Statistics Reports*, 47, No. 19.
- Kamphuis, J.H., Emmelkamp, P.M.G., & de Vries, V. (2003). Moderated validity of clinical informant assessment: Use in depression and personality. *Clinical Psychology and Psychotherapy*, 10, 102-107.
- Kastenbaum, R. (1999). Dying and bereavement. In J. C. Cavanaugh, & S. K. Whitbourne (Eds.), *Gerontology: An interdisciplinary perspective* (pp. 155-185). London: Oxford University Press.
- Kelly, G.A. (1955). *The psychology of personal constructs. I. A theory of personality. II. Clinical diagnosis and psychotherapy*. Oxford, England: Norton & Co.
- Kline, R.B. (2005). *Principles and practice of structural equation modeling*. (2nd Ed.). New York: The Guilford Press.

- Kolar, D.W., Funder, D.C., & Colvin, R.C. (1996). Comparing the accuracy of personality judgments by the self and knowledgeable others. *Journal of Personality*, 64, 311-337.
- Kotre, J. N. (1984). *Outliving the self: How we live on in future generations*. New York: W. W. Norton & Co.
- Krieger, S. R., Epting, F. R., & Hays, C. H. (1979). Validity and reliability of provided constructs in assessing death threat. *Omega: Journal of Death & Dying*, 10, 87-95.
- Kubler-Ross, E. (1969). *On death and dying*. New York: Macmillan.
- Kurtz, J.E., & Sherker, J.L. (2003). Relationships quality, trait similarity, and self-other agreement on personality ratings in college roommates. *Journal of Personality*, 71, 21-48.
- Lin, Y., Dai, Y., & Hwang, S. (2003). The effect of reminiscence on the elderly population: A systematic review. *Public Health Nursing*, 20, 297-306.
- McAdams, D. P., & de St. Aubin, E. (1992). A theory of generativity and its assessment through self-report, behavioral acts, and narrative themes in autobiography. *Journal of Personality & Social Psychology*, 62, 1003-1015.
- McAdams, D.P., de St. Aubin, E., & Logan, R.L. (1993). Generativity among young, midlife and older adults. *Psychology and Aging*, 8, 221-230.
- McAdams, D. P., Hart, H. M., & Maruna, S. (1998). The anatomy of generativity. In D. P. McAdams & E. de St. Aubin (Eds.), *Generativity and adult development: How*

and why we care for the next generation. (pp. 7-43). Washington DC: American Psychological Association.

McAdams, D.P., Ruetzel, K., & Foley, J.M. (1986). Complexity and generativity at mid-life: Relations among social motives, ego development, and adults' plans for the future. *Journal of Personality and Social Psychology*, 50, 800-807.

McCrae, R.R. (1982). Consensual validation of personality traits: Evidence from self-reports and ratings. *Journal of Personality and Social Psychology*, 43, 293-303.

McCrae, R.R. (1993). Agreement of personality profiles across observers. *Multivariate Behavioral Research*, 28, 25-40.

McKeeman, J.L., & Erickson, M.T. (1997). Self and informant ratings of SCID-II personality disorders items for nonreferred college women: Effects of item and participant characteristics. *Journal of Clinical Psychology*, 53, 523-533.

Moore, M.K., & Neimeyer, R.A. (1991). A confirmatory factor analysis of the Threat Index. *Journal of Personality and Social Psychology*, 60, 122-129.

National Center for Health Statistics (2003). Retrieved on May 15, 2006 from www.cdc.gov/nchs/agingact.htm.

Neimeyer, R.A. (1994). Death attitudes in adult life: A closing coda. In R. A. Neimeyer (Ed.), *Death anxiety handbook: Research, instrumentation, and application.* (pp. 263-279). Philadelphia: Taylor & Francis.

- Neimeyer, R. A., Dingemans, P. M., & Epting, F. R. (1977). Convergent validity, situational stability and meaningfulness of the threat index. *Omega: Journal of Death & Dying*, 8, 251-265.
- Neimeyer, R. A., & Moore, M. K. (1994). Validity and reliability of the multidimensional fear of death scale. In R. A. Neimeyer (Ed.), *Death anxiety handbook: Research, instrumentation, and application* (pp. 103-119). Philadelphia: Taylor & Francis.
- Neimeyer, R.A., Moore, M.K., & Bagley, K.J. (1988). A preliminary factor structure for the Threat Index. *Death Studies*, 12, 217-225.
- Neimeyer, R. A., & Van Brunt, D. (1995). Death anxiety. In H. Wass, & R. A. Neimeyer (Eds.), *Dying: Facing the facts (3rd Ed.)* (pp. 49-88). Philadelphia, PA: Taylor & Francis.
- Pina, A.A., Silverman, W.K., Saavedra, L.M., & Weems, C.F. (2001). An analysis of the RCMAS Lie scale in a clinic sample of anxious children. *Journal of Anxiety Disorders*, 15, 443-457.
- Robinson, P. J., & Wood, K. (1984). Fear of death and physical illness: A personal construct approach. In F. R. Epting, & R. A. Neimeyer (Eds.), *Personal meanings of death: Applications of personal construct theory to clinical practice* (pp. 127-142). Washington DC: Hemisphere Publishing Corp.
- Schiappa, E., Gregg, P.B., & Hewes, D.E. (2004). Can a television series change attitudes about death? A study of college students and Six Feet Under. *Death Studies*, 28, 459-474.

- Silverman, W.K., & Eisen, A.R. (1992). Age differences in the reliability of parent and child reports of child anxious symptomatology using a structured interview. *Journal of the American Academy of Child and Adolescent Psychiatry*, 31, 117-124.
- Spain, J.S., Eaton, L.G., & Funder, D. C. (2000). Perspectives on personality: The relative accuracy of self versus others for the prediction of emotion and behavior. *Journal of Personality*, 68, 837-867.
- Stillion, J. M. (1984). Perspectives on the sex differential in death. *Death Education*, 8, 237-256.
- Templer, D. I. (1970). The construction and validation of a death anxiety scale. *Journal of General Psychology*, 82, 165-177.
- Thorson, J.A., & Powell, F.C. (1988). Elements of death anxiety and meanings of death. *Journal of Clinical Psychology*, 44, 691-701.
- Thorson, J. A., & Powell, F. C. (1994). A revised death anxiety scale. In R. A. Neimeyer (Ed.), *Death anxiety handbook: Research, instrumentation, and application* (pp. 31-43). Philadelphia, PA: Taylor & Francis.
- Tomer, A. (1994). Death anxiety in adult life--theoretical perspectives. In R. A. Neimeyer (Ed.), *Death anxiety handbook: Research, instrumentation, and application* (pp. 3-28). Philadelphia, PA: Taylor & Francis.
- U.S. Bureau of the Census (2003). The older population in the United States (P20-564). Washington DC: Bureau of the Census.

- Viney, L.L. (1984). Loss of life and loss of bodily integrity: Two different sources of threat for people who are ill. *Omega: Journal of Death and Dying*, 15, 207-222.
- Walaskay, M., Whitbourne, S. K., & Nehrke, M. F. (1983-1984). Construction and validation of an ego integrity status interview. *International Journal of Aging & Human Development*, 18, 61-72.
- Wass, H., & Neimeyer, R. A. (1995). Closing reflections. In H. Wass, & R. A. Neimeyer (Eds.), *Dying: Facing the facts (3rd Ed.)*(pp. 435-446). Philadelphia, PA: Taylor & Francis.
- Whitbourne, S.K., Zuschlag, M.K., Elliot, L.B., & Waterman, A.S. (1992). Psychosocial development in adulthood: A 22-year sequential study. *Journal of Personality and Social Psychology*, 63, 260-271.
- Wicker, F.W., & Young, E.L. (1990). Instance-based clusters of fear and anxiety: Is ambiguity an essential dimension? *Perceptual and Motor Skills*, 70, 115-121.
- Wong, P. T.P., Reker, G. T., & Gesser, G. (1994). Death attitude profile--revised: A multidimensional measure of attitudes toward death. In R. A. Neimeyer (Ed.), *Death anxiety handbook: Research, instrumentation, and application*. (pp. 121-148). Philadelphia, PA: Taylor & Francis.

