

ASSESSING ATTITUDES TOWARD DYING AND DEATH: PSYCHOMETRIC CONSIDERATIONS*

ROBERT A. NEIMEYER, PH.D.

University of Memphis, Tennessee

RICHARD P. MOSER, PH.D.

National Cancer Institute, Bethesda, Maryland

JOACHIM WITTKOWSKI, DR.PHIL.

Universitaet Wuerzburg, Germany

ABSTRACT

In the 50 years of research in death attitudes, clear gains have been made in the measurement of death concerns and competencies, leading to the development and validation of several scales whose more extensive use could improve the conceptual yield of research in this area. In this article, we review these promising instruments, focusing on nine general questionnaires for measuring death anxiety, fear, threat, depression, and acceptance, and four specialized measures of death self-efficacy and coping, readiness for death, and desire for hastened death. We also offer an orientation to non-questionnaire based techniques for the assessment of death attitudes (e.g., narrative measures, repertory grids, behavioral observations, death personifications and drawings), and close with a note on international developments that hold promise for improved cultural awareness of the role of death attitudes in human life.

*This article is dedicated to our colleague, Herman Feifel, whose death on January 18, 2003, deprived the field of a pioneering voice in the study of death attitudes.

In a certain sense, the attempt to come to terms with the reality of death in human life has animated our collective systems of belief since before their recorded origins (Neimeyer, Prigerson, & Davies, 2002). From the ancient cosmologies of traditional peoples to 20th century existentialism and beyond, individuals, tribes, and whole cultures have contemplated the problems that arise at the intersection of death and human identity, expressing these problems and their provisional solutions in an endless array of oral traditions, artistic creations, literary works, religions, and philosophies.

Viewed in the sweep of millennia, scientific and psychological contributions to the human encounter with death are of recent origin. And yet, in the half-century that has elapsed since Feifel's pioneering studies of death attitudes (Feifel, 1955, 1956), nearly 2,000 published articles have examined the causes, correlates, and consequences of death anxiety, and the related concepts of death threat, fear, and acceptance (Neimeyer & Fortner, 1997; Neimeyer & Van Brunt, 1995).

Our goal in the present article is to describe and evaluate the foundations of this literature by reviewing research instruments devised for assessing attitudes toward dying and death.¹ Undertaking this task in the space allotted requires that some potentially relevant goals not be pursued here, in order to treat other objectives more adequately. We will therefore defer to other sources for: a) more comprehensive discussions of the role of thanatological theory in guiding death anxiety research (Kastenbaum, 1988; Neimeyer, 1994b; Tomer, 1994); b) complete psychometric evaluations of several existing measures of death attitudes, along with details of their scoring (Neimeyer, 1994a); and c) an historical survey of the seminal contributions of Herman Feifel to the assessment of death attitudes (Neimeyer & Fortner, 1997). Instead, we will focus here on methodological approaches to the general measurement of death anxiety, fear, threat, and acceptance as well as several more specific measures of death competencies and wishes, and draw attention to their validity, reliability, and factor structure.

A DEFINITIONAL POINT OF DEPARTURE

By any analysis, the dominant focus of death attitude researchers has been the measurement of death anxiety, fear, and related concepts. But what do we fear when we fear death? One might suppose that the scholarly study of any given topic would begin with a clear definition of basic terms, preferably grounded in an explicit conceptual framework. However, with only occasional exceptions, this has not been the case in the burgeoning field of death anxiety research, where the enthusiasm to "collect data" on death attitudes has typically taken the form of a raw and often naive empiricism, which is neither guided by theory nor directed

¹ This article substantially extends an earlier review published in this journal by Neimeyer (1998), and incorporates and modifies the coverage provided in that review with the permission of the Editor.

toward practical applications (Kastenbaum, 1988; Neimeyer, 1994b). As a consequence, relatively little thought has been given by empirically oriented researchers to the meaning of “death anxiety,” beyond the common sense association of the term with some form of personal discomfort concerning the state of death or the process of dying.

For the sake of readability, we will use the term “death anxiety” as a shorthand designation for a cluster of death attitudes characterized by fear, threat, unease, discomfort, and similar negative emotional reactions, as well as anxiety in the psychodynamic sense as a kind of diffuse fear that has no clear object. This usage accords with the imprecision of the term “death anxiety” in actual (research) practice; even when semantic distinctions have been introduced by the authors of the general scales reviewed below, these are typically undercut by essential similarities in the items used to measure the purportedly distinctive constructs. Although some of the instruments covered here vary as a function of situational stimuli, most of them are designed to assess the fear of dying and/or death as a relatively stable personality disposition (trait). However, some terminological distinctions (e.g., between anxiety on the one hand and threat on the other) seem to be well grounded in theory and method. Thus, we will adopt terminology appropriate to each scale in the sections to follow.

Although most of the extensive literature in this area focuses on the various forms of death anxiety noted above, we consider this an incomplete sampling of the broad and complex domain of death attitudes, which can also include positive appraisals of death, such as death approach or readiness. Our use of “death attitudes” as a covering term for this general domain therefore in no way implies that all, or even most of the scales we will review are functionally equivalent, and can be used interchangeably in research. Indeed, even measures of general death anxiety often target subtly different death attitudes (e.g., death fear versus avoidance), as well as different foci of anxiety (e.g., about the dying process, the afterlife, not completing important life tasks). This makes it essential for the would-be investigator of death attitudes to think carefully about his or her focal interest: Is it in the meanings that respondents attribute to the prospect of their own death if it were to occur at this point in their lives, the degree of acceptance that people have of their own future mortality when asked to contemplate it, or the level of emotional arousal associated with the passage of time, the prospect of war, or the indignities of advancing illness?

All of these facets of death attitudes (and more) have been operationalized with various degrees of rigor in existing measures, although the titles of the scales themselves may give only a very general indication of their actual focus. For this reason we will first consider the basic constructs that are operationalized by the strongest existing measures of death anxiety, along with the evidence for their validity and reliability. We will then broaden the discussion by introducing several specialized scales for evaluating death attitudes, as well as other novel procedures that could contribute to more satisfying research in the future.

DEATH ANXIETY SCALES: THE ROYAL ROAD TO THE CONSCIOUS

It has become a commonplace observation in thanatological scholarship that we live in a death-denying society. Particularly among writers having a broadly psychodynamic background, this claim often leads to the corollary assumption that most people, most of the time, live in denial of their “true” attitude toward death, which is marked by considerable unconscious anxiety, dread, and fear (Becker, 1973; Firestone, 1994; see Kastenbaum, 2000, for a caution on the overuse of “denial” as a concept in this literature). From this vantage point, it would follow that investigators aspiring to study death anxiety would need to delve below the level of conscious report, relying on perceptual or fantasy level assessments that are less susceptible to defensive distortion. This was precisely the path taken by early investigators of death anxiety, who used such diverse procedures as imagery tasks (Feifel, 1955; Feifel & Branscomb, 1973), the Thematic Apperception Test (Rhudick & Dibner, 1961), galvanic skin response (Alexander & Alderstein, 1958), word association tasks (Golding, Atwood, & Goodman, 1966), and tachistoscopic word recognition techniques (Lester & Lester, 1970) in an attempt to assess death fears below the level of awareness. Although occasional studies using projective methods have appeared in recent decades (Feifel & Nagy, 1980; Ungar, Florian, & Zernitsky-Shurka, 1990), these typically “cross validate” results by the inclusion of conscious measures of death anxiety.

However, general enthusiasm had begun to wane for such procedures by the mid-1970s. At least three factors seem to have contributed to this trend. The first of these was probably the general decline in the hegemony of a psychodynamic position in the field, coincident with the apparent successes of more straightforward research on attitudes in related fields such as social psychology. A more specific contributor was the dubious validity and reliability of these projective tasks, prompting investigators to look elsewhere for more adequate measures (Neimeyer & Van Brunt, 1995; Wass & Forfar, 1982). Finally, and more perniciously, the deceptive simplicity of utilizing brief and tantalizingly quantifiable measures probably tempted many researchers to abandon more labor intensive methods, ushering in the current era of death anxiety research relying almost exclusively on brief, easily scored questionnaires (Kastenbaum, 1988). Because 95 percent of the literature on death anxiety has used conscious reports of respondents in the form of written questionnaires, we will consider several examples of these, concentrating for the most part on those that have demonstrated the greatest degree of psychometric adequacy. We will therefore exclude many (e.g., Dodd & Mills, 1985) that may nonetheless merit continued psychometric refinement and perhaps wider use.

GENERAL SCALES OF DEATH ATTITUDES

The evolution of measures of death attitudes has been in the direction of greater differentiation and specificity, moving from global assessments to more multi-dimensional scales, and from the general measurement of death anxiety to attitudes of particular relevance in various life contexts. The general scales to be reviewed include the Death Anxiety Scale (Templer, 1970), The Revised Death Anxiety Scale (McMordie, 1982), the Collett-Lester Fear of Death Scale (Collett & Lester, 1969), the Threat Index (Krieger, Epting, & Leitner, 1974; Neimeyer 1994b), the Multidimensional Fear of Death Scale (Hoelzer, 1979b), the Death Depression Scale (Templer, Lavoie, Chalgujian, & Thomas-Dobson, 1990), the Fear of Personal Death Scale (Florian & Kravetz, 1983), the Death Attitude Profile-Revised (Gesser, Wong, & Reker, 1987), and the Multidimensional Orientation toward Dying and Death Inventory (Wittkowski, 2001). A summary of research on the psychometric properties of these scales is provided in Tables 1 and 1a.

The Death Anxiety Scale

Originally published over 30 years ago, Templer's (1970) Death Anxiety Scale (DAS) remains the most popular measure of death attitudes in the literature. Consisting of 15 true/false statements (e.g., "I am very much afraid to die," "The sight of a dead body is horrifying to me."), the DAS enjoys the advantages of brevity, straightforward scoring (a simple tally of "anxious" responses), and clear name recognition, contributing to its use in hundreds of studies of the relationship of death anxiety to such factors as locus of control, self-concept, adjustment, religiosity, occupation, and a range of demographic variables (Lonetto & Templer, 1986). These advantages notwithstanding, the DAS has been found by several investigators to have important shortcomings, including its range restriction (Kastenbaum, 1988), social desirability confound (Dattel & Neimeyer, 1990; Templer, 1970), poor internal consistency (Schell & Zinger, 1984; Warren & Chopra, 1978), and unstable factor structure (Gilliland & Templer, 1985; Lonetto, Fleming, & Mercer, 1979; Martin, 1982). The latter issue is particularly problematic, insofar as a given score on the instrument could represent quite different anxiety factors, whose number and interpretation shift from study to study. This has led some investigators to recommend that use of the DAS be abandoned altogether (Durlak, 1982). An alternative response to this state of affairs would be to modify the DAS to circumvent some of these limitations, a course pursued by some researchers (McMordie, 1982; Nehrke, 1973).

The Revised Death Anxiety Scale

The most promising of these improved versions is the Revised Death Anxiety Scale (RDAS) developed by Thorson and Powell (1994) across a systematic series

Table 1. Representative Psychometric Properties of General Measures of Death Attitudes

Criterion	Death Anxiety Scale (DAS)	Revised Death Anxiety Scale (RDAS)	Collett-Lester Fear of Death Scale (CLFD)	The Threat Index (Ti; Self-administered version)	Multidimensional Fear of Death Scale (MFODS)
Internal consistency (Cronbach's alpha)	.65 to .83 (Templer, 1970; Warren & Chopra, 1978)	.80 to .83 (Thorson & Powell, 1990; 1994)	Full scale range: .78 to .82; Scales (4) range from .58 to .69 (Loo & Shea, 1996) ^b	.88; Split-half correlations ranged from .90 to .96 (Moore & Neimeyer, 1991; Neimeyer, 1994)	Subscales (8) ranged from .65 to .82 (Hoelter, 1979; Walkey, 1982)
Test-retest reliability	.76-.80 (McMordie, 1978; Templer, 1970)	Not reported	Total scale: .55 (Rigdon & Epting, 1985); Subscales (4) ranged from .79 to .86 (Lester, 1994)	.64 to .90 (Moore & Neimeyer, 1991; Neimeyer, 1994)	Subscales (8) ranged from .61 to .81; total score: .85 (Neimeyer & Moore, 1994)
Convergent and discriminant validity ^a	DAS scores correlate positively with anxiety (Gilliland & Templer, 1985; Siscoe et al., 1992); .03 to -.27 correlation with social desirability (Dattel & Neimeyer, 1990; Templer, 1970)	Not reported	Scale correlations with DAS scores ranged from .40 to .55; significant negative correlation of total score with social desirability: -.27 (Lester, 1994)	Correlated positively with other measures of death anxiety (range: .16 to .58); lack of correlation with social desirability (-.08) (DePaola et al., 1992; Neimeyer, 1994)	Low but significant correlations with Threat Index scales; higher correlations with death concern (Neimeyer & Moore, 1994)

Construct validity	Higher DA for clinical and psychiatric vs. normal populations (Templer, 1970; Templer & Ruff, 1971); mean differences between healthy and ill subjects (Dougherty et al., 1986)	Some evidence it discriminates between those high and low in religiosity (Thorson & Powell, 1994)	Fear of others' death predicted behavior of nurses with dying patients; other study found no association between subscale scores and nurses' self-confidence in care of dying patients (Lester, 1994)	Discriminates between hospice patients and matched comparison group; split scores increased after exposure to death-related stimuli (Hendon & Epting, 1989; Neimeyer, 1994)	Distinguished between those who had a satisfactory philosophy of death and those who did not (Neimeyer & Moore, 1994)
Factorial validity	Unstable factor structure (Lonetto et al., 1979); analyses have indicated three (Saggino & Kline, 1996) and four factors (Gilliland & Templer, 1985)	Four main factors found, though differences found between those low and high in death anxiety (Thorson & Powell, 1992; 1994)	Four factor solution only partially supported hypothesized structure; "self" vs. "other" two-factor solution supported (Loo & Shea, 1996)	Exploratory factor analysis found 4 factors; confirmatory factor analysis indicated that these four factors fit data well (Moore & Neimeyer, 1991)	Eight stable factors (Hoelter, 1979; Walkey, 1982); structure failed to be replicated with Islamic sample (Long, 1985)

^aConvergent validity refers to correlations with established measures of death anxiety; discriminant validity to freedom from social desirability confounds. ^bThe Revised CLFD had alphas ranging from .88 to .92 for the four scales (Lester & Abdel-Khalek, 2009).

Table 1a. Representative Psychometric Properties of General Measures of Death Attitudes

Criterion	Death Depression Scale	Fear of Personal Death Scale (FPDS)	Death Attitude Profile-Revised (DAP-R)	Multidimensional Orientation toward Dying and Death Inventory (MODDI-F)
Internal consistency (Cronbach's alpha)	.77 (Templer et al., 1990)	.73 to .90 (Florian & Mikulincer, 1992, 1997; Mikulincer, Florian, & Tolmacz, 1990)	Across scales, alphas ranged from .60 to .97 (Clements & Rooda, 2000; Wong, Reker, & Gesser, 1994)	Subscales (8) range from .82 to .92 (Wittkowski, 2001); In separate study found alphas ranging from .88 to .94 for just subscales measuring fear (Braun, 1994)
Test-retest reliability	Not reported	.50 to .91 for subscales (Florian & Kravetz, 1983; Mikulincer, Florian, & Tolmacz, 1990)	Across scales, coefficients ranged from .61 to .95 (Wong, Reker, & Gesser, 1994)	Subscales range from .66 to .82 in a 17-18 week interval (Elflein, 1996)
Convergent and discriminant validity ^a	Significant correlation with other measures of general depression (Templer et al., 1990), but also with general anxiety and death anxiety (Hintze et al., 1993); correlation with depression not replicated in separate study (Siscoe et al., 1992)	One factor (Punishment in the Hereafter) correlated with non-conscious (TAT themes) measures of death centrality, anxiety, and guilt (Florian, Kravetz, & Franke, 1984)	Working with dying correlates negatively with Fear of Death, Death Avoidance, positively with Death Acceptance (Clements & Rooda, 2000)	Positive correlations within fear and acceptance subscales with negative correlations between these subscales (Wittkowski, 2001). Subscale scores showed no correlation with a measure of social desirability, though it was manifest to a small degree with men (Eberst-Hartmann, 1995)

Construct validity	Not reported	Distinguishes between different types of loss (i.e., death of parent vs. other relatives; Florian & Mikulincer, 1997) different levels of religiosity (Florian & Kravetz, 1983; Florian & Mikulincer, 1992) and attachment style (Mikulincer, Florian, & Tolmacz, 1990)	Fear of Death, Death Avoidance subscales negatively correlated with psychological well-being (Wong, Reker, & Gesser, 1994); Death Acceptance positively correlated with well-being	After a course in death education, the fear of other's dying as well as the fear of other's death showed a large and stable reduction whereas the fear of one's own death and the fear of corpses showed a small reduction (Krauss, 2000)
Factorial validity	Six factors found among the 17 items (some scales only contained two items; Templar et al., 1990); combined factor analysis with DAS items did find two distinct factors, anxiety and depression (Siscoe et al., 1992)	Six factors that explained 67.9% of the variance (Florian & Kravetz, 1983; Mikulincer, Florian, & Tolmacz, 1990)	Appears to have five stable factors (Wong, Reker, & Gesser, 1994), with a possible 6th factor (Clements & Rooda, 2000)	A five-factor solution for the fear items explained 51.4% of the variance and a three-factor solution for the acceptance items (i.e., a total of 8 scales) explained 53.8% of the variance (Wittkowski, 2001)

^aConvergent validity refers to correlations with established measures of death anxiety; discriminant validity to freedom from social desirability confounds.

of studies since 1977. Combining the 15 items of the original DAS with items derived from an earlier instrument (Boyar, 1964), they first experimented with a 24-item true/false scale, studying its relationship to a variety of demographic and personality variables. However, the limited correlations with relevant measures and subsequent factor analyses of this version of the scale suggested the need for further revision, leading to the pruning, rewording, and adding of items and reformatting them into 5-point Likert scales to increase the instrument's sensitivity. The current version of the RDAS contains 25 items (e.g., "I am not afraid of a long, slow dying," "Never feeling anything again after I die upsets me") with which the respondent indicates agreement or disagreement on a 5-point scale. Available psychometric data on the instrument indicate good internal consistency and favorable construct validity, but information about other forms of reliability and validity is not available. Thus, further studies of the instrument seem worth undertaking, especially in view of its promise in illuminating age and gender differences in death anxiety (Thorson & Powell, 1994).

Collett-Lester Fear of Death Scale

As an early attempt at constructing a multidimensional fear of death, the Collett-Lester Fear of Death Scale (CLFD; Collett & Lester, 1969) was rationally constructed to distinguish between fears associated with the state of death and with the process of dying, and fear as it applies to not only the self but also to others. Thus, the instrument has four subscales: Fear of Death of Self, Fear of Death of Others, Fear of Dying of Self, and Fear of Dying of Others (Lester, 1994). In its original form, the CLFD is composed of 36 items in which respondents rate their agreement with a series of statements using a 6-point Likert scale (range: -3 = Strong Disagreement to +3 = Strong Agreement). Sample items include, "I would avoid death at all costs" (Death of Self), and "I would avoid a friend who was dying" (Dying of Others). In this format, the CLFD has been used extensively in the psychological literature. For example, scores on the CLFD have been correlated with gender (Neimeyer, Bagley, & Moore, 1986) and other psychological constructs such as neuroticism (Loo, 1984) and depression (Triplett et al., 1995), or used to examine changes in fear of death resulting from death education (Leviton & Fretz, 1978-79).

Psychometric analyses performed on the original CLFD have shown equivocal results. Its rationally-derived four-factor structure has received little support, with various factor analytic studies reporting five to seven factors that map poorly on to those proposed by the authors. Test-retest correlations have been fair, but its internal consistency has been shown to be adequate. Convergent and discriminant validity for the CLFD is partly favorable and partly insufficient. Although it has shown strong correlations with other measures of death anxiety, it has also demonstrated high associations with measures of social desirability (Lester, 1994).

Because of problems with scoring and unequal numbers of items on different scales, a Revised CLFD (Lester & Abdel-Khalek, 2003) was created that maintains the original four rationally proposed scales—with seven items per scale—but which incorporates a 5-point scale on which respondents answer how anxious or disturbed they are by various aspects of death and dying (range: 1 = Not to 5 = Very). Though the original instrument did not demonstrate factorial validity, the revised version offers a slight improvement with items loading fairly consistently on two of the factors and adequate alphas (see Table 1). However, items for the other factors did not load as predicted. Thus, future investigators who use this scale would be well-advised to disregard its attractive and symmetrical factor structure focusing on fear of death and dying of self and others, and instead analyze the instrument in terms of its harder-to-interpret, but more defensible empirical factor structure.

The Threat Index

Originally introduced as a structured interview procedure by Krieger, Epting, and Leitner (1974), the Threat Index (TI) is one of the few measures of death attitudes to be derived from a consistent theoretical base. Threat, according to George Kelly's (1955) personal construct theory, represents the awareness of imminent, comprehensive change in one's core identity constructs, those dimensions of meaning that one uses to define oneself as a living being. Thus, the developers of the TI first interviewed respondents, asking them to compare and contrast various death related situations, and then to describe with which "pole" of these conceptual contrasts they associated themselves and their own deaths, thinking of their death as if it were to occur at this point in their lives. Instances in which self and death were placed in polar opposition (e.g., I see myself as "full of possibility," but death as "closed to alternatives") were tallied as "splits," with larger numbers of such configurations across a sample of dozens of such comparisons reflecting higher degrees of "death threat" in personal construct terms.

An unusually long and systematic literature has established the validity and reliability of this procedure, and extended the TI method to simpler paper and pencil formats that circumvent the complexity of the structured interview method. Current versions of the instrument instruct the respondent to rate "self" and "death" on 7-point Likert scales anchored by those dimensions most frequently evoked by respondents in the interview studies (e.g., predictable vs. random, secure vs. insecure). In this standardized form, the TI has accrued substantial evidence of internal consistency, test-retest reliability, convergent and construct validity, and freedom from social desirability bias (for a comprehensive review see Neimeyer, 1994c). It is also the only death attitude scale to have been subjected to a published confirmatory factor analysis, lending confidence to the interpretation of its factor structure as assessing not only general death threat, but

also Uncertainty, Fatalism, and Threat to Well-Being (Moore & Neimeyer, 1991). Like the DAS, it has been used in a broad spectrum of studies, ranging from the investigation of the death concerns of hospice patients (Hendon & Epting, 1989) and persons with AIDS (Bivens, Neimeyer, Kirchberg, & Moore, 1994) to the relationship between death threat and religiosity in cross cultural contexts (Tobacyk & Pirttila-Backman, 1992). Thus, the TI represents a broadly applicable and psychometrically refined measure of the degree of “challenge” death poses to one’s construing of self, complementing the focus on emotional reactions that characterizes most other death attitude instruments. Finally, as a measure derived from personal construct theory, the TI may prove more compatible with “meaning reconstruction” models of loss, which focus on the disruption of one’s assumptive world in the face of death and bereavement (Neimeyer, 2001).

It may be that such theory-based methods could contribute greater coherence to the often disparate thanatological literature, permitting more bridging between related domains, such as those concerned with death attitudes on the one hand and grief and loss on the other. However, the TI, like other death attitude instruments presented here, may be limited in its cross-cultural relevance, insofar as its content was derived from the study of middle-class American samples. Thus, investigators applying the method in other settings might do well to make use of the interview-based measure to elicit culturally relevant constructs, and also investigate the validity of the “split” structure in non-Western societies characterized by different notions of personal identity as well as dying.

Multidimensional Fear of Death Scale

Whereas the DAS, TI, and most other death anxiety scales were originally designed to be unidimensional measures of some facet of death attitudes (later studies of their factor structure notwithstanding), the Multidimensional Fear of Death Scale (MFODS) was explicitly constructed to assess numerous aspects of apprehension about death and dying (Hoelter, 1979b). The 42-item, Likert format scale measures eight distinct factors, including: 1) Fear of the Dying Process (e.g., I am afraid of dying very slowly); 2) Fear of the Dead (e.g., I would be afraid to walk through a graveyard, alone, at night); 3) Fear of Being Destroyed (e.g., I would like to donate my body to science [reverse scored]); 4) Fear for Significant Others (e.g., I have a fear of people in my family dying); 5) Fear of the Unknown (e.g., I am afraid that death is the end of one’s existence); 6) Fear of Conscious Death (e.g., I am afraid of being buried alive); 7) Fear for the Body after Death (e.g., The thought of my body decaying after I die scares me); and 8) Fear of Premature Death (e.g., I have a fear of not accomplishing my goals in life before dying).

Carefully pre-testing items assigned to each scale, Hoelter (1979b) was able to demonstrate that the MFODS had a remarkably clear factor structure, which has survived attempts at replication in other Western cultures (Roff, Butkeviciene, &

Klemmack, 2002; Walkey, 1982), though its structure was found to be quite different in an Islamic sample (Long, 1985). Available information on the instrument's psychometric properties indicates fair to good internal consistency, test-retest reliability, and validity (for summary see Neimeyer & Moore, 1994). As a result, it has been incorporated into studies of such topics as attitudes toward suicide (Hoelter, 1979a), reactions to aging on the part of nursing home staff (DePaola, Neimeyer, Lupfer, & Fiedler, 1992), and the death concerns of grief counselors (Terry, Bivens, & Neimeyer, 1995). The MFODS therefore would seem useful as a means of studying various dimensions of death anxiety associated with relevant groups or issues in a more refined way than is possible with unidimensional measures.

Even this well-developed instrument might require refinement in different cultural applications, however. Roff and her colleagues (2002), for example, found that items referring to preference for burial in a "steel vault vs. a wooden box" or to fears of being "buried alive," which loaded with fears about bodily integrity and conscious death respectively for American samples, carried little meaning in a Lithuanian context. Thus, investigators should be vigilant about not only dropping items that are irrelevant to their cultural context, but also devising items that represent the unique attitudes of their respondents. This obviously requires a trade-off between adopting integral instruments whose validity and reliability have been assessed (in at least one cultural context), and re-establishing the psychometric properties of a scale following its alteration and translation.

Death Depression Scale

In addition to his Death Anxiety Scale, Templer has also constructed a Death Depression Scale. This instrument was created to measure depression that accompanies the realization of one's death as theorized by much of the clinical literature. Originally constructed as a 17-item true-false scale, it was shown to have adequate internal consistency and six factors that were labeled death despair, death loneliness, death dread, death sadness, death depression, and death finality. However, when associated with like measures, scores on the scale were found to have high correlations with general measures of depression and anxiety, and very high correlations with death anxiety, raising concerns about its discriminant validity (Alvardao, Templer, Bresler, & Thomas-Dobson, 1992; Hintz, Templer, Cappelletty, & Frederick, 1993; Siscoe, Reimer, Yanovsky, Thomas-Dobson, & Templer, 1992).

Because of this, a Revised Death Depression Scale was developed (Templer et al., 2002). Though this revised instrument has promising psychometric properties, its recent creation has precluded its extensive use in the empirical literature. At this time, the only use of the Death Depression Scale in the literature has been in several correlational studies. For example, scores on the scale have been

shown to correlate positively with grief over a pet (Planchon & Templer, 1996), war-related traumatic events in a sample of Iranians (Roshdieh, Templer, Cannon, & Canfield, 1998), and with religious conviction (Alvarado, Templer, Bresler, & Thomas-Dobson, 1995). In addition, Death Depression scores between family members have been shown to be significantly related (Reimer & Templer, 1995). Thus, the Revised Death Depression Scale has potential to be a useful instrument, given its strong internal consistency and its more moderate correlation with scores on the Death Anxiety Scale (Templer et al., 2002). As the revised version is used more widely, a clearer assessment of its validity and utility will become possible.

Fear of Personal Death Scale

A second well-designed multidimensional measure of death attitudes is the Fear of Personal Death Scale (FPDS) devised by Florian and Kravetz (1983). Originally constructed in Hebrew to investigate death fears in an Israeli context, the scale has since been carefully translated into English for use in cross-cultural research (Florian & Snowden, 1989). The instructional set for the FPDS distinguishes it from the MFODS and other commonly used death anxiety scales, insofar as the respondent is asked to rate the relevance of various reasons for fearing death, rather than to indicate the extent of fear, per se. It is therefore best conceived as an attributional measure of sources of discomfort when reflecting on one's own mortality. Moreover, it was designed to measure fear of personal death as opposed to the fear of death in general (as with the DAS), and was created to assess several qualitatively distinct meanings of this personal fear at interpersonal, intrapersonal, and transpersonal levels. The interpersonal level refers to fears related to one's death and its impact on personal relationships, whereas the intrapersonal realm refers to concerns related to loss of the mind and body. The transpersonal level is related to transcendental fears such as punishment in the hereafter and other existential concerns.

The FPDS is comprised of 31 items that the respondent rates on 7-point Likert scales reflecting degree of agreement or disagreement with each item. A principal-component factor analysis of the items found six factors that fit well with the three aforementioned clusters (Florian & Kravetz, 1983). Factors and representative items assess three domains. *Intrapersonal concerns* include: 1) Loss of self-fulfillment (e.g., Death frightens me because of the necessity to cease all plans and goals); and 2) Self-annihilation (e.g., I am afraid of death because of the cessation of the ability to think and experience). *Interpersonal concerns* include: 3) Loss of social identity (e.g., Death frightens me because of the absolute severance of ties with loved ones); and 4) Consequences to family and friends (e.g., I am afraid of my death because of the worry that my family will still need me when it occurs). Finally, *transpersonal concerns* encompass: 5) Transcendental consequences (e.g., Death frightens me because of the uncertainty of any sort of existence after death); and 6) Punishment in the hereafter (e.g., I am afraid of death

because of the expected punishment in the next world.). This factor structure has been replicated in other studies employing the FPDS (e.g., Mikulincer, Florian, & Tolmacz, 1990).

Reliability analyses have found fair to excellent test-retest correlations of the items (Florian & Kravetz, 1983) and sufficient internal consistency (Florian & Mikulincer, 1992, 1997; Mikulincer, Florian, & Tolmacz, 1990). The FPDS has also been employed in some of the most theoretically sophisticated research in the area, testing the effect of religious belief on personal concerns of death (Florian & Kravetz, 1983), the mediating impact of different coping styles on the relationship between number of undesirable life events and personal death fears (Mikulincer & Florian, 1995), and the moderating role of attachment style in the relationship between symbolic immortality and personal death fear (Florian & Mikulincer, 1998). The FPDS therefore represents a psychometrically sound instrument that deserves broader application by other investigators.

Death Attitude Profile-Revised

Despite their diversity of format, structure, and content, all of the measures reviewed to this point have in common one overriding feature—a focus on negative reactions to death. In an attempt to extend the assessment of death attitudes beyond anxiety and related concepts, Gesser, Wong, and Reker (1987) introduced the Death Attitude Profile (DAP), a multidimensional measure of death acceptance as well as fear. In its revised form, the DAP-R consists of 32 items, with which the respondent indicates his or her agreement using 7-point Likert scales (Wong, Reker, & Gesser, 1994). In addition to a subscale tapping general *Fear of Death* (e.g., Death is no doubt a grim experience) and death avoidance (e.g., Whenever the thought of death enters my mind, I try to push it away), the instrument assesses three conceptually distinguishable facets of death acceptance, including: *Neutral Acceptance* (e.g., Death is a natural aspect of life), *Approach Acceptance* (e.g., Death is an entrance to a place of ultimate satisfaction), and *Escape Acceptance* (e.g., Death is deliverance from pain and suffering).

Internal consistency and test-retest reliability of the five subscales range from adequate to excellent (Clements & Rooda, 1999-2000; Wong et al., 1994), and the conceptually complex factor structure of the DAP-R has been closely approximated in a principle components analysis (Wong et al., 1994). Equally important, Wong and other researchers report very specific patterns of interrelationship between subscales of the DAP-R and methodologically independent measures of attitudes toward life, death, the possibility of an afterlife, working with the dying, and subjective well-being, which generally support the convergent and discriminant validity of the instrument.

While the DAP-R should be broadly applicable to the study of death attitudes in adult life, it may be especially well suited to the investigation of the ways in which cohorts that differ in age or physical health view death. For example, a similar

report of low fear of death should be interpreted differently for an elderly and infirm individual who views death as a means of escape from an increasingly burdensome existence, and a comparatively young and healthy person who simply sees death as a part of life. Thus, an instrument like the DAP-R can make a contribution to the study of death attitudes by directly assessing the form and function of death acceptance, rather than merely assuming it on the basis of low manifest death anxiety scores.

Multidimensional Orientation toward Dying and Death Inventory

Like the DAP-R, the Multidimensional Orientation toward Dying and Death Inventory (MODDI-F; Wittkowski, 2001) is based on the premise that a comprehensive assessment of a person's death attitudes encompasses fear as well as acceptance. In particular, it is built on a 2×4 logical dimensional structure that distinguishes between attitudes toward the state of death and the process of dying, each of which differentiates between attitudes concerning oneself or another person (Collett & Lester, 1969). This *a priori* structure served as a conceptual guideline for the generation of items concerning fear of dying and death as well as acceptance.

Whereas the items of the fear dimensions all were keyed true, those of the acceptance dimensions included some items keyed false, thereby controlling for acquiescence response set. A 4-point Likert scale ("agree not at all – somewhat – for the most part – almost totally") was chosen as the response format. The German sample on which the MODDI-F has been developed consists of 944 men and women covering the whole span of adult life, and is stratified by age and sex.

Factor analyses carried out separately for those items addressing fear of dying and death on one hand and acceptance of dying and death on the other hand yielded eight subscales with a total of 47 items: 1) Fear of one's own dying (eight items); 2) Fear of one's own death (six items); 3) Fear of another person's dying (six items); 4) Fear of another person's death (4 items); 5) Fear of corpses (four items); 6) Acceptance of one's own dying and death (eight items); 7) Acceptance of another person's death (six items); and 8) Rejection of one's own death (five items).

The original German items were translated into English and then back into German; these steps of translation were carried out by two native speakers of both languages who worked independently from one another. For the German subscales of the MODDI-F, the coefficients of internal consistency have repeatedly been found to be strong in large sample studies (Braun, 1994; Wittkowski, 1996). On the whole, preliminary data on the four-month test-retest reliability of the MODDI-F are satisfactory. However, those subscales that exclusively address the process of dying show a lower retest-reliability than the subscales that exclusively address the state of death.

Although the subscales have been generated by an orthogonal rotation technique, they cannot be considered statistically independent of each other; instead, a kind of “g-factor” seems to be operating. Within the subscales that assess fear on one hand and acceptance on the other hand there are consistently positive correlations, respectively. On the contrary, the subscales measuring fear all show negative correlations with the subscales measuring acceptance. Thus, construct validity has been demonstrated. The influence of social desirability in the MODDI-F is small and to the most part negligible in women, whereas it is manifest to a certain degree in men.

In sum, the MODDI-F seems to offer the advantage of a multidimensional assessment of fear as well as acceptance of dying and death by means of a single instrument. Moreover, its development on the basis of a large sample that covers the whole age span of adult life, combined with generally good psychometric properties, argues for its more general use by English language researchers.

SPECIALIZED DEATH ATTITUDES SCALES

In addition to the “general use” death attitude measures reviewed above, additional scales have recently been designed to assess attitudes of specialized interest to caregivers and patients in end-of-life settings, such as palliative care units and hospice programs. Here we will draw attention to four such instruments: the Coping with Death Scale and the Death Self-Efficacy Scale (Robbins, 1994), the Schedule of Attitudes Toward Hastened Death (Rosenfeld et al., 1999), and the Revised McCauley Readiness for Death Instrument (Moody, Beckie, Long, Edmonds, & Andrews, 2000). A psychometric summary of these instruments appears in Table 2.

Coping with Death Scale

As critical as our emotional reactions to death are (ranging from terror to acceptance), it is equally critical to acknowledge that human beings have a long history of coping with death more or less effectively in a variety of personal and institutional settings. The components of such coping (e.g., making prearrangements for funerals, being able to talk to children about death) are as behavioral as they are affective or cognitive, and need to be considered if the study of death attitudes is to be truly comprehensive. Only comparatively recently have investigators broadened their attention from a pre-emptive focus on death anxiety to devise measures of such coping skills and competencies.

One such instrument is Bugen’s Coping with Death Scale (CDS), which has been the focus of a series of studies by Robbins (1991, 1992, 1994). The scale consists of 30 items assessing both one’s sense of competence in handling death (e.g., I can communicate with the dying) and concrete knowledge concerning preparation for death (e.g., I am aware of the full range of services offered by

Table 2. Psychometric Properties of Specialized Death Attitudes Scales

Criterion	Coping with Death Scale (CDS)	Death Self-Efficacy Scale (DSES)	Schedule of Attitudes Toward Hastened Death (SAHD)	Revised McCaense Readiness for Death Scale (R-MRD)
Internal consistency (Cronbach's alpha)	.89 to .90 (Robbins, 1991, 1994)	.94 (Robbins, 1992, 1994)	.88-.89 (Rosenfeld et al., 1999, 2000)	.76 for total score; subscales (4) ranged from .45 to .75 (Moody et al., 2000)
Test-retest reliability	.91 (Robbins, 1991, 1994)	.91 (Robbins, 1992, 1994)	Not reported	Not reported
Convergent and discriminant validity ^a	Not reported	Not reported	Scores positively correlated with other measures of desire for death, depression, and hopelessness (Rosenfeld et al., 1999, 2000)	Not reported
Construct validity	Correlated with death-preparation behaviors (Robbins, 1991, 1994)	Distinguished between hospice volunteers and controls (Robbins, 1992, 1994)	Unable to show significant differences between ambulatory and terminal HIV patients (Rosenfeld et al., 1999, 2000)	Distinguished between terminally ill adults and a community dwelling control group (Moody et al., 2000)
Factorial validity	Not reported	Not reported	Single factor structure replicated across two studies (Rosenfeld et al., 1999, 2000)	Four factors representing 43% of the variance; however, items did not fit subscales as hypothesized by McCaense (McCaense, 1995; Moody et al., 2000)

^aConvergent validity refers to correlations with established measures of death anxiety; discriminant validity to freedom from social desirability confounds.

funeral homes), to which the respondent indicates agreement or disagreement on a 7-point scale. To date, the scale has shown impressive internal consistency and stability with various samples, as well as some evidence of construct validity in distinguishing hospice volunteers from controls and predicting death preparation behaviors, though its factor structure has yet to be tested.

Death Self-Efficacy Scale

A second instrument developed by Robbins (1994) is a Death Self-Efficacy Scale (DSES), requiring respondents to rate their degree of certainty (1 to 100) that they could perform each of 44 specific tasks relevant to hospice work as well as personal mortality (e.g., write a Living Will, provide physical care for a terminal patient). Like the CDS, the DSES displays promising consistency and stability over time, and distinguishes hospice volunteers from controls, but also like the CDS, its factor structure has not been studied. A variant on this scale measures self-efficacy in making arrangements for organ donation (Robbins, 1994; Robbins, McLaughlin, & Nathan, 1991). This shift in assessment focus from macro-level measures of death attitudes to micro-analyses of specific competency domains appears to be important, insofar as evidence suggests that Robbins' more context-dependent measures are better predictors of specific outcomes, such as continuation as a hospice volunteer, than are general measures of death anxiety. In light of the growing concern about training physicians, social workers, nurses, and psychologists to be more engaged and competent when interacting with terminally ill patients and their families, these scales or others focusing on death competencies merit more widespread use in the future.

Schedule of Attitudes Toward Hastened Death

Public and professional debates in Europe and North America about "physician assisted suicide" or foregoing life-extending treatment when such treatment is futile have spurred interest in patients' end-of-life decision making. One of the most promising methods of assessing such end-of-life attitudes is the Schedule of Attitudes Toward Hastened Death (SAHD) developed by Rosenfeld and his colleagues (1999). Initially designed to evaluate why some people seek physician-assisted suicide, the SAHD consists of 20 True-False items that measure a unidimensional construct of desire for hastened death (e.g., "My illness has drained me so much that I do not want to go on living"; "Dying seems like the best way to relieve the pain and discomfort my illness causes"). Though a relatively new instrument, psychometric analyses of the SAHD have indicated very good internal consistency, good convergent and construct validity, and a stable factor structure (Rosenfeld et al., 1999, 2000). It has also been used in theoretically meaningful research, with one study demonstrating that depression and hopelessness were significant predictors of a desire for hastened death independent of social support and physical functioning (Breitbart et al., 2000). Given its

promising psychometric structure and an increasing realization in medicine and psychology of the importance of quality-of-life for those who are terminally ill, the SAHD appears to be an instrument of great utility.

Revised McCanse Readiness for Death Instrument

Another questionnaire measuring a similar construct is the Revised McCanse Readiness for Death Instrument (R-MRDI; Moody et al., 2000), based on the original scale developed by McCanse (1995). It was designed to measure four conceptual domains: 1) withdrawal from internal and external environment; 2) decreased social interaction; 3) increased death acceptance behaviors; and 4) increased admission of readiness to die. The R-MRDI consists of 26 items measured on four scales that are scored using a graphical rating scale (0 = "None of the Time" to 10 = "All of the Time"). A psychometric analysis of this instrument indicated poor to adequate internal consistency of the four scales and demonstrated its construct validity through significant group differences found between terminally ill adults and a community dwelling control group. A factor analysis found four factors but not all of the items fit the scales as theorized by McCanse. Clearly, much more work needs to be done on this instrument before its utility is adequately demonstrated, and investigators might do well at present to consider the SAHD as a superior instrument tapping the same general domain.

BEYOND THE QUESTIONNAIRE

In many respects, the above instruments have been diverse in their theoretical grounding, content focus (on death anxiety, acceptance, or competency), and dimensionality (encompassing various aspects of death attitudes). However, they also share a great deal of "method variance," in the sense that they all (with the possible exception of the Threat Index) represent straightforward, experimenter-framed inquiries into the respondent's conscious attitudes toward death and dying. Moreover, these instruments have substantial commonalities even at the level of specific item format, to the extent that they rely on brief declarative statements to which the respondent indicates approval or disapproval on Likert scales. Although the shift toward psychometric adequacy in instrumentation has indeed contributed to the greater sophistication of studies (Neimeyer & Van Brunt, 1995), investigators should guard against the assumption that all relevant aspects of death attitudes can be evaluated by questionnaires of this type. Thus, it is important to experiment with novel means of assessing people's understandings, feelings, and images of death if our research into the psychology of death is to have a broader basis. We will therefore highlight a few intriguing methods that suggest the possibility of such methodological extension.

Narrative, Text Based Measures

One potential limitation of questionnaire measures of death attitudes is their standardization. That is, the very uniformity in content that facilitates the assessment of general trends within groups of respondents can militate against the communication of the unique reactions to death that characterize a given respondent. If a questionnaire asks only about the respondent's degree of death anxiety, then it will obviously preclude our learning that this individual views death with curiosity rather than fear, or is concerned mainly about the degree to which it challenges his or her sense of personal agency or control. What seems required to elicit these personal meanings is a less structured form of assessment, which allows the respondent a chance to express his or her reactions to death with minimal constraints. The text of such interview responses or free-form narratives can then be analyzed to reveal the themes common to many respondents, or distinctively associated with those who are ill versus healthy, death anxious or accepting, and so on.

One measure taking this approach is the Revised Twenty Statements Test (R-TST), devised by Durlak and his colleagues (1990) to assess the meanings that individuals attribute to their own mortality. Respondents are instructed to give 20 brief narrative responses to the prompt, "What does your own death mean to you?" which are then coded by the investigator using 10 mutually exclusive content categories (e.g., positive, negative, religious). Preliminary evidence of inter-rater reliability is promising, suggesting that the measure could be usefully applied by other investigators.

A second illustration of a text-based measure is the Death Construct Coding Manual developed by Neimeyer, Fontana, and Gold (1984). Originally devised to code death-relevant constructs elicited through repertory grids (see below), it subsequently has been adapted to the analysis of free-response narratives portraying respondents' personal meanings of death (Holcomb, Neimeyer, & Moore, 1993). In this application, the narratives are first segmented into phrases, and then analyzed using a non-exclusive 25-category system supported by a coding "dictionary" of over 1000 commonly occurring constructs. Using this method, Holcomb and her colleagues found that certain themes predominated in different subsets of the over 500 individuals studied, grouped by age, sex, health, and various death attitudes or ideologies. For example, respondents who showed elevated "fear of the unknown" as measured by the MFODS wrote narratives permeated with references to death as a form of continued existence or non-existence, as purposeful or purposeless, and as involving limited understanding. Another study of a large group of young adults was conducted by Evans, Walters, and Hatch-Woodruff (1999), who used the same coding manual to score hypothetical deathbed narratives in which participants described their own dying or that of another. Interestingly, they found that respondents characterized the deaths of others by a cluster of codes suggesting "suffering"

(pain, negative affect, etc.), whereas they described their own deaths in more “romanticized” terms.

The Gottschalk-Gleser Content Analysis of Speech (Gottschalk, Winget, & Gleser, 1969) is a broad system of content analysis, which includes a “death anxiety” subscale focusing on death as a state. The respondent is asked “to speak for five minutes about any interesting or dramatic personal life experiences” (p. 5) he or she has had. The transcribed interview is then analyzed for both manifest and latent references to death related fears, yielding a quantifiable death anxiety score. Scoring is carried out by means of general rules, specific instructions, and by examples. Although there is a wealth of data on this procedure, it has not been widely adopted by death anxiety researchers (see Gottschalk, 1979).

One exception is the work of Viney and her colleagues (Viney, 1983a, 1983b, 1984-85; Viney, Walker, Robertson, Lilley, & Ewan, 1994; Viney & Westbrook, 1976; Westbrook, 1976), who applied the Gottschalk-Gleser Death Anxiety scale to seriously ill patients. With Kelly’s (1955) theory of personal constructs as a background, they developed new scales to assess state anxiety. A quantitative analysis of the verbal material yields differentiated findings as to the kind of worry or threat a patient feels, and various dimensions of the quality of life of patients in palliative care.

Not only do such free-form text-based measures permit the study of idiographic reactions likely to be missed by standardized questionnaires, but they also have the advantage of applicability to existing documents (e.g., literary works, suicide notes) and verbal protocols (e.g., taped interviews) contributed by individuals who may not be able or willing to complete a typical death anxiety measure. They therefore seem worth the additional investment of time required to score textual data.

Repertory Grids

A quite different method for studying people’s conceptions of death is the repertory grid, or repgrid, a technique introduced by personal construct theorists to map the implicit theories that individuals hold about some aspect of their experience (Kelly, 1955; Neimeyer, 1993). As applied to the study of death attitudes, the repgrid consists of a standardized set of death-related situations (e.g., 22 Israelis die when an Arab bomber strikes their bus; an elderly cancer patient chooses to end her life with the assistance of her physician), which the respondent is asked to compare and contrast in order to elicit the personal constructs he or she uses to interpret various forms of death and dying (e.g., “These situations are *tragic*, whereas this one is *merciful*”). A repgrid of this type was used in early studies on the Threat Index to identify constructs on which respondents “split” their self and death concepts.

In a more complete application of grid technique, however, patterns of rating of all elements (pertaining to self, ideal self, and various forms of death and dying) can be analyzed statistically to examine particular patterns of correlation (e.g., which types of death the respondent views as most and least compatible with his or her self concept), or to yield measures of overall conceptual structure concerning death (Neimeyer, 1994c). A preliminary effort to apply grid technique in this way was reported by Neimeyer, Bagley, and Moore (1986). By analyzing the patterns of rating of elements on constructs, they were able to compute measures of cognitive flexibility, uncertainty, and integration (see original report for statistical details), and relate these meaningfully to the backgrounds of participants in two death and dying classes. For example, they discovered that respondents who reported belief in an afterlife construed death in more coherent and certain terms, whereas nonbelievers conceptualized death in more complex, uncertain ways.

Similar grid-based methods have proven useful in revealing the way in which traumatized individuals incorporate specific loss experiences into the narrative of their lives, and in identifying the personal themes that render such experiences interpretable (Neimeyer & Stewart, 1996). With appropriate adaptation to measure different aspects of conceptual structure, such methods might extend our understanding of the relationship between cognitive appraisals of death and its emotional significance, as well as our appreciation of structural shifts in people's conceptualization of death across the course of development.

Death Drawings and Personifications

Although projective measures as a whole have fallen out of favor in the more recent literature on death attitudes, at least one "projective" measure continues to hold promise for future studies. Originally conceived by Kastenbaum and Aisenberg (1972) as a measure of death related fantasies, the procedure of describing death as if it had a human form has a long tradition in world culture. In its psychological application, the personification of death (e.g., as a macabre figure, a gentle comforter, a seductive liaison, or a faceless automaton) has been found to vary systematically as a function of both the sex of the perceiver, and his or her level of death anxiety (Lonetto & Templer, 1986). The finding that American college students tend to perceive death as a male figure has been replicated over a 20-year period, although shifts have occurred toward more comforting images, at least among female respondents (Kastenbaum & Herman, 1997).

A particularly systematic use of imagery in depicting death has been provided by Tamm and Granqvist (1995), who studied drawings of death made by a stratified sample of 431 Swedish schoolchildren. By applying a sophisticated and reliable content analysis system to the resulting depictions, they were able to discover clear developmental trends (e.g., from biological to metaphysical conceptions of death) as children matured, as well as identify significant

differences in the content of death imagery by sex (e.g., the more violent content of boys' depictions). Related research by Tamm (1996) suggests that death personifications can also be useful in revealing the attitudes of Swedish adults working in health care. While she discovered that 84 percent of the men and 65 percent of the women personified death as an old man, only 25 percent considered the image frightening. Instead, the majority of respondents associated death with serenity, peace, and melancholy. This contrasted sharply with their images of life, which they more commonly depicted as a woman or child, and associated with joy, intimacy, and harmony. A fascinating extension of this work in a Chinese context suggested that some developmental trends (e.g., from more physical to abstract conceptions of death) might be trans-cultural whereas other features (e.g., construing death in psychological terms) might not generalize to non-Western cultures (Yang & Chen, 2002). The success of these investigations suggests that free-form personifications, coupled with clear and reliable coding schemes, can yield meaningful data that could be applied to a broad range of research questions. In addition, they might have special relevance in cross-cultural and developmental research, insofar as they may be less "word-bound" than other approaches to the assessment of death attitudes.

Behavior Observation

Presently there is very little use systematic behavior observation in the field of dying and death, although there is a need for such methods. Actually recording attitudinally relevant behaviors (e.g., differential response time of nurses in responding to calls of terminal and non-terminal patients) could be especially helpful in research settings in which a direct inquiry by means of questionnaire or interview is likely to yield biased answers, or where it is inappropriate for methodological and/or ethical reasons. This seems to be often the case with research involving dying persons in general and young children and very old persons in particular. The work of Glaser and Strauss (1965, 1968) provides an impressive example of how behavior observation can generate valuable findings on the situation of the dying. Furthermore, there are some relevant behaviors that could be easily observed, such as whether a person has completed a will, signed forms for durable power of attorney for health care, attends funerals, etc. Therefore, we would like to encourage the development of methods of systematic behavior observation specifically for application in thanatology.

INTERNATIONAL TRENDS

Although the development of instruments for studying death attitudes remains predominantly a phenomenon of the English speaking world, increasing psychometric contributions are being made to the area by investigators in other language communities. In Germany, Hensle (1977) pioneered in this domain with his

“Todesfragebogen” (Death Questionnaire), an 80-item, factor analytically constructed instrument of moderate reliability assessing fear of aging, dying, and death. A further questionnaire in the German language is Ochsmann’s (1993) “Furcht vor Tod und Sterben Fragebogen” (Fear of Death and Dying Questionnaire). This instrument consists of 48 items in six factor-analytically derived subscales that display reasonable internal consistency. Finally, Klug (1997) presented 26 scales covering a wide range of attitudes toward dying, death, the afterlife, interaction with the dying, reaction to a corpse, and attitudes toward suicide. Several of these scales, however, borrow extensively from older American instruments for item content, and relative to the MODDI-F (reviewed above), are less psychometrically refined and validated. Many of the general death anxiety scales described in this article have also been translated for use in Spanish-speaking countries (Neimeyer, 1997), although they continue to rely upon English language studies for their validity and reliability.

As to text-based measures, the Gottschalk-Gleser Content Analysis of Speech has been adapted into German by Schöfer (1980). As part of the “Würzburger Auswertungsskalen für Interviewmaterial” (Wuerzburg Scales for Coding Interview Material), the subscales “Fear of one’s own dying,” “Fear of one’s own death,” “Fear of other persons’ dying and death,” and “Frequency of thinking about dying and death” have also been developed (Wittkowski, 1994). The respondent is interviewed by means of a semi-structured interview guideline. The transcript is first structured into units of analysis and then coded using detailed instructions, yielding adequate inter-rater reliability.

Nor has the development of instruments been limited to Europe. In Kuwait, Abdel-Khalek has been especially prolific in developing and testing several instruments with predominately Arabic populations. The Death Obsession Scale (DOS; Abdel-Khalek, 1998) was designed to measure the amount of pre-occupation one has with death. It is a 15-item scale that has been shown to have three factors: 1) Death Rumination; 2) Death Domination; and 3) Death Idea Repetition. It appears to have strong internal consistency, temporal stability, and good construct validity. It shows adequate convergent validity, although its high correlation with death anxiety (.67) calls its discriminant validity into question. This measure was also translated and tested with English subjects, reversing the usual transmission of scales from North America to other parts of the world. The results of this study again demonstrated its strong reliability and validity, though a similar high correlation with death anxiety was also found (Maltby & Day, 2000). Abdel-Khalek’s most recent measure, the Reasons for Death Fear Scale (RDFS; Abdel-Khalek, 2002), was specifically designed to answer the question, “Why do we fear death?” that is, to understand the reasons for death anxiety. Utilizing an Arabic sample, Abdel-Khalek created an 18-item scale with four factors: 1) Fear of Pain and Punishment; 2) Fear of Losing Worldly Involvements; 3) Religious Transgressions and Failures; and 4) Parting from Loved Ones. This scale appears to have good internal consistency and convergent validity though its test-retest

reliability and construct validity remain to be tested. One particularly interesting aspect of this instrument is that according to the author, one item, referring to the “torture of the grave,” is unique to the subjects used to norm it (i.e., Muslims). This underscores the importance of understanding other cultural perspectives and how they differ from Western, predominantly Christian and Jewish views.

CONCLUSION

Like the field of psychology as a whole, the psychology of dying and death has evolved considerably over the last 50 years, showing growth in both quantitative and qualitative terms. In the first instance, this has produced a burgeoning literature on death attitudes, yielding an enormous body of research on death anxiety and other negative reactions to death and dying, and to a lesser extent, positive responses and competencies concerning these same facets of the human experience. In the second instance, the growth has been subtler, taking the form of slow but consistent qualitative improvements in the methodological rigor of the basic measurement methods on which the field relies, accompanied by a gradual expansion of concern to encompass more concrete and specific features of death attitudes. With time has also come a growth in the internationality of this literature and its associated instrumentation, which has hinted at the largely untapped diversity of attitudes toward death associated with different cultural systems. Our goal in the present article has been to acquaint the reader with some of the most promising of these measures, along with a few less commonly used assessment approaches that could add novelty, richness, and breadth to future research. If such measures are integrated intelligently into studies that combine conceptual and analytic sophistication with relevant samples and applications, we are optimistic that future research can extend our comprehension of the variegated ways in which human beings respond to death.

REFERENCES

- Abdel-Khalek, A. M. (1998). The structure and measurement of death obsession. *Personality and Individual Differences, 24*, 159-165.
- Abdel-Khalek, A. M. (2002). Why do we fear death? The construction and validation of the Reasons for Death Fear Scale. *Death Studies, 26*, 669-680.
- Alexander, I. E., & Alderstein, A. M. (1958). Affective responses to the concept of death in a population of children and early adolescents. *Journal of Genetic Psychology, 93*, 167-177.
- Alvarado, K. A., Templer, D. I., Bresler, C., & Thomas-Dobson, S. (1992). Are death anxiety and death depression distinct entities? *Omega, 26*, 113-118.
- Alvarado, K. A., Templer, D. I., Bresier, C., & Thomas-Dobson, S. (1995). The relationship of religious variables to death depression and death anxiety. *Journal of Clinical Psychology, 51*, 202-204.
- Becker, E. (1973). *The denial of death*. New York: Macmillan.

- Bivens, A. J., Neimeyer, R. A., Kirchberg, T. M., & Moore, M. K. (1994). Death concern and religious belief among gays and bisexuals of variable proximity to AIDS. *Omega*, 30, 105-120.
- Boyar, J. I. (1964). The construction and partial validation of a scale for the measurement of the fear of death. *Dissertation Abstracts*, 25, 2041.
- Braun, B. (1994). "Angst vor Tod und Sterben" und ihre Beziehung zu "Intrinsischer/ Extrinsischer religioeser Orientierung." ("Fear of death and dying" and its relationship to "intrinsic/extrinsic religious orientation"). Unveroeffentlichte Diplomarbeit. (Unpublished diploma thesis.) Universitaet Frankfurt/M.
- Breitbart, W., Rosenfeld, B., Pessin, H., Kaim, M., Funesti-Esch, J., Galiotta, M., Nelson, C. J., & Brescia, R. (2000). Depression, hopelessness, and desire for hastened death in terminally ill patients with cancer. *Journal of the American Medical Association*, 284, 2907-2911.
- Clements, R., & Rooda, L. A. (1999-2000). Factor structure, reliability, and validity of the death attitude profile-revised. *Omega*, 40, 453-463.
- Collett, L. J., & Lester, D. (1969). The fear of death and the fear of dying. *Journal of Psychology*, 72, 179-181.
- 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.
- Dodd, D. K., & Mills, L. L. (1985). FADIS: A measure of the fear of accidental death and injury. *Psychological Record*, 35, 269-275.
- Durlak, J. A. (1982). Using the Templer scale to assess "death anxiety": A cautionary note. *Psychological Reports*, 50, 1257-1258.
- Durlak, J. A., Horn, W., & Kass, R. A. (1990). A self-administering assessment of personal meanings of death. *Omega*, 21, 301-309.
- Eberst-Hartmann, H. (1995). *Untersuchung des Einflusses Sozialer Erwünschtheit im Fragebogeninventar zur mehrdimensionalen Erfassung des Erlebens gegenüber Sterben und Tod (FIMEST)* [Investigation of the influence of social desirability on the Questionnaire Inventory for the Multidimensional Assessment of the Experiencing Toward Dying and Death]. Unpublished diploma thesis, Universität Würzburg, Germany.
- Elflein, K. (1996). *Untersuchung zur retest-reliabilität des Fragebogen Inventars zur Mehrdimensionalen Erfassung des Erlebens gegenüber Sterben und Tod (FIMEST)* [Study of the retest reliability of the Questionnaire Inventory for the Multidimensional Assessment of Experiencing Toward Dying and Death]. Unpublished diploma thesis, Universität Würzburg, Germany.
- Evans, J. W., Walters, A. S., & Hatch-Woodruff, M. L. (1999). Deathbed scene narratives: A construct and linguistic analysis. *Death Studies*, 23, 715-733.
- Feifel, H. (1955). Attitudes of mentally ill patients toward death. *Journal of Nervous and Mental Disease*, 122, 375-380.
- Feifel, H. (1956). Older persons look at death. *Geriatrics*, 11, 127-130.
- Feifel, H., & Branscomb, A. B. (1973). Who's afraid of death? *Journal of Abnormal Psychology*, 81, 38-45.
- Feifel, H., & Nagy, V. T. (1980). Death orientation and life-threatening behavior. *Journal of Abnormal Psychology*, 89, 38-45.

Firestone, R. W. (1994). Psychological defenses against death anxiety. In R. A. Neimeyer (Ed.), *Death anxiety handbook: Research, instrumentation, and application* (pp. 217-241). New York: Taylor & Francis.

Florian, V., & Kravetz, S. (1983). Fear of personal death: Attribution, structure and relation to religious belief. *Journal of Personality and Social Psychology, 44*, 600-607.

Florian, V., & Mikulincer, M. (1992). The impact of death-risk experiences and religiosity on the fear of death: The case of Israeli soldiers in Lebanon. *Omega, 26*, 101-111.

Florian, V., & Mikulincer, M. (1997). Fear of personal death in adulthood: The impact of early and recent losses. *Death Studies, 21*, 1-24.

Florian, V., & Mikulincer, M. (1998). Symbolic immortality and the management of the terror of death: The moderating role of attachment style. *Journal of Personality and Social Psychology, 74*, 725-734.

Florian, V., & Snowden, L. R. (1989). Fear of personal death and positive life regard: A study of different ethnic and religious-affiliated American college students. *Journal of Cross-Cultural Psychology, 20*, 64-79.

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. *Omega, 18*, 113-128.

Gilliland, J. C., & Templer, D. I. (1985). Relationship of death anxiety scale factors to subjective states. *Omega, 16*, 155-167.

Glaser, B. G., & Strauss, A. (1965). *Awareness of dying*. Chicago: Aldine.

Glaser, B. G., & Strauss, A. (1968). *Time for dying*. Chicago: Aldine.

Golding, S. L., Atwood, G. E., & Goodman, R. A. (1966). Anxiety and two cognitive forms of resistance to the idea of death. *Psychological Reports, 18*, 359-364.

Gottschalk, L. A. (Ed.) (1979). *The content analysis of verbal behavior. Further studies*. New York: Spectrum Publications.

Gottschalk, L. A., Winget, G. C., & Gleser, G. C. (1969). *Manual of instructions for using the Gottschalk-Gleser Content Analysis Scales. Anxiety, hostility, and social alienation-personal disorganization*. Berkeley, CA: University of California Press.

Hendon, M. V., & Epting, F. R. (1989). A comparison of hospice patients with other recovering and ill patients. *Death Studies, 13*, 567-578.

Hensle, U. (1977). Todesfurcht—Versuch einer Strukturierung und Entwicklung einer Fragebogenskala. (Death anxiety—Provisional structuring and development of a questionnaire scale). *Psychologische Beitrage, 19*, 545-566.

Hintze, J., Templer, D. I., Cappelletty, G. G., & Frederick, W. (1993). Death depression and death anxiety in HIV-infected males. *Death Studies, 17*, 333-341.

Hoelster, J. W. (1979a). Multidimensional treatment of fear of death. *Journal of Consulting and Clinical Psychology, 47*, 996-999.

Hoelster, J. (1979b). Religiosity, fear of death, and suicide acceptability. *Suicide and Life-Threatening Behavior, 9*, 163-172.

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.

Kastenbaum, R. (1988). Theory, research, and application: Some critical issues for thanatology. *Omega, 18*, 397-411.

Kastenbaum, R. (2000). *The psychology of death (3rd edition)*. New York: Springer.

Kastenbaum, R., & Aisenberg, R. (1972). *The psychology of death*. New York: Springer.

- Kastenbaum, R., & Herman, C. (1997). Death personification in the Kevorkian era. *Death Studies, 21*, 115-130.
- Kelly, G. A. (1955). *The psychology of personal constructs*. New York: Norton.
- Klug, A. (1997). *Einstellungen zu Sterben, Tod und Danach* [Attitudes Toward Dying, Death, and Afterlife]. Aachen, Germany: Mainz.
- Krauss, O. (2000). *Konstruktion und Evaluation eines Trainingsprogramms zum Umgang mit Sterbenden und ihren Angehörigen* [Development and Evaluation of a Program for Dealing with the Dying and Their Relatives]. Unpublished doctoral dissertation, University of Leipzig, Germany.
- Krieger, S. R., Epting, F. R., & Leitner, L. M. (1974). Personal constructs, threat, and attitudes toward death. *Omega, 5*, 299-310.
- Lester, D. (1994). The Collett-Lester Fear of Death Scale. In R. A. Neimeyer (Ed.), *Death anxiety handbook* (pp. 45-60). New York: Taylor & Francis.
- Lester, D., & Abdel-Khalek, A. (2003). The Collett-Lester Fear of Death Scale: A correction. *Death Studies, 27*, 81-85.
- Lester, G., & Lester, D. (1970). The fear of death, the fear of dying, and threshold differences for death words and neutral words. *Omega, 1*, 175-179.
- Leviton, D., & Fretz, B. (1978-79). Effects of death education on fear of death and attitudes toward death and life. *Omega, 9*, 267-277.
- Lonetto, R., Fleming, S., & Mercer, G. W. (1979). The structure of death anxiety: A factor analytic study. *Journal of Personality Assessment, 43*, 388-392.
- Lonetto, R., & Templer, D. I. (1986). *Death anxiety*. New York: Hemisphere.
- Long, D. D. (1985). A cross-cultural examination of fears of death among Saudi Arabians. *Omega, 16*, 43-50.
- Loo, R. (1984). Personality correlates of the fear of death. *Journal of Clinical Psychology, 40*, 120-122.
- Loo, R., & Shea, L. (1996). Structure of the Collett-Lester Fear of Death and Dying Scale. *Death Studies, 20*, 577-586.
- Maltby, J., & Day, L. (2000). The reliability and validity of the Death Obsession Scale among English university and adult samples. *Personality and Individual Differences, 28*, 695-700.
- Martin, T. O. (1982). Death anxiety and social desirability among nurses. *Omega, 13*, 51-58.
- McCanse, R. P. (1995). The McCanse Readiness for Death Instrument (MRDI): A reliable and valid measure for hospice care. *The Hospice Journal, 10*, 15-26.
- McMordie, W. R. (1982). Concurrent validity of Templer and Templer/McMordie Death Anxiety Scale. *Psychological Reports, 51*, 265-266.
- Mikulincer, M., & Florian, V. (1995). Stress, coping, and fear of personal death: The case of middle-aged men facing early job retirement. *Death Studies, 19*, 413-431.
- Mikulincer, M., Florian, V., & Tolmacz, R. (1990). Attachment styles and fear of personal death: A case study of affect regulation. *Journal of Personal and Social Psychology, 58*, 273-280.
- Moody, L. E., Beckie, T., Long, C., Edmonds, A., & Andrews, S. (2000). Assessing readiness for death in hospice elders and older adults. *The Hospice Journal, 15*, 49-65.
- Moore, M. K., & Neimeyer, R. A. (1991). A confirmatory factor analysis of the Threat Index. *Journal of Personality and Social Psychology, 60*, 122-129.

Nehrke, M. (1973). *Perceived generational differences in attitudes toward death*. Paper presented at the 26th Annual Meeting of the Gerontological Society, Miami Beach.

Neimeyer, R. A. (1993). Constructivist approaches to the measurement of meaning. In G. J. Neimeyer (Ed.), *Constructivist assessment* (pp. 58-103). Thousand Oaks, CA: Sage.

Neimeyer, R. A. (Ed.) (1994a). *Death anxiety handbook*. New York: Taylor & Francis.

Neimeyer, R. A. (1994b). Death attitudes in adult life: A closing coda. In R. A. Neimeyer (Ed.), *Death anxiety handbook* (pp. 263-277). Washington: Taylor & Francis.

Neimeyer, R. A. (1994c). The Threat Index and related methods. In R. A. Neimeyer (Ed.), *Death anxiety handbook* (pp. 61-101). New York: Taylor & Francis.

Neimeyer, R. A. (1997). *Metodos de evaluacion de la ansiedad ante la muerte* [Methods for the evaluation of death anxiety]. Barcelona, Spain: Paidós.

Neimeyer, R. A. (1998). Death anxiety research: The state of the art. *Omega*, 36, 97-120.

Neimeyer, R. A. (Ed.) (2001). *Meaning reconstruction and the experience of loss*. Washington, D.C.: American Psychological Association.

Neimeyer, R. A., Bagley, K. J., & Moore, M. K. (1986). Cognitive structure and death anxiety. *Death Studies*, 10, 273-288.

Neimeyer, R. A., Fontana, D. J., & Gold, K. (1984). A manual for content analysis of death constructs. In F. R. Epting & R. A. Neimeyer (Eds.), *Personal meanings of death* (pp. 213-234). Washington, DC: Hemisphere.

Neimeyer, R. A., & Fortner, B. (1997). Death attitudes in contemporary perspective. In S. Strack (Ed.), *Death and the quest for meaning* (pp. 3-29). Northvale, NJ: Jason Aronson.

Neimeyer, R. A., & Moore, M. K. (1994). Validity and reliability of the Multi-dimensional Fear of Death Scale. In R. A. Neimeyer (Ed.), *Death anxiety handbook* (pp. 103-119). Washington: Taylor & Francis.

Neimeyer, R. A., Prigerson, H., & Davies, B. (2002). Mourning and meaning. *American Behavioral Scientist*, 46, 235-251.

Neimeyer, R. A., & Stewart, A. E. (1996). Trauma, healing, and the narrative employment of loss. *Families in Society*, 77, 360-375.

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). Washington: Taylor & Francis.

Ochsmann, R. (1993). *Angst vor Tod und Sterben. Beitrage zur Thanato-Psychologie*. Goettingen, Germany: Hogrefe.

Planchon, L. A., & Templer, D. I. (1996). The correlates of grief after death of a pet. *Anthrozoos*, 9, 107-113.

Reimer, W., & Templer, D. I. (1995). Death anxiety, death depression, death distress, and death discomfort differential: Adolescent-parental correlations in Filipino and American populations. *Omega*, 32, 319-330.

Rhudick, P. J., & Dibner, A. S. (1961). Age, personality, and health correlates of death concerns in normal aged individuals. *Journal of Gerontology*, 16, 44-49.

Robbins, R. A. (1991). Bugen's Coping with Death Scale: Reliability and further validation. *Omega*, 22, 287-299.

Robbins, R. A. (1992). Death competency: A study of hospice volunteers. *Death Studies*, 16, 557-569.

- Robbins, R. A. (1994). Death competency: Bugen's Coping with Death Scale and Death Self-Efficacy. In R. A. Neimeyer (Ed.), *Death anxiety handbook* (pp. 149-165). New York: Taylor & Francis.
- Robbins, R. A., McLaughlin, N. R., & Nathan, H. M. (1991). Using self-efficacy theory to predict organ card signing. *Journal of Transplant Coordination, 1*, 111.
- Roff, L. L., Butkeviciene, R., & Klemmack, D. L. (2002). Death anxiety and religiosity among Lithuanian health and social service professionals. *Death Studies, 26*, 731-742.
- Rosenfeld, B., Breitbart, W., Galietta, M., Kaim, M., Funesti-Esch, J., Pessin, H., Nelson, C. J., & Brescia, R. (2000). The Schedule of Attitudes Toward Hastened Death: Measuring desire for death in terminally ill cancer patients. *Cancer, 88*, 2868-2875.
- Rosenfeld, B., Breitbart, W., Stein, K., Funesti-Esch, J., Kaim, M., Krivo, S., & Galietta, M. (1999). Measuring desire for hastened death among patients with HIV/AIDS: The Schedule of Attitudes Toward Hastened Death. *The American Journal of Psychiatry, 156*, 94-100.
- Roshdieh, S., Templer, D. I., Cannon, W. G., & Canfield, M. (1998). The relationships of death anxiety and death depression to religion and civilian war-related experiences in Iranians. *Omega, 38*, 201-210.
- Schell, B. H., & Zinger, J. T. (1984). Death anxiety scale means and standard deviations for Ontario undergraduates and funeral directors. *Psychological Reports, 54*, 439-446.
- Schöfer, G. (1980). Die deutschen Formen der Gottschalk-Gleser-Skalen [The German versions of the Gottschalk-Gleser scales]. In G. Schöfer (Ed.), *Gottschalk-Gleser Sprachinhaltsanalyse* [Gottschalk-Gleser Content Analysis of Speech (pp. 43-66). Weinheim, Germany: Beltz.
- Siscoe, K., Reimer, W., Yanovsky, A., Thomas-Dobson, S., & Templer, D. I. (1992). Death depression versus death anxiety: Exploration of different correlates. *Psychological Reports, 71*, 1191-1194.
- Tamm, M. (1996). The personification of life and death among Swedish health care professionals. *Death Studies, 20*, 1-22.
- Tamm, M. E., & Granqvist, A. (1995). The meaning of death for children and adolescents: A phenomenographic study of drawings. *Death Studies, 19*, 203-222.
- Templer, D. I. (1970). The construction and validation of a death anxiety scale. *Journal of General Psychology, 82*, 165-177.
- Templer, D. I., Harville, M., Hutton, S., Underwood, R., Tomeo, M., Russell, M., & Mitroff, D. (2002). Death depression scale-revised. *Omega, 44*, 105-112.
- Templer, D. I., Lavoie, M., Chalgujian, H., & Thomas-Dobson, S. (1990). The measurement of death depression. *Journal of Clinical Psychology, 46*, 834-838.
- Terry, M. L., Bivens, A. J., & Neimeyer, R. A. (1995). Comfort and empathy of experienced counselors in client situations involving death and loss. *Omega, 32*, 269-285.
- Thorson, J. A., & Powell, F. C. (1994). A Revised Death Anxiety Scale. In R. A. Neimeyer (Ed.), *Death anxiety handbook* (pp. 31-43). Washington: Taylor & Francis.
- Tobacyk, J., & Pirttila-Backman, A. (1992). Paranormal beliefs and their implications in university students from Finland and the United States. *Journal of Cross-Cultural Psychology, 23*, 59-71.
- Tomer, A. (1994). Death anxiety in adult life: Theoretical perspectives. In R. A. Neimeyer (Ed.), *Death anxiety handbook* (pp. 3-28). Washington: Taylor & Francis.

- Triplett, G., Cohen, D., Reimer, W., Rinaldi, S., Hill, C., Roshdieh, S., Stanczak, E. M., Siscoe, K., & Templer, D. I. (1995). Death discomfort differential. *Omega*, *31*, 295-304.
- Ungar, L., Florian, V., & Zernitsky-Shurka, E. (1990). Aspects of fear of personal death, levels of awareness, and professional affiliation among dialysis unit staff members. *Omega*, *21*, 51-67.
- Viney, L. L. (1983a). The assessment of psychological states through content analysis of verbal communications. *Psychological Bulletin*, *94*, 542-563.
- Viney, L. L. (1983b). Concerns about death among severely ill people. *Death Education*, *7*, 229-243.
- Viney, L. L. (1984-85). Loss of life and loss of bodily integrity: Two different sources of threat for people who are ill. *Omega*, *15*, 207-222.
- Viney, L. L., Walker, B. M., Robertson, T., Lilley, B., & Ewan, C. (1994). Dying in palliative care units and in hospital: A comparison of the quality of life of terminal cancer patients. *Journal of Consulting and Clinical Psychology*, *62*, 157-164.
- Viney, L. L., & Westbrook, M. T. (1976). Cognitive anxiety: A method of content analysis for verbal samples. *Journal of Personality Assessment*, *40*, 140-150.
- Walkey, F. W. (1982). The Multidimensional Fear of Death Scale: An independent analysis. *Journal of Consulting and Clinical Psychology*, *50*, 466-467.
- Warren, W. G., & Chopra, P. N. (1978). Some reliability and validity considerations on Australian data from the Death Anxiety Scale. *Omega*, *9*, 293-299.
- Wass, H., & Forfar, C. S. (1982). Assessment of attitudes toward death. *Measurement and Evaluation in Guidance*, *15*, 210-220.
- Westbrook, M. T. (1976). Positive affect: A method of content analysis for verbal samples. *Journal of Consulting and Clinical Psychology*, *47*, 715-719.
- Wittkowski, J. (1994). *Das Interview in der Psychologie. Interviewtechnik und Codierung von Interviewmaterial* [The Interview in Psychology. Interview technique and Coding of Interviewmaterial]. Opladen, Germany: Westdeutscher Verlag.
- Wittkowski, J. (1996). *Fragebogeninventar zur mehrdimensionalen Erfassung des Erlebens gegenüber Sterben und Tod (FIMEST)* [Questionnaire Inventory for the Multidimensional Assessment of the Experiencing Toward Dying and Death]. Goettingen, Germany: Hogrefe.
- Wittkowski, J. (2001). The construction of the Multidimensional Orientation Toward Dying and Death Inventory (MODDI-F). *Death Studies*, *25*, 479-495.
- Wong, P. T., Reker, G. T., & Gesser, G. (1994). Death Attitude Profile-Revised. In R. A. Neimeyer (Ed.), *Death anxiety handbook* (pp. 121-148). New York: Taylor & Francis.
- Yang, S. C., & Chen, S. (2002). A phenomenographic approach to the meaning of death: A Chinese perspective. *Death Studies*, *26*, 143-175.

Direct reprint requests to:

Robert A. Neimeyer, Ph.D.
 Department of Psychology
 University of Memphis
 Memphis, TN 38152-6400
 e-mail: neimeyer@memphis.edu