# THE EFFECT OF EXPLORING AND EXPRESSING FEELING TOWARDS PERSONAL DEATH OR INSTRUCTION IN THE CHRISTIAN MEANING OF DEATH ON LEVELS OF DEATH ANXIETY

by

Joseph P. Campbell

A thesis submitted to
The Faculty of Graduate Studies
in partial fulfillment of the degree
Doctor of Philosophy
in
Department of Psychology

University of Manitoba
Winnipeg, Manitoba, 1983

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ACKNOWLEDGEMENTS

I wish to thank my supervisor Dr. Terry Hogan for his support throughout. I also wish to thank all the members of my Committee. My gratitude to all members of my family cannot adequately be expressed. Finally, a special note of appreciation must be given to Dr. Tim Ball.

## DEDICATION

I wish to especially thank my loving wife Mary, without whose support this thesis could not have been completed.

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

LIST OF APPENDICES

LIST OF TABLES

ABSTRACT

The overall purpose of the present study was to determine whether death anxiety decreases as a function of expressing and exploring attitudes and feelings towards personal mortaltiy. An assumption underlying the present clinical work with dying patients and also the workshops and seminars conducted for the 'heatlthy' is that open discussion of our fears concerning death helps relieve those fears. However, to date, the evidence supporting this assumption is more experiential than experimental, with its justification based on intuition rather than empirical verification.

In the present study, 50 adults between the ages of 30 and 55 were used as subjects. They were randomly assigned to one of five groups, subject to the provision that high, medium and low anxious males and females were equally represented in each group. An individual interview, a group discussion and a lecture on the Christian meaning of death constituted the three treatment conditions. A control group and a quasi-control group constituted the no-treatment conditions. The individual interview and group discussion conditions explored the subjects feelings and attitudes concerning personal death. The religious lecture group received instruction in the Christian meaning of death. The control group was requested to complete the IPAT Anxiety Scale and the four dependent measures which was the extent of their participation in the experiment. The quasi-control group was informed about the nature of the treatment conditions and asked to respond to the dependent measures as if they had participated in the treatment condition.

Four dependent measures of death anxiety were used to assess treatment effects: Templer's Death Anxiety Scale, a Word Association Test, a

Do-It-Yourself death certificate, and a measure of the subject's readiness to visit a dying patient. All four dependent measures were administered immediately following treatment. They were re-administered two months later to determine whether the effects of treatment were short term, long term or delayed.

The results of the study failed to support the hypothesis that exploring and expressing attitudes and feelings concerning personal death decreases death anxiety. However, a hypothesis that the high anxious subjects would have significantly higher death anxiety than the low anxious subjects was confirmed.

The dependent measures, with the notable exception of the Word Association Test, correlated significantly with each other. They also loaded together on the same orthogonal factor with the exception of the Word Association Test. The failure of the Word Association Test to correlate even modestly with the other measures or to factor even moderately with them raises questions as to its usefulness as a measure of death anxeity.

# INTRODUCTION

Although psychology emerged from social and philosophical traditions in which the problem of death was prominent, the new science had other priorities. Fechner inspired an experimental psychology that had little interest in death. It came of something of a surprise that Fechner himself wrote a book entitled Little Book of Life After Death in which he proposed a perpetual development model of the death state (Fechner, 1904). He saw death as a transition to a freer mode of existence in which tremendous new possibilities for spiritual growth could be found. Precisely what the state means to the individual depends on his stage of spiritual development at the moment of death. His state at death will determine whether he finds himself possessed of an organism strong or weak, healthy or sick, beautiful or hateful in the world to come and also the extent of his further development in the world (Kastenbaum, 1977). Even though William James wrote on immortality and Stanley Hall conducted an early empirical study of thanatophobia (fear of dying), the new psychology in its early years occupied itself little with the subject of death (James, 1910; Hall, 1915; Kastenbaum and Costa, 1977).

In the last two decades interest in the topic of death, at least among clinicians if not academicians, has mushroomed. This is evidenced by the increase in the number of articles, books, workshops and seminars devoted to the subject. It used to be said that death was a taboo subject but this can no longer be considered the case (Kastenbaum and Costa, 1977). The credit for removing death from its proscriptive status among professionals is in no small measure due to the efforts and

pioneering spirit of Herman Feifel. Although taboos did obstruct his early effort to talk to dying persons and those involved in their care, his persistence was rewarded. He made a discovery that many have since made for themselves. Although we may attempt to protect the dying person from being aware of impending death, the dying person is often grateful for an opportunity to talk about it. Feifel sparked the interest of professionals in the subject of death and dying through editing a book entitled The Meaning of Death in 1959 (Feifel, 1959). Many consider this book the first product of the new death awareness movement and it included contributions from C. G. Jung and Gardner Murphy as well as representatives from philosophy, art, history and other fields.

Public interest in death was stimulated by Jessica Mitford's humorous satirization of American funeral practices in her book The American Way of Death (Mitford, 1963). Kubler-Ross not only aroused concern for the plight of dying persons but also made an invaluable contribution to our understanding of the process of dying through her book On Death and Dying which many believe to be the bible of the death awareness movement (Kubler-Ross, 1969). Like Feifel, she had to contend with deep seated prejudices opposed to more open discussion with the dying of their feelings and fears.

The number of research articles on death increased from a mere trickle in the fifties to a respectable stream by the early seventies. The first effort to evaluate and integrate the mass of data was undertaken by Kastenbaum and Aisenberg in The Psychology of Death published in 1972 (Kastenbaum and Aisenberg, 1972). The first half of the book examined thoughts, feeling, attitudes and actions about death and the second half examined death as a possible outcome of individual and social

behaviour. The authors suggested that all cultures have a sociophysical network whose functions include predictions and warnings of death, attempts to prevent or inflict death, orientations towards the dying person, body disposal, social reconstruction after death and efforts to explain or rationalize death. Each person's relationship to death is a function of the culture's death system. They found much to criticize in the research to that date, while recognising the inherent difficulties involved in the task. Over the past two decades research in the area of thanatology has largely focussed on the dimension of 'death anxiety' or 'fear of death' (Kastenbaum and Costa, 1977). The importance of this dimension is borne out by its being labelled the 'core' problem by theorists and clinicians alike. Not simply that death anxiety is the core problem in thanatology but that it is the central issue in our lives. Yalom sums up this orientation when he states

> Terror of death is ubiquitous and of such magnitude that a considerable portion of one's life energy is consumed in the denial of death. Death transcendence is a major motif in human experience ... The basic human group, the molecules of social life were, as Freud speculated, formed out of the fear of death ... The fear of death has permeated the fabric of our social structure (Yalom, 1980).

This terror of death is kept in check through our addiction to diversions, our unfaltering belief in the myth of progress and our constant need to be on the move (Wahl, 1969). In those who fail to keep this fear at bay it manifests itself in a variety of psychosomatic and psychotic disturbances (Klein, 1943; Searles, 1961; Gillespie,

1963; Feifel, 1969; Yalom 1980). Melanie Klein beleived fear of death to be at the root of all persecutory ideas and, indirectly, of all anxiety (Klein, 1943). Searles was among the first to ascribe to death anxiety a major part in the development of schizophrenia (Searles, 1961). He argues that the schizophrenic is unable to cope with the reality and inevitability of life's finitude. The patient becomes and remains, schizophrenic in order to avoid facing the fact that life is finite. This apathy and withdrawal constitutes the perfect defence against death: "one need not fear death so long as one feels dead anyway; one has, subjectively, nothing to lose through death" (Searles, 1961). It is the view of these authors that death anxiety is always active within us. The fact that we are generally unaware of this terror is a function of our ability to repress it and seal it off from conscious awareness. This repression according to Wahl (1959) is heavily and expensively symbolized. Fear of death may be disguised as fear of abandonment or fear of punishment. Wahl (1959) contends that this fear can even masquerade as feelings of revenge, thirst for power, or desire for immortality. Thus fear and anxiety are not only assumed to be one of man's reactions to death but his paramount reaction to it. It is not surprising then that death anxiety became the main focus for researchers in the area of death.

## Measures of death anxiety

Methods of assessing death anxiety can be divided into direct and indirect measures. Direct measures explicitly ask the subject verbally to express his conscious fears or attitudes to death. The most commonly used direct measures are questionnaires and death anxiety scales. Indirect

measures use the subject's non verbal responses to death related stimuli to assess his less conscious reactions to death. The most commonly used indirect measures are the subject's psychogalvanic skin response to death stimuli and his reaction time to death words compared to neutral words.

Direct measures

Direct measures are used to tap conscious or verbalized death anxiety. As these are the most frequently used measures it would seem that in practice researchers are chiefly interested in conscious or verbalized death anxiety. The most popular of such instruments in current use are the Collet-Lester Fear of Death Scale (1969) and Templer's Death Anxiety Scale (1970). The Collet-Lester scale measures various aspects of death fears; fear of death of self, fear of death of others, fear of dying of self and fear of dying of others. The number of items in each subscale are 10, 10, 8 and 10 respectively or 38 items in total. Templer's scale comprises fifteen items focussing on the individual's affective reactions to death and dying. Both measures treat death as a unidimensional concept. Less frequently used direct measures are forced choice rating scales (Swenson, 1961) and semantic differential tests which purport to measure underlying cognitive organizations of meaning relative to death (Jeffers et al., 1961; Golding et al., 1966; Rainey, L. C., & Epting, F. R., 1977).

These self-report measures have been criticized for lack of reliability data and, in particular, internal reliability (Kastenbaum and Costa, 1977; Durlak and Kass, 1982). More recently, however, investigators have been addressing themselves to the reliability and convergent validity of these instruments. Among the scales which have generated the most

research are the Death Concern Scale (Dickstein, 1972), the Tolor and Reznikoff Death Anxiety Scale (1967), Templer's Death Anxiety Scale (1970) and the Collet-Lester Fear of Death Scale (1969). Dickstein (1978) found an average correlation of .35 between these four scales. Partialling out state and trait anxiety made little difference to interscale correlations for males, but in the case of females partialling out trait anxiety reduced the interscale correlations from .58 to .32. Dickstein concludes that for males the commonality between the scales is due almost entirely to concern about death, whereas for females a substantial portion of the commonality between the death scales appears to reflect their common correlations with trait anxiety. In a recent study Durlak and Kass (1982) report the results of a factor analysis of a representative sample of death scales completed by college students. They selected fifteen scales as representative of those in common use. Among them were included the scales in the previous study with the exception of the Tolor and Reznikoff scale. Five orthogonal factors were uncovered, negative evaluation of death, reluctance to interact with the dying, negative reaction to pain, reaction to reminders of death and preoccupation with the thought of dying. The results support the emerging theory that death attitudes are multidimensional and that multiple death attitudes coexist and covary within individuals. Several scales were found to be factorially complex, including Templer's. The authors conclude "The factorial complexity of these scales creates problems in interpreting results under different experimental situations". Obviously, greater care is needed in the interpretation of these scales and there would seem to be a need for instruments which are more precise in their measurement.

Indirect measures

Those researchers who take seriously the premise of universal denial or repression of death anxiety or who are concerned with measuring covert aspects of death anxiety have usually turned to the use of indirect measures. Unfortunately these measures have the same problems of lack of convergent and discriminant validity as the direct measures and possibly more serious problems of construct validity. The GSR has been used in several studies since the early work of Alexander et al., (1957). Although these studies consistently show greater autonomic arousal to death words than to neutral words it has been more difficult to show differentiation between death words and other emotionally toned words. Nor can the nature of the emotion underlying the arousal be directly inferred. A study on emotionality and perceptual defense by McGinnies (1949) which found a significantly higher GSR to emotional compared to neutral words was probably what gave the impetus to its use in death research even though reference is made to McGinnies's findings in only one study (Lester and Lester, 1970). McGinnies explained his results in terms of perceptual defense, which he describes as a perceptual filtering of stimuli, that serves, in many instances, to protect the observer as long as possible from objects which have unpleasant emotional significance for him or her. Unfortunately for the theory, two other researchers (Howes and Solomon, 1950) showed that the higher GSR to emotional words was a function of word frequency or word usage based on the Thorndike-Lorge Semantic counts (1944). The controversy still remains unresolved.

Other indirect approaches have included the use of latency measures

from word association and tachistoscopic recognition tasks (Golding et al., 1966; Lester and Lester, 1970; Lowry, 1966). The Word Association Test has for its rationale the psychoanalytic view of memory functioning. According to this view, ideas are perceived in terms of the emotions, affects, strivings, wishes and attitudes of the person. They become preserved or in some cases distorted in conformity with these inner states. Ideas are delivered into consciousness or reproduced when the affects or attitudes which were responsible for their perception are again brought into play. In this view memories of words, images, or bodily movements are but representations of emotions, affects or attitudes. Forgetting, blocking or memory distortion are explained by the process of repression, which attempts to keep out of consciousness all ideas connected with unacceptable preconscious and unconscious wishes, affects or strivings. In this way reaction time disturbances or blocking are a function of unconscious unease (Rapaport, 1970). This is simply a repetition of the perceptual defense theory as outlined by McGinnies (1949). The assumption that statistically significant differences in latencies of one second or less to neutral as compared to death words represents a defensive process is a dubious one (Kastenbaum and Costa, 1977). While longer latencies to death words compared to neutral words is strongly supported in the literature (Lester et al., 1970; Feifel et al., 1973; Golding et al., 1966), the scientific evidence for the conclusion that such latency is due to unconscious anxiety is far from conclusive (McGinnies, 1947; Howes and Solomon, 1950; Erickson, 1952).

Less frequently used indirect measures are the Thematic Apperception Test, content of dreams and self-ratings of mood after exposure to neutral, erotic and death related reading matter (Kastenbaum et al.,

1977; Yalom, 1980; and Pollak, 1980). All of these measures depend for their interpretation on the theoretical orientation of the researcher. The leap from what is observed to what is inferred is a leap based on theory rather than empirical support. Researchers with a psychoanalytic or existentialist perspective interpret longer latencies or higher GSRs to death words compared to neutral words as evidence of unconscious death anxiety. They posit perceptual defense as the unconscious defense mechanism whereby fearful stimuli are delayed from entering consciousness. Researchers with a behavioural perspective interpret the same phenomena simply as resulting from the individual's reinforcement history. Responses to taboo words were punished and as a consequence such responses tended to be extinguished. It is not surprising that when asked to respond to taboo words the subject's anxiety increases causing higher GSRs and longer latencies in responding to these taboo words. Kastenbaum (1977) suggests that the widely held belief of denial in the face of death among researchers needs to be put to empirical test as resolving this question seems to be at the root of much research in this area.

## Correlational studies

Research in the area of death anxiety has been largely correlational and, in the majority of studies, undergraduate students continue to supply the subject power. The emphasis on correlational studies is to be expected in a speciality which is still endeavouring to gather basic and consistent data on which to build a solid science. The use of undergraduate students, while obviously convenient, leaves a serious gap in our scientific knowledge regarding the attitudes of those in their mature years (Kastenbaum and Costa, 1977). We cannot hope to develop a comprehensive

psychology of death based solely on the attitudes and feelings of those in their late teens or early twenties. More attention needs to be given to the attitudes and feelings of those in their middle years to death and dying.

Three classes of variables have received the most attention from researchers, namely, demographic characteristics, personality and maladjustment.

## Demographic Variables

Sex. Whether males and females differ in levels of death anxiety depends on which particular study you read. Results are conflicting. Early studies by Christ (1961), Dickstein (1972), Swenson (1961), Jeffers, Nichols and Eisdorfer (1961) and more recent studies by Cole (1978), Dickstein (1978) and Trent et al., (1981) found no differences with regard to level of death anxiety between the sexes. Studies by Lester (1972), Iammarino (1976), Ray and Najman (1974) and McDonald (1976) report significant differences between the sexes with women having the higher levels of death anxiety. This discrepancy cannot be explained as a function of different measures being used as the majority of recent studies used Templer's Death Anxiety Scale. The difference in results may be accounted for by the fact that the majority of studies finding no difference used adults as subjects, whereas the recent studies reporting significant differences used college or undergraduates as subjects. There would appear to be general agreement that adult women do not have lower death anxiety than adult men.

Age. Once again there is lack of agreement among research findings

on the relationship between age and death anxiety. Lester (1972), Templer, Ruff and Frank (1971) and Pollak (1977) report no significant relationship between these two variables. All of these studies used large samples with ages ranging from seventeen to eighty-five. These findings were recently supported by Trent et al., (1981) in their study assessing the impact of a workshop on death on the participant's death anxiety. Cole (1978) reported a negative relationship between death anxiety and age which supports an earlier finding by Diggory and Rothman (1961). He fails to report the order of the correlation and seems to base his conclusion on the fact that education, race, age and religious preference account for 18% of the variance in the death anxiety scores. At the moment the weight of evidence supports the lack of any correlation between the two variables.

Occupation. Prior to 1969 little research had been carried out on relationships between anxiety and specific occupations. An exception was Feifel et al., (1967) who investigated death anxiety in groups of physicians and medical students. The major hypothesis of the study was that individuals chose the medical profession as a defense against their fear of death. By curing others and controlling disease they would gain mastery over death. The hypothesis was supported by the data which showed that a group of eighty-one physicians was more fearful of death than a control group which consisted of medical students, healthy people and seriously ill patients. The data suggested that continued experience in the profession tended to increase fear of death. A later study by Lester et al., (1974) failed to support the previous study. They found that fear of death and dying decreased with increased academic

credentials and professional experience. The data from the Lester et al., study could equally be interpreted to support the relationship between age and death anxiety.

Ford et al., (1971) found no difference between a group of policemen and a group of mailmen with regard to fear of death. The policemen, as a group, did not differ on any of the death measures from a group of undergraduates. Similar findings are reported by Alexander and Lester for a sample of parachute jumpers (1972). A study by Livingston and Zimet (1965) found that medical students who enter psychiatry had more death anxiety and were less authoritarian than those who entered surgery. Yalom posited that those who enter psychiatry have more death anxiety and enter the mental health field in search of personal relief (Yalom, 1980).

Religion. Comparatively little research has been carried out on the relationship between religious belief and death anxiety. In his review of studies on the association between religion and attitudes towards death Lester (1972) cites a total of 13 studies relevant to this area of research. Since 1972 research dealing with religion and death anxiety has been just as sparse (Pollak, 1980).

In general the evidence supports the view that among adults religious belief and death anxiety are negatively correlated. Swenson (1961) found a significant correlation ($p < .01$) between religiosity and positive attitudes towards death among a sample of 210 senior citizens (minimum age 60). Those with more fundamental religious convictions (belief in a personal God and life after death) and more frequent Church attendance looked forward to death more than those with less fundamental convictions

and less regular church attendance. Fearful attitudes towards death were expressed by those with less active involvement in religious activities. Jeffers et al. (1961) also reported a significant ($p < .01$) negative correlation between fear of death and belief in the after life among a sample of 260 subjects 60 years of age and older. Diggory and Rothman (1961) investigated the association between belief in the afterlife and fear of the consequences of death. The sample of 563 subjects, aged 15 and above, included Protestants (254), Catholics (135), Jews (132) and others (41). The major consequences of death, namely, loss of experiences and no longer being able to carry out one's plans and projects, were least feared by Catholics and most feared by those with no religious affiliation or beliefs. They concluded that Catholics feared these consequences less than others because of their strong belief in life after death. Magni (1972) administered Lester's Scale of Death Attitudes (1966) and Alport's Religiosity Scale (Feagin, 1964) to 53 nursing students. He found a modest but significant correlation ($\eta = -.38$, $p. < .01$) between fear of death and a personal religious committment as opposed to a mere external conformity to religious practices. No significant relationship was found between religiosity and latent death anxiety. Recognition thresholds for death pictures was used as a measure of latent death anxiety. The author concluded that religiosity appears to have little effect on latent or unconscious death anxiety. Feifel and Branscomb (1973) reported results similar to Magni (1972). They reported a significant correlation between conscious fear of death and religiosity but no significant correlation between unconscious fear of death and religiosity.

In contrast to the results of the above studies, all of which used

adults as subjects, the majority of studies using students as participants report no significant association between religion and death anxiety. Kalish (1963) found that college students who believed in God tended to disapprove of birth control, euthenasia and abortion, and to approve of capital punishment. There was no significant relationship between belief in God and fear of death. Belief in the after-life was also associated with disapproval of birth control and abortion but was not related to fear of death. Alexander and Alderstein (1960) compared the death attitudes of 20 religious and 20 non-religious students. The students were selected on the basis of high and low scores on Josey's Scale of Religiosity (1950). No differences were found between the groups on a fear of death scale (Middleton, 1936) or in their associations to death words. The authors concluded that religion does little to dissipate death anxiety. McDonald (1976) found no difference between religious and nonreligious undergraduates on Templer's Death Anxiety Scale. Members of the Mormon Church constituted the religious group. Whether non-Mormons should be designated non-religious is open to question.

Recent studies by Cole (1978) and Trent et al. (1981) found no association between religion and death anxiety among adult subjects. In both studies religion was one among many of the variables examined relative to death anxiety. Templer's Death Anxiety Scale was used in both studies to measure death anxiety. Cole reported that frequency of Church attendance was not associated with death anxiety but those with a religious preference had a higher death anxiety than those with no religious preference. What the author meant by religious preference was not explained. In the Trent et al., (1981) study, how religious the

participants considered themselves to be was not significantly related to their level of death anxiety.

Based on the research to date, adults who participate actively in Church services and who believe in a personal God and after-life fear death less than those adults who attend Church less or do not believe in a personal God or the after-life. In the case of students religion appears to have no association with death anxiety. These divergent findings need further investigation and replication.

## Personality variables

Locus of control. The construct of locus of control was related to death anxiety in four studies with conflicting results. Tolor and Reznikoff (1967) reported that male college students with external locus of control expectancies had significantly greater overt death anxiety than those with internal locus of control expectancies ($r = .24$, $p. < .05$). This finding seems theoretically plausible on the grounds that those who see themselves as having little or no control over events in their lives would tend to be more anxious than those who see themselves as active and controlling of events. Studies by Berman and Hays (1973), Dickstein (1972) and Nehrke et al., (1978) failed to support Tolor and Reznikoff's study. In the Nehrke et al., (1978) study elderly men and women living in nursing homes, public housing units and the general community were asked to complete locus of control, life satisfaction and death anxiety surveys. They found that the nursing home sample were the least educated, mostly externally controlled and lowest in death anxiety. They concluded that death anxiety was a function of the individual's living arrangements and the presence of other elderly people

with common interests who served to defuse death through mutual support. Locus of control was not a significant factor in accounting for levels of death anxiety.

Repression-Sensitization. The R-S scale is thought to be a measure of the tendency to acknowledge or avoid threatening stimuli and is composed of selected items from the MMPI. Low scores are associated with repression and high scores with sensitization. The studies investigating the relationship between death anxiety and repression-sensitization have consistently found statistically significant relationships between the two variables at or beyond the .01 level of significance (Tolor and Korzikoff, 1967; Handal and Rychlak, 1971; Dickstein, 1972). The average correlation between the two variables across studies is .5. Thus high death anxiety seems to be positively associated with those who are sensitive to perceived threat, while low death anxiety is associated with repressive defenses aimed at avoiding the threatening stimuli. If one views low scores on the R-S as signifying positive adjustment (Foulds and Warehime, 1971), then the high death anxious subjects may be less well adjusted than the low death anxious subjects. This inference has yet to be verified empirically.

General anxiety. One variable which has been consistently found to relate positively with death anxiety is general anxiety. Without exception all studies investigating the relationship between these two variables report modest but significant correlations between them (Handel, 1969; Monosoff et al., 1973; Nehrke et al., 1973; Lucas, 1974; Dickstein, 1978; Amenta et al., 1981; and Hoelter et al., 1981). Handel (1969) using Zuckerman's (1960) Affective Check List of Anxiety and

Livingston and Zimet's Death Anxiety Scale (1965) reported a correlation between them of .33; Monosoff and Sterns (1973), using the IPAT and Templer's scale found a correlation of .44 between death and general anxiety in a cross sectional study of respondents ranging in age from 10 to 82. They further reported that this relationship reached its peak in the 20 to 29 age bracket and then declined steadily. For persons 65 to 82 years of age the relationship was -.21. Although not significant, the reversal of the overall trend for the older age group points to the danger of missing important developmental trends by lumping all age groups together. So far this finding has not been replicated. Lucas (1974) administered Spielberger's State-Trait Anxiety Inventory (1970) and Templer's Death Anxiety Scale to a group of male medical patients and their wives. He presents separate correlations for the state and trait measures of anxiety and also for the males and females. The correlations between state anxiety and death anxiety for males and females, were .29 and .49 respectively. The correlations between trait anxiety and death anxiety for males and females were .39 and .50 respectively. Dickstein (1978) using the same measures with a sample of male and female undergraduate students found very similar results. State anxiety is conceptualized as a transitory emotional state or condition characterized by subjective, consciously perceived feelings of tension or apprehension. Trait anxiety refers to relatively stable individual differences in anxiety proneness. The correlations between state anxiety and death anxiety for male and females were .18 and .40 respectively and for trait anxiety the correlations were .42 and .65 respectively. I have reported in a previous section Dickstein's interpretation of these results. Using a predominantly female sample, Amenta and Weiner (1981) reported a

correlation of .52 between Cattell and Schier's 16PF factor Q11 (general anxiety factor) and Templer's scale. This finding for the predominantly female sample is in line with those results previously cited. Hoelter and Hoelter (1981) used Spielberger's State-Trait Anxiety Inventory to measure general anxiety and a multidimensional scale consisting of eight Likert-type subscales, derived through factor analysis, to measure fear of death. Seven of the eight scales correlated significantly with both state and trait anxiety. The subscale entitled 'Fear of Being Destroyed' was the one exception. Multiple correlations for the eight subscales with state and trait anxiety were .37 and .38 respectively. The fact that the size of the correlations are less than those previously reported is very likely due to the uniqueness of the death anxiety measure used in the study.

The Lucas (1974) and Dickstein (1978) studies suggest that the death scales possess greater discriminant validity for males than for females. When trait anxiety is partialled out only about 10% of the common variance can be specifically attributed to female concern about death.

Despite the number of studies supporting the relationship between general anxiety and death anxiety, only one study (Hoelter and Hoelter, 1981) offers any interpretation or explanation of the relationship between these two variables. I shall outline their interpretation later in this section. The unwillingness of researchers to offer explanations for their results is probably due to the confusion and lack of precision in the definition of these terms. Anxiety itself is a painful emotion but trying to adequately define it provokes further tension. The psycho-analytic distinction between free-floating anxiety and fear of an object is important to keep in mind.

Kierkegard, in 1844, was the first to make a clear distinction between

fear and anxiety (dread). He contrasts fear which has a definite object with anxiety (dread) which has no object. Dread or anxiety is really fear of nothing and thus cannot be located.

> The concept of anxiety is almost never treated in psychology. Therefore, I must point out that it is altogether different from fear and similar concepts that refer to something definite, whereas anxiety is freedom's actuality as the possibility of possibility. For this reason, anxiety is not found in the beast, precisely because by nature the beast is not qualified as spirit (Kierkegaard, 1957).

This free-floating anxiety constantly seeks an object and is what Rollo May (1977) meant by "anxiety seeks to become fear." If we accept these definitions then to speak of death anxiety is a contradiction in terms, as anxiety by definition has no object or referent.

The question then for existentialists of the relationship between general anxiety and death anxiety may be non-question. The question as to the source of this dread or free-floating anxiety still needs to be answered. For the existentialists there is no question but that the primal source of this anxiety is death:

> This dread that is part of the fabric of being, that is formed early in life at a time before the development of precise conceptual formulation, a dread that is chilling, uncanny, and inchoate, a dread that exists prior to and outside of language and image (Yalom, 1980).

For the existentialists the intercorrelations between general anxiety (fear) and death anxiety (fear) is a function of their being conscious manifestations of the dread that is part of the fabric of being.

Hoelter and Hoelter (1981) offer three possible explanations for the significant correlations between general and death anxiety. The first possible explanation is that they co-vary in accordance with a third variable. Following Levitt (1961) they suggest the existence of a general anxiety-fear-phobia factor. In this explanation, according to the authors, the two variables are related to each other by being related to a third. The second possible explanation is that anxiety causes fear of death. This is the interpretation favoured by Dickstein (1972) who states "the relationship between death concern and measures of anxiety suggest that the former is simply a manifestation of a more generalized tendency to be anxious." The third possible explanation, and the one favoured by Hoelter et al., (1981), is that fear of death precedes anxiety. This third possibility is in reality but a variant of the first explanation above, as the general anxiety factor is the unconscious or primal anxiety or dread of nothingness. The argument as to which comes first or which is subordinate to which, death anxiety (fear) or general anxiety (fear), is yet to be resolved empirically.

The basic concept of death anxiety needs to be clarified before this issue can be resolved. When there is agreement on the concept of death anxiety and its measurement, this issue can then be addressed. One possible way of resolving it would be to choose subjects with high levels of general and death anxiety. Having divided them into two groups desensitizes one group to general anxiety and the other group to death

anxiety. The posttest pattern of scores should help to resolve the relationship between the two variables. For example, general anxiety is not modified in the death desensitization group and death anxiety is significantly modified in the general anxiety desensitization group, this would suggest that death anxiety is a function of subjects' levels of general anxiety.

## Death Anxiety and Psychopathology

Studies investigating the relationship between death anxiety and psychopathology focus either on the conscious or unconscious dimension of death anxiety, although one or two studies have focussed on both dimensions. The rationale for these studies is the generally accepted fact that anxiety lies at the core of most pathology. Whether death anxiety is or is not a consequence of general anxiety it too ought logically be related to psychopathology. The distinction between studies investigating either conscious or unconscious death anxiety is based on their use of direct or indirect measures of death anxiety.

Conscious anxiety. Prior to 1966 only two studies investigated the relationship between psychopathology and death anxiety. Schilder (1936) interviewed murderers and found that those with psychopathic and psychotic tendencies were much more preoccupied with thoughts of death than those without psychopathic traits. In 1964 Greenberg gave schizophrenics an interview focussing on death attitudes and scales to measure self-esteem and ego strength. It was predicted that emotional arousal would increase in subjects when they spoke about death, whether or not they were conscious of this response. His prediction of emotional

arousal was confirmed for females but not for males. No association was found between ego strength and death anxiety. More recent studies conducted since Lester's 1966 review, with one exception, report positive relationships between death anxiety measures and various forms of maladjustment. Templer (1970) found that the DAS was not strongly related to scores on the MMPI using college students as subjects. The rather low correlations did not support the impressions of clinicians who maintained that death anxiety is associated with certain syndromes of psychopathology (Templer, 1970). Two of the scales, K and Pd, correlated -.43, and -.24, respectively, and the Si scale correlated .25 with the DAS. All three correlations were modest but significant. In order to determine whether the correlations were a function of the relative absence of severe psychopathology in the sample of college students he administered the DAS and the MMPI, with the DAS embedded in the last 200 items of the MMPI, to patients who had a diagnosis of psychosis, neurosis or personality disorder. A very different pattern of relationships was found between the two measures from those for the student population. Five of the clinical scales and the F scales correlated positively and significantly with the DAS. The highest correlated positively and significantly with the DAS. The highest correlations were .56 ($p < .01$) for Sc., .49 ($p < .01$) for Pt., and .47 ($p < .01$) for the D scale. Templer concluded that these findings confirmed the opinion of clinicians that schizophrenics, obsessive-compulsives and depressed persons have a high level of death anxiety. Such a conclusion may not be justified as the MMPI scales are not generally seen as seperate scales to be interpreted in isolation from the overall profile. Also if his college sample was considered by him to be an unfair test of

clinicians impressions one can hardly say that his psychiatric sample was a fair test of their assumptions.

In a subsequent study (Templer, 1971), a modest but significant correlation ($r = .28$, $p < .01$) was found between the depression scale of the MMPI and the DAS for a group of elderly psychiatric patients. He also reported in the same study a strong correlation of .54 ($p < .01$) between the DAS and the psychiatric section of the Cornell Medical Index. Templer was so impressed with these correlations that he suggested that heightened death anxiety be considered part of the depressive syndrome in the aged. Another study by Templer (1972) reports a positive correlation between death anxiety and the neuroticism scale of the Eysenck Personality Inventory. This result is consistent with the findings of Moses (1973) of positive correlations between fear of death as measured by Boyer's (1964) Fear of Death Scale, and maladjustment as measured by the neuroticism scale of the Maudsley Personality Inventory, also for undergraduate subjects.

If one views oral, obsessive and hysterical personality variables as symptomatic of neurosis, as is suggested by psychoanalytic theory, then a study by Pollak (1977) questions what was becoming generally accepted. He found that the DAS did not correlate significantly with the oral, obsessive and hysterical personality variables as measured by the Lazare-Klerman Trait Scales (Lazare et al., 1966; Lazare et al., 1970). Although 'one swallow does not make a summer', it makes us wonder. The lack of cross-validation between Pollak's measure and those used by Templer and Moses leaves open the possibility that the contradictory findings might be a result of the different measures used rather than a difference between the variables being measured.

Unconscious anxiety. In view of the relative absence of death anxiety in the general population, as measured by self-reports or death anxiety scales, many researchers interpreting this as evidence of denial have used indirect measures to uncover our unconscious or repressed terror of death (Kastenbaum and Costa, 1977).

In a study by Lester and Schumacher (1969) it was found that groups of male and female schizophrenics did not differ from normals in their concern with death as measured by the number of death related responses to the TAT. Fast and Paul (1972) questioned this finding on the grounds that approximately half of the nonschizophrenics used in the study were acutely depressed. Using a sample of college students, male and female, Fast and Paul (1972) found a positive relationship between Rorschach responses indicating a degree of unreality and death concepts. They concluded that there was a positive relationship -etween death concern and schizophrenic thinking. There are no recent studies of the relationship between unconscious death anxiety and psychopathology which seems to indicate that researchers are skeptical both of the theory of unconscious anxiety and its relevance.

## Experimental studies

Reference has already been made to the paucity of experimental studies in the area of death and dying. As in the case of correlational research, the majority of studies use death anxiety as the dependent variable and either courses in thanatolgy, death awareness workshops or desensitization as the independent variable.

Death education. In assessing the effect of a six-week death

education course on the death anxiety of nurses using a pre-posttest design, Murray (1974) reported a significant decrease at a one week follow-up but not during immediate posttest. The methods used included lecture-discussion, audio-visual presentation, group dynamics, role playing and sensitivity exercises. He used Templer's DAS as the dependent measure. The lack of a control group is a serious flaw in the design of the study and makes interpretation of results arbitrary. Bell (1975) used an experimental format to assess the influence of a course on death and dying on the death attitudes of college students. The experimental group (N = 24) consisted of those who had pre-enrolled for the course in question. The control group (N = 50) was chosen from the student population. Pre and posttest measures of death attitudes were assessed using a Likert-type instrument measuring how frequently they entertained thoughts of death, the degree of fear associated with death and dying, the amount of interest manifested in death related discussions, and their willingness to discuss their own or a close friend's death with others. No significant differences were found between the groups on the affective or anxiety dimension. Those in the experimental group appeared to entertain more frequent thoughts of death ($p < .0005$) and greater interest in death-related discussion ($p < .05$) than the control group. Keller (1974) found a self-instructional programme 'Shaping your own attitudes towards death' successful in decreasing subjects death anxiety. A pretest-posttest design using Templer's DAS and the Collett-Lester Fear of Death Scale measured the effectiveness of the programme. No control group was used in the design and no specific results were reported. Mueller (1975) using a measure of death anxiety specifically designed for the study found that adolescents who participated in a

twelve lesson religious education programme designed to assist students achieve an attitude of integration towards life and death scored higher on the fear of death scale than the nonparticipant control group ($p < .05$).

Knott and Prull (1976) used a Likert-type instrument to measure the impact of a course entitled 'Death education and lethal behaviour' found no difference between the experimental and control groups in their levels of death anxiety. One of their findings confirmed Bell's (1975) finding that the experimental group showed a marked increase in thoughts about death. Levition and Fretz (1979) determined the effects of a death education course compared to sex education and introductory psychology. All students completed the Collett-Lester Fear of Death Scale and three other measures. In study one the only significant effect was a group difference on the "dying of other" scale; the death education students had a significantly less fear of dying of other, than did the sex education students ($F = 5.89$. $p < .05$). In the pre- to post-course measures, the students in the death education course did show a consistent though small decrease in fear of death of self, death of other and dying of others. The 'dying of self' scale showed a reverse change, a slightly increased fear of dying of self. Paired comparison analysis indicated that those in the death education course had significantly less fear about dying of other even at the beginning of the course. Rainey and Epting (1977) reported negative results for students enrolled in a thanatology course on a death threat index measure of death anxiety, compared to controls. Wittmaier (1979) used several measures to determine the effects of a death education course on participants levels of death anxiety. A posttest only design was used. Two weeks following the three

week course the participants completed Templer's DAS, semantic differential scales for rating the concepts death and dying (evaluation: good-bad, sweet-sour, positive-negative, fair-unfair; Potency: hard-soft, strong-weak, severe-lenient; Activity: fast-slow, happy-sad, noisy-quiet, hot-cold) and a question asking the student to estimate on a seven point scale how he/she would feel about talking with someone who was dying and knew it. The experimental group had higher death anxiety scores ($p = .09$) than the control group which was similar to the results reported by Mueller (1975). Negative findings were also reported by McClam (1980) using a pre- and post-test design to assess the effects of a death education course on students death anxiety. The two day workshop included films, group discussions and awareness exercises. Templer's DAS and the Collett-Lester Fear of Death Scale were used to assess death anxiety. No significant differences were found between pretest, posttest or follow-up scores on either of the two measures. The author concluded that the results might have been different if subjects had been selected on the basis of high death anxiety. Positive findings would be difficult to interpret due to the absence of a control group.

In contrast to the above studies, two recent studies report positive findings subsequent to a death education course. Neither study, however, used death anxiety per se as a dependent variable. Shoemaker et al., (1981) evaluated the effects of a course entitled 'The Hospice Approach to Death and Dying' on participants attitudes to bereavement, their attitudes towards the Hospice, their ability to discuss death and dying, and their ability to deal with terminal illness. An adaptation of Osgood's Semantic Test Differential was used to measure cognitive changes resulting from the course (Osgood et al., 1967). Significant changes were found between pre- and posttest scores for the concepts of bereavement

($p < .02$) and the ability to discuss death and dying ($p < .22$). No significant change was found for the concept terminal illness ($p < .80$). Confidence in their findings would have been enhanced by the use of a control group from the hospital as the demand characteristics were quite strong. Participants enrolled in the course either for education credit, interest in becoming volunteers and/or personal reasons.

Tobacyk et al., (1981) investigated the effects of a thanatology course on students death concerns. Using as their dependent measure a 'Death Threat Index' they found a significant difference ($p < .04$) following the course between the thanatology students compared to a control group. The score on the 'Index' was computed by counting the number of splits on each of 40 bipolar construct dimensions. A split was defined as a placement of 'self' and 'own death' on different poles of a bipolar construct dimension. They also reported that trait anxiety was a significant predictor of change from pretest to posttest in death threat, with lower trait anxiety change associated with significantly greater decrease in death threat.

It is difficult to compare these conflicting results as no cross validation of the different measures was carried out. This shortcoming is characteristic of studies in the area of death and dying (Kastenbaum and Costa, 1977).

Death awareness workshops. The effects of death awareness workshops on participants' death anxiety have been investigated in a number of recent studies. Bugen (1978) found no significant decrease in subjects' death concerns as measured by Dickstein's (1972) Death Concern Scale, following a 15 week seminar on death and dying. As in the studies by Mueller (1975) and Wittmaier (1979) the subjects' death

concern scores increased from pretest to posttest.

A study by Durlak (1979) examined the impact of a death and dying workshop on individual attitudes towards life and death. The workshop was an eight hour, small group experience conducted for hospital staff. Templer's and Collet's scales were used as measures of death anxiety and fear. One of the workshop groups participated in an educational program emphasizing lecture presentations and small group discussion (didactic group). In contrast, a second group confronted, examined and shared their own feelings and reactions to grief and death (experiential group). Role playing and group exercises were used for this purpose. The non-participant control group completed the pre- and posttest measures during the seminar. On the Templer scale, scores increased over time for all groups, but the experiential group showed the smallest increase and the didactic group the greatest increase. On the latter scale, however, scores declined significantly over time for the experiential group, but for the didactic and control groups they increased. The data supports the view that an emotional or personal approach to death is more effective in reducing death anxiety than a didactic approach (Durlak, 1979). These specific results are a little surprising in view of the fact that Lester's scale is usually seen as a measure of the conceptual meaning death has for the individual, whereas Templer's scale measures affective reactions to death or death anxiety per se. Thus, one might have expected the effect of experiential treatment to have had a greater effect on Templer's scale and the didactic treatment to have had the greater effect on Lester's scale.

The effects of a series of six two-hour workshops consisting of lecture-discussions, group discussions, and sensitivity exercises was

assessed using Templer's DAS (Trent et al., 1981). Although a control group was used in the study no direct comparison was made between the scores of the experimental and control group. Conclusions were based on the pre- to posttest changes within each group. They reported a significant decrease in death anxiety for the experimental group only. The level of significance chosen was .10 which is possibly over-indulgent. Even if the significance level is accepted the fact that the control groups' pre- and posttest scores on the DAS were appreciably lower than the experimental groups' suggests another interpretation of the results than that put forward by the authors. The decrease in the experimental groups posttest scores could be seen as due to the tendency of scores to regress towards the mean and not due to the effects of treatment.

Whelan and Warren (1981) evaluated the effects on participants' death anxiety of an eight hour workshop on death and dying. Sixteen students were randomly assigned to treatment and control groups. Death anxiety was assessed by Templer's DAS. All data was evaluated on the basis of between group mean comparisons via one-way analysis of variance. The workshop was based on a series of exercises which have been constructed to parallel Kubler-Ross's (1969) five stages (denial, anger, bargaining, depression, and acceptance). An emphasis was placed on the sharing of feelings and experiences by the participants.

Despite their statement to the contrary, the authors carried out only two between group mean comparisons. The first such comparison showed no difference between the groups at pretest on the DAS. The second such comparison showed that the experimental group had a significantly greater number of emotional words than the control group, in

a one page essay describing personal reactions to a film on dying. The remainder of the analyses compared each group's pre- and posttest scores seperately as in the previous study of Trent et al., (1981). No significant decrease in death anxiety at posttest was found for either group. Eight weeks later the experimental group, but not the control group, again completed the DAS. The difference between their follow up score and their posttest score was significant at the .05 level. The authors concluded that the effect of the workshop on participants' level of death anxiety was a delayed effect. This conclusion would have carried greater weight if it had been shown that no comparative decrease was shown by the control group. Follow up data for the control group was not presented.

Desensitization of death anxiety. The application of desensitization procedures to treat death anxiety has been reported in two recent studies. Peal et al., (1982) compared the effects of relaxation, desensitization and a no treatment control condition on participants death anxiety. Participants were selected from a pool of 247 undergraduate students. Only those who had a combined z score > .50 standard deviations above the mean on the Templer's DAS and Livingston and Zimet's DAS were chosen as potential subjects. Thus, only those high in death anxiety participated in the experiment. Results, using Templer's DAS, revealed significant effects due to treatment. The relaxation and desensitization groups were significantly less death anxious than the test-retest group ($p < .01$ and $p < .05$ respectively). On the Livingston-Zimet (1965) DAS the desensitization group was significantly less death anxious than either of the other two groups who did not differ from each other.

A conflicting finding was reported by Testa (1981) who found no change in death anxiety as a function of group desensitization or implosive therapy compared to an attention-placebo or a no-treatment control condition. The subjects were 48 nurses who ranged in age from 23 to 62 years. The implosive and desensitization groups had five 50-minute preprogrammed sessions over five consecutive weeks. The Attention-Placebo group had five 50-minute sessions in which they were shown films on death and dying without group discussion. Group differences failed even to approach significance.

One explanation of these conflicting results is the fact that the participants differed on at least two counts. The first study (Peal et al., 1981) used undergraduate students who were highly death anxious, whereas the second study (Testa, 1981) used adults who were not selected on the basis of high death anxiety. It is also possible that desensitization procedures were not identical and that length of treatment also affected results.

## Conclusions

The present study is similar in intent to the experimental studies reviewed. It differs from them in its multi-method approach to measurement, its comparison and cross validation of direct and indirect measures, and in the inclusion of a quasi-control group to assess the important but usually neglected influence of subject bias on outcome measures.

The overall purpose of the present study was to determine whether death anxiety decreases as a function of expressing and exploring attitudes and feelings towards personal mortality. An assumption underlying the present clinical work with dying patients and also the workshops

and seminars conducted for the healthy is that open expression of fears concerning death helps relieve those fears (Kubler-Ross, 1969, 1974; Saunders, 1969; Kalish, 1969). This assumption, at least in the case of healthy individuals, is still in need of empirical verification using both direct and indirect methods of measurement.

The specific objective of the present study was to investigate the following: 1) Whether those who express and discuss their fears concerning their own death or are instructed in the Christian meaning of death have, as a consequence, lower death anxiety than a control or quasi-control group. On the basis of clinical speculation and case studies (Kubler-Ross, 1974, Yalom, 1980). It was hypothesised the death anxiety scores of the three treatment groups combined would be significantly less than that of the control or quasi-control groups (Hypothesis 1); 2) Whether significant differences exist as a function of different types of treatment. Taking into account the religious nature of the sample it seems reasonable to predict, based on the research evidence to date, that an explanation of the Christian meaning of death (Group IV) would have a greater effect in reducing death anxiety than a personal interview exploring feelings and attitudes (Group II) or a group discussion in which members explore each others feeling and fears toward death (Group III). The writings of Victor Frankl (1965) and a study by Durlak (1972) lend support to this prediction. Frankl's notion that the meaning of life is enhanced as one finds meaning in death would lead one to suspect a negative relationship between meaning or purpose relative to death and fear of death. Durlak (1972) found a highly significant correlation of .54 ($p < .001$) between the 'Purpose in life test' (Craumbaugh and Maholick, 1964) and Lester's (1967) Fear of Death Scale.

Christian theology has as its cornerstone the Resurrection and it is that which gives ultimate meaning to death not as the end of a journey but as a natural stage in life. Thus, Christian theology integrates death or grafts it onto life. An examination of the import of this teaching in the context of personal death would appear to have the power to assuage fear by giving meaning and purpose to death. Therefore it was hypothesized that the death anxiety of the religious instruction group will be significantly less than that of the individual interview and the group discussion conditions combined (Hypothesis II); 3) It seems reasonable to assume, given the different dynamics of group interaction compared to one-to-one interaction, a difference in death anxiety will be evidenced between these two treatments. The sharing and support involved in group interaction would suggest greater benefit in terms of anxiety reduction for subjects participating in this condition compared to individual interview subjects. This assumption appears central to the death awareness workshops and seminars which have mushroomed in recent years. Therefore, it was hypothesized that the group discussion condition manifest significantly less anxiety than the individual interview condition (Hypothesis III). The consistent significant correlation reported between death anxiety and general anxiety makes it reasonable to predict a possible difference between subjects' level of death anxiety as a function of their level of general anxiety, irrespective of treatment. Therefore, it was hypothesized that high anxious subjects would have significantly higher death anxiety than the medium or low anxious subjects (Hypothesis IV).

Besides these principal objectives the present study explored, compared and cross validated the several measures of death anxiety used

in the present study. It investigated their relationship to age, sex and general anxiety. It also carried out what is believed to be the first factor analysis of the word association test to be reported in the literature, in order to determine its internal consistency as a scale purporting to measure death anxiety.

# METHOD

## Subjects

Fifty Catholics, resident in Ireland, between the ages of 23 and 62, mean age 41, participated as subjects in the present study. The sample of 34 females and 16 males comprised 15 high anxious, 20 medium anxious and 15 low anxious subjects.

Subjects were asked to take part in the study through a request printed in the church bulletin (Appendix A). During the service the pastor asked for volunteers to take part in a study on death and dying. Those interested were requested to pick up and complete the IPAT Anxiety Scale. An envelope containing a covering letter (Appendix B) and the questionnaire was pre-addressed and pre-stamped.

A mere four per cent of the 200 envelopes taken from the church were returned, despite repeated requests. In response to notices placed in community centres and through personal contacts over the space of five months the number of volunteers reached 55. From this pool 50 subjects were chosen.

Research design. On the basis of sex and scores on the IPAT subjects were assigned to one of the following six categories: high anxious male or female; medium anxious male or female; low anxious male or female. Subjects in each of these categories were randomly assigned to the five treatment conditions using a table of random numbers. An equal number of subjects was randomly assigned to each of the five experimental conditions: control group (Group I), individual interview (Group II), discussion group (Group III), religious instruction group

(Group IV), quasi-control group (Group V). The groups were balanced for sex and levels of general anxiety to the extent this was feasible. Perfect balancing for both sex and anxiety proved impossible due to the limited number of volunteers and the scattered geographical location of subjects. As a consequence the number of subjects per cell in the 5 X 3 design ranged from one to six. The fact that the number of variables exceeded the number of subjects in several of the cells a two factor design in conjunction with multivariate analysis was no longer statistically feasible.

The participants in this study are not assumed to be representative of the general population, assuming that religious affiliation biases individuals reactions to death and dying. While this restricts the generalizability of the results, it is a criticism which applies equally to research which uses undergraduates, senior citizens, nurses, or rodents as subjects. The rationale for using such a "biased" sample was purely practical, i.e., its accessibility. In addition, the majority of studies in the area of thanatology have focussed on the attitudes or reactions of either college students or senior citizens. There is little information available on the attitudes or reactions of the middle aged. The present researcher was willing to sacrifice generalizability in the interest of learning the reactions and attitudes of even a biased sample from this age range.

The IPAT Anxiety Scale Questionnaire

Prior to the treatment phase all volunteers were given the IPAT Anxiety Scale Questionnaire to complete. The IPAT Anxiety Scale Questionnaire consists of 40 items. The items are divided into those which manifestly refer to anxiety, yielding an overt anxiety score, and those

which probe the more covert dimension of anxiety. Construct validity for the total scale is estimated at .85 to .90 (Cattell and Schier, 1963). The average correlation between individual items and total score is .40, and the multiple correlation between all items and the total score is .92 (Tadashi and Tsushima, 1958). Test-retest reliability has been estimated at .93 and .87 for one and two week intervals respectively (Cattell and Schier, 1963). Split half reliability using 240 adults was estimated at .84 (Cattell and Schier, 1963). Three seperate determinations of reliability by Bendig (1960) using a variation of the Kuder-Richardson Formula 20, each on a different sample of college students yielded co-efficients of .83, .81, and .80 respectively. Norms based on 935 cases, consisting of 530 men and 405 women ranging in age from 18 to 50, with an average age of 30, yielded an average raw score of 27.1 and a standard deviation of 11.4. Scores one standard deviation above or below the mean indicated high and low anxiety levels (Cattell and Schier, 1963). The IPAT was used in this study to divide participants into high, medium, and low anxious groups.

Treatment stage

The control group received no further instructions but were requested to complete the dependent measures. A convenient time was arranged for the completion of the word association test measure. With the exception of the individual interview group the experimenter administered the word association test to each subject. In the case of the individual interview condition the interviewers recorded the responses and the experimenter at a later date timed them. This was done to insure that timing of responses were consistent. Subjects in the

individual interview group were randomly assigned to one of the three interviewers. The interviewers were instructed to direct all questions towards facilitating the expression of feelings and concerns towards personal death. They were instructed not to allow the session to develop into a philosophical or theological discussion on death and dying. The interviewer explained to the subject prior to the session that the purpose of the interview was to explore his/her personal feelings regarding death and dying. In general the interview began with questions relating to whether the subject had previously discussed their personal death or had had an opportunity to do so. How the subject felt about discussing it was probed. Half-way through the interview the subject was asked to reflect on his/her dying and the feelings connected with it were explored. They were then asked how frequently and at what time they thought about death and how they coped with such thoughts and what feelings accompanied them. Finally they were asked if the interview had been helpful and how they felt about it (Appendix C). Without exception all of the subjects were grateful for the opportunity to express their feelings and concerns. In one particular case a subject cried when speaking of her mothers death. She said she had never really mourned and that this was the first opportunity she had to let her feelings out.

The group discussion condition followed exactly the same format used for the individual interview. The group leader was instructed to be firm in keeping the focus on feelings and not on intellectual debate. He was instructed to reflect all questions back to the group or, when appropriate, to point out the abstract nature of the question. At the beginning of the session there was much laughter which seemed to imply

nervousness on the part of the members. As the group were all strongly Catholic, religion and the after-life was very real for them. Discussion remained at this level for a period and the sense of joy appeared to be very real (Appendix D).

When the feelings did surface following the period of reflection on one's own dying and death there was terror, fear and anxiety about the event itself rather than about what followed the event. The degree of discussion among couples, prior to the group, varied. Although willing to talk about their own death they were reluctant to discuss the death of their spouse. In this regard there was evidence of denial. There appeared to be some connection between the level of self-esteem and fear of death. The higher the self-esteem the less overt anxiety was expressed.

On meeting a number of the participants a week later many said that following the group experience they felt quite anxious about death for a few days but that then they felt a sense of acceptance and calmness. When questioned they stated that for the days immediately following the group thoughts of death were uppermost in their minds. Then their frequency diminished rapidly which probably accounted for the drop in their anxiety levels.

The religious instruction group were given a lecture on the Christian meaning of death by a local Catholic priest. The theme of the lecture was Christ's victory over death through his resurrection (Appendix E). Death is no longer a punishment for sin as Christ has paid back that debt through his death. By participating in Christ's grace believers participate in his Divine Life and thus have triumphed over death. As a consequence death is simply the passage to eternal life. The discussion which followed indicated the disharmony between belief and

affect regarding death. While belief was strong in the reality of personal resurrection and the meaning of death as a passage to life, it did not seem to modify the groups feelings of anxiety and fears towards death. This disharmony may be a function of the relative infrequency of thoughts of death and after life among the majority of individuals.

In addition to the four groups participating in the experiment a quasi-control group was chosen to assess subject bias.

> Positive results in social science research must always remain open to question when the contaminating effects of subject bias are not controlled through the use of a quasi-control group informed as to the nature of the experimental conditions and treatment (Adair, 1973).

This group was chosen from the initial pool of volunteers in the same manner as the other groups. As a group they were instructed to imagine themselves undergoing the treatment procedures and asked to respond to the dependent measures as if they had participated in the treatment conditions. They received the following instructions:

> I want you to imagine that you have taken part in an individual interview or group discussion on your attitudes and feelings about your own death, or that you have attended a lecture on the Christian meaning of death. (At this point the instructions given to the experimental subjects were read to them). I ask you to respond to these materials as if you had actually participated in the sessions I have described.

The length of treatment sessions was intended to maximize the effectiveness of each treatment. Optimal duration of individual therapy sessions has yet to be determined, but 50 minutes is generally accepted as sufficient for most individual interviews (Meltzoff and Korneich, 1970; Yalom, 1975). Group therapists consider one and a half to two hours the optimal length for a group session as less time is inadequte for the unfolding and working through of major themes, and after two hours a point of diminishing returns is reached (Yalom, 1975). The two hour session for the lecture or didactic group was suggested by the author's experience conducting workshops and seminars on death and dying. While less time would not do justice to the extent of the theme, more time would tend to shift the focus from theological issues to a discussion or an expression of personal feeling about death. In the present study such a change of focus would have affected the distinctive or specific quality of this treatment.

Dependent measure stage. All four dependent measures were administered immediately following treatment to the experimental groups. In the case of the control and quasi-control groups the dependent measures were administered throughout the treatment phase to control for day-to-day events or experiences. The WVDP, comprising several stages, required approximately two weeks to complete. The dependent measures were re-administered two months later. However, as only 15 per cent of the subjects appeared for the re-administration of the WAT this measure was not used in the analysis of the follow up data.

Personnel. Three colleagues were used as interviewers for Group II. They had a minimum of five years experience as individual therapists. The colleague who acted as facilitator for Group III had four years

experience in that modality. A catholic priest experienced in conducting retreats and seminars gave the lecture on the Christian meaning of death to Group IV. Prior to the experimental phase the confederates assigned to each treatment received four hours briefing on treatment materials and the administration of the dependent measures to insure uniformity of procedure.

Dependent Measures

Four dependent measures of death anxiety were used to determine the effects of treatment: Templer's (1970) Death Anxiety Scale (DAS) as a measure of the subject's expressed or conscious level of death anxiety; repsonse latency to death related words, in a word association test (WAT), as a measure of the subject's more covert level of anxiety; a Do-It-Yourself-Death certificate (DIY) in which the subject describes the causes, time, and circumstances of his or her own death, and finally a measure of the subject's willingness to visit a dying person (WVDP).

Templer's Death Anxiety Scale. Templer's scale consists of 15 items. Nine of the items are keyed "True", the remaining 6 are keyed "False". These 15 items were selected from a list of 40 items which had been chosen on a rational basis. Seven judges rated the face validity of these original 40 items on a scale of one to five as follows: 1 = irrelevant to death anxiety; 2 = slightly associated with death anxiety; 3 = moderately associated with death anxiety; 4 = considerably associated with death anxiety; 5 = very greatly associated with death anxiety.

The average rating for each item was calculated and those items receiving an average rating of below three were discarded. To determine

item consistency, item-total score correlation coefficients for three independent groups of subjects were used. It was decided to retain those items having coefficients significant at the .01 level in two out of the three analyses. The 15 items which met this condition constitute the present scale (Appendix F). The probability of a truly zero correlation being significant at the .01 level in two of the three anslyses is .02. Phi coefficients were computed to determine the relative independence of items. Since none of the coefficients of correlation between retained items exceeded .65 it can be inferred that there is no excessive inter-item redundancy.

Test-retest reliability for a three week interval was estimated at .83. To establish the scale's construct validity it was administered to 21 psychiatric patients who had spontaneously verbalized fear of or preoccupation with death and their scores compared with a group matched for diagnosis, sex and approximate age. The 21 high death anxious subjects had a DAS mean of 11.62 compared to 6.77 for the control group. The difference was significant at the .01 level (two-tailed).

Scale scores range from zero to 15, whith a mean of 5.5 and a standard deviation of 3.2. Females tend to score higher on the test than males, and scores are not significantly effected by religious belief, affiliation or devotion (Templer and Dotson, 1970). Although the DAS has been presumed to be a unidimensional scale of death anxiety, two recent studies (Durlak and Kass, 1982; Martin, 1982) have demonstrated its factorial complexity. In a factor analysis of 15 death anxiety scales, which yielded 5 factors (Durlak et al., 1982) the DAS loaded significantly on three factors: negative reaction to pain (.51), negative evaluation of personal death (.50), and, reaction to the

reminders of death (.44). In a factor anslysis of the DAS, Martin (1982) found that the varimax method of orthogonal rotation yielded five factors. Death anxiety denial (factor I) accounted for 41.2 per cent of the variance (items 5 and 7), general death anxiety (factor II) accounted for 21 per cent of the variance (items 1, 3, 10, 11, and 14), fearful anticipation of death (factor III) accounted for 14.6 per cent of the variance (items 2, 4, 8, 12, 15) physical death fear (favtor IV) accounted for 12.9 per cent of the variance (items 6 and 9), and fear of catastrophic death (factor V) a-counted for 9.2 per cent of the variance (item 13). Both studies agree on the factorial complexity of the scale but due to the intrinsic differences between them there are no common factors. The construct validity of the scale gains some support from Martin's (1982) finding of the clustering of ten of the items on the death anxiety factor and the fearful anticipation of death factor.

Word Association Test. The Word Association Test used in the present study contained five death related words and 20 neutral words. The death words were: coffin, death, tomb, perish, and funeral (Golding, Atwood, and Goodman, 1966). The 20 neutral words used were: pen, house, friend, pet, holiday, fish, rain, snow, cup, sugar, work, picture, music, mouth, ring, shoe, table, sport, window, and apple. Four neutral words preceeded each of the "death" words. Order of presentation was the same for each subject. The use of response latency rather than response quality (ecolalia, perseveration, or neologisms) would facilitate comparison with previous studies making use of this measure (Alexander, Colley, and Alderstein, 1957; Christ, 1961; Golding et al., 1966). The importance of cross validation and systematic comparison between studies goes without saying.

Previous studies using this measure have consistently found longer latencies to death words compared to neutral words (Christ, 1961; Alexander et al., 1957; Golding et al., 1966; Feifel et al., 1973). Christ (1961) reported that the average response latencies to the words 'death', 'grave' and 'dying' were significantly longer than the latencies to neutral words ($p < .05$). Alexander et al. (1957) found that a population of normal subjects related to death words with greater emotional intensity (indicated by GSR magnitude and longer response latencies) than to equivalent neutral words. The difference in response times was significant at the .01 level. Golding et al. (1966) found that the average number of trials required to recognize tachistoscopically presented death words was significantly longer than the number required to recognize neutral words ($p < .01$). Scores on the Sarnoff Fear of Death Scale (Sarnoff and Corwin, 1969) failed to correlate significantly with the latency measure. He attributed this failure to the inability of the Fear of Death Scale to tap the deeper aspects of an individual's affective reaction to death. The validity of the latency measure in tapping unconscious anxiety was not questioned. Feifel and Branscomb (1973) measured death anxiety at three different levels, the conscious level (measured by scoring the response to the question 'Are you afraid of your own death?', the fantasy level (measured by coding the positivity or negativity of responses to the directive 'What pictures come to your mind when you think about death?', and, below-the-level-of awareness (measured by reaction time to death words). He found that subjects' mean reaction time to death words (6.2 sec) was significantly longer than their reaction time to neutral words ($p < .01$). In each case the longer latencies to death words were interpreted as evidence of deep seated death anxiety. The rationale for this assumption has already been

discussed in the previous section. One study (Lester and Lester, 1970) using recognition thresholds as the dependent variable found that recognition thresholds for death words were significantly lower than for neutral words. He also found that recognition thresholds for active death words (die, strangle, kill and suicide) were significantly lower compared to passive death words (tomb, corpse, coffin, funeral, grave, hearse, morgue, death, and autopsy). There was no significnat difference between passive words and neutral words. Unfortunately the findings of this study have not been replicated in the literature. Hence, the weight of the evidence supports the longer latencies of death words compared to neutral words. Response latencies, recognition thresholds or psychogalvanic skin responses have consistently shown significantly higher scores on all measures to the 'death' words compared to neutral words (Alexander et al., 1957; Christ, 1961; Golding et al., 1966). Greater use of these measures has been urged by those who stress the need to measure the less conscious dimensions of anxiety (Feifel et al., 1973; Yalom, 1980).

The Do It Yourself Death Certificate. The Do It Yourself Death Certificate (DIY) is an abridged facsimile of the death certificate used in the State of Michigan. It was initially developed as a technique for focussing attention on personal mortality in workshops and seminars in thanatology (Sabatini and Kastenbaum, 1973). The developers reported signal success in eliciting affective responses from participants. The instrument was subsequently adopted by Sabatini and Kastenbaum (1973) as part of a test battery for thanatological research. It was used by Mahoney et al., (1975) to compare subjects who anticipated sudden violent death with those who anticipated death from natural causes.

The DIY used in the present study contains seven questions pertaining to the date, place, and circumstances of one's own death. Scores range from zero to seven. Each item left unanswered is scored one. Therefore a score of seven signifies that the subject failed to answer any item on the scale. It has never previously been used as a measure of death anxiety. Feifel (1969; 1973) has emphasised the need to measure death anxiety at various levels, conscious and unconscious. One researcher (Bell, 1975) suggests the use of behavioural type measures such as making a will, taking out life insurance or making one's own funeral arrangements. Filling out one's own death certificate obviously falls into this category. A person's willingness to engage totally, partially or not at all in such an exercise seems, a priori, a valid measure of death anxiety.

Willingness to Visit a Dying Person. The Willingness to visit a dying person (WVDP) was measured by a scale specially designed for the present study. No previously reported study on death anxiety has used such a measure. Aronson and Carlsmith (1968) refer to dependent measures as being on a continuum ranging from behaviour of great importance to the most trivial paper and pencil measures. Close the the behavioural end of the continuum would be a subject's committment to perform a particular piece of behaviour without actually performing it. Aronson et al., (1968) call this a behaviouroid measure. An example of a behaviouroid measure is supplied by Aronson and Cope (1968) who assessed the degree of the subject's liking for the experimenter by having the department secretary ask them to volunteer to make telephone calls on behalf of the experimenter. They were not actually asked to do so. Similarly

Marlowe et al., (1965) wanted to determine the extent to which a subject became more and more committed to his or her liberal beliefs as a function of having lost a money making opportunity because of these beliefs. The major dependent variable was a statement by the subject as to whether or not he was willing to spend a great deal of time escorting some visiting Negroes around the campus. Although the data in these studies are merely verbal statements they are far different from a simple statement like 'I like the experimenter' or 'I like Negroes' (Aronson and Carlsmith, 1968).

The total scale contains five items or responses. The scores range from zero to five (Appendix H). Subjects, who on the appointment card, expressed a wish to visit a dying person and, when contacted to confirm the appointment, were still willing, obtained a score of 1 on the scale; those who said they were unsure but when contacted said 'yes' scored 2; those who expressed their willingness but when contacted said 'no' scored 3; those who said they were unsure but when contacted said 'no' scored 4; those who stated on the appointment that they were not willing to visit a dying person, scored 5 on the scale. Following the treatment stage the subjects were instructed as follows:

> Arrangements are presently being made with hospital authorities to allow you to visit a dying patient. Such a visit may help you overcome some of your apprehensions concerning death and dying. Please indicate whether or not you wish to vist a dying person by filling in the card provided.

All subjects who were contacted for an appointment and who stated

they were still willing to visit a dying patient were given the following message:

> Thank you for your cooperation. Due to unforseen circumstances it is not possible to arrange your visit. Please attend a meeting for all participants for a full explanation of the nature and purpose of the study.

# RESULTS

The overall hypothesis that death anxiety would decrease as a function of verbal expression of affect towards death or instruction in the Christian meaning of death was not supported by the present study. No significant difference was found between the control group and treatment groups or between treatment groups themselves. The present study did confirm the hypothesis that highly anxious subjects had significantly higher death anxiety than either the medium or low anxious subjects irrespective of treatment.

Means and standard deviations for each of the dependent measures, the IPAT and age of subjects are presented in Table 1. The representativeness of the sample is attested to by its conformity to the general norms for the IPAT and the DAS. No norms are available for the WAT. The average response latency for death words of 3.00 (the scale average of 12.02 divided by four) seconds is rather shorter than the 6.1 seconds reported by Feifel and Branscomb (1973) and the difference in average response latencies to death words compared to neutral words of .80 seconds is notably greater than the .30 seconds claimed for it by Kastenbaum and Costa in their 1977 review article. The death words, the neutral words preceeding the death words and the neutral words immediately following the death words are included in the table for purposes of comparison by other researchers. Thorough reporting of findings is crucial in an area frought with ambiguity and in great need of standardized procedures.

Statistical Analyses of WAT

Paired t-tests. Studies previously cited have reported significantly longer latencies to death words and have attributed this to the blocking effects of subconscious death anxiety. The finding of longer latencies to the death words as a group when compared to the neutral or post death words as a group was corroborated by the present study (Table 2). However, this finding did not hold up when a seperate t-test was computed for each death word - neutral word pair (Table 3). Only three of the death words had significantly longer latencies than their respective neutral words.

Correlational analysis of WAT. The first step in testing the assumption of an underlying and unitary explanation for longer latencies was to determine the degree of correlation between the three death words in conjunction with the preceeding neutral words. It is apparent from Table 4 that the death words correlated as highly and more frequently with the neutral words than with each other. In fact only three of the 10 correlations between death words were significant, compared to eight significant correlations between death words and neutral words and seven significant correlation between the neutral words themselves. These correlations suggest a more consistent pattern of response latencies for the neutral words compared to the death words. Among the death words there would seem to be a somewhat contradictory pattern of response latencies.

Factor analysis of Wat. The second step in testing the assumption of an underlying theoretical dimension which would explain the longer

latencies was to factor analyze the WAT results, including in the analysis the death words, the neutral words, and the words immediately following the death words. Table 5 presents the terminal solution of orthogonally rotated factors.

There is scant support for an underlying source variable tying together the death words. The death words load on different factors and with the exception of 'Tomb' are less determined by the factors than the neutral and post-death words. Therefore based on this analysis the death words used in the present study appear to have little in common which would justify attributing their longer latencies to the blocking effects of subconscious anxiety.

Reliability analysis of WAT. The final step in the analysis was to evaluate the reliability of the WAT as an additive five item scale. Such an evaluation has not been previously reported in the death literature, despite the importance attributed to it as a measure of unconscious anxiety (Feifel et al., 1973; Yalom, 1980). It would seem that the face validity of these words has been taken as sufficient evidence for their construct validity as death anxiety measures. Although common sense would suggest that the words coffin, death, tomb, perish, and funeral have a strong cohesiveness it was decided to evaluate it statistically. The results of the first reliability analysis are set forth in Table 6. Taking the scale as the independent variable it accounts for a mere 12 per cent of the variance of item 5 (funeral) which has the highest correlation with the scale, and one per cent of the variance of item 2 (death) which has the lowest correlation with the scale. The standardized alpha of .52 leaves almost 50 per cent of the variance of the scale

unexplained. The word 'death' which would seem to have the strongest claim to inclusion in the scale faired the worst. As a consequence this word was omitted from the second reliability analysis to determine the internal consistency of the remaining items.

The results of the second analysis are set forth in Table 7. Once again the item-total correlations are quite moderate but show less variability compared to the first analysis. This also holds true for the alpha if item deleted value. There is also a modest improvement in the standardized alpha (.57) but not so much as to lend strong support to the internal consistency of the scale.

Correlational analysis of all Measures

Because of the use of measures purporting to assess different dimensions of death anxiety, it was important to determine the degree to which these measures correlated. Kastenbaum (1973) has repeatedly stressed the need for cross validation between direct and indirect measures. The use of behaviouroid measures in the present study made such an analysis even more important as these measures had not previously been used as measures of death anxiety. The IPAT was included in the analysis not only to confirm previous findings of the relationship between death anxiety and general anxiety but also because the IPAT has very rarely been used in conjunction with death anxiety scales in the research. It was therefore important to determine whether it conformed to the general trend of reported relationships between these two variables. The variable of age was also included as previous research on the relationship between it and death anxiety is conflicting and as the sample had a fairly wide age range (22-62) the results of the analysis would add to

our knowledge of the relationship between these two variables.

It is clear from Table 8 that the results of the analysis are in line with previous findings especially with regard to the IPAT and the DAS. The correlation of .26 ($p = .03$) supports previous findings of the modest but significant correlations between paper and pencil measures of death and general anxiety. The behaviouroid measures have a similar pattern of relationships with general anxiety (.33 and .23) which is prima facie evidence of their validity as death anxiety measures. Their credibility is further enhanced by their significant correlations with the DAS, .34 ($p = .008$) in the case of the DIY and .29 ($p = .02$) in the case of the WVDP. If the DAS is considered a criterion measure then the correlations between the behaviouroid measures and it are evidence in support of their construct validity. Perhaps the most encouraging result is the very high correlation between the behaviouroid measures themselves (.64, $p = .000$). They were included in the research as measures of the more behavioural dimensions of death anxiety distinct from self-report and indirect measures. This rationale is fully supported by their very strong relationship. Their claim to measure distinct dimensions of death anxiety is supported by their more modest relationship with the DAS. The correlations between the WAT and the other variables are spectacularly insignificant, with the highest being .11 ($p = .21$) between WAT and the DIY. The lack of even a modest correlation between the WAT and its co-variables may be a forceful argument in support of its discriminant validity but casts serious doubts on its construct validity as a measure of death anxiety. This issue will be further discussed later in this section.

The significant negative correlation between age and the DAS was unexpected in the light of previous findings. Age also tended to be

negatively correlated with the DIY and the WVDP even though not significantly.

Factor analysis of all measures

The next step in the analysis of the data, given the array of correlational coefficients, was to see whether some underlying pattern of relationships existed such that the data might be reduced to fewer factors or source variables. As it was assumed that the correlations were due to shared determinants, namely, general and death anxiety, classical factor analysis was used for the analysis. For rotation to terminal factors, the orthogonal rotational method was the method of choice. The fact that orthogonal factors are uncorrelated makes them simpler to understand mathematically and easier to interpret compared to oblique factoring. Table 9 presents the terminal solution of orthogonally rotated factors. Since it is an orthogonal factor matrix it stands for both regression and correlation coefficients.

The WAT, as might be expected, loads on neither factor. With the exception of the IPAT the remaining variables load significantly on only one factor. The factorial complexity of these variables is thus 1 and, as a consequence, they can be said to measure one theoretical dimension. The IPAT, on the other hand, loads heavily on Factor 2 and moderately on Factor 1. Its factorial complexity indicates it is measuring more than one theoretical dimension. The amount of variance accounted for by Factor 1 is 64.9 per cent (WVDP), 11.49 per cent (IPAT), 15.33 per cent (DAS) and 64.32 per cent (DIY). In contrast, Factor 2 accounts for a mere .005 per cent, .03 per cent, .01 per cent of the variance of WVDP, DAS, and DIY respectively, while accounting for 34.64 per cent of the variance

of the IPAT. Thus the most important determinant of the IPAT is Factor 2.

The fact that three of the death measures load heavily and exclusively on a single factor gives further support to the scales convergent validity and would seem to suggest that the theoretical dimension underlying these measures is death related and more specifically death anxiety. As the IPAT is the only variable to load on Factor 2, and this despite the correlations between these variables, the theoretical dimension underlying this factor would appear to be general anxiety.

This analysis may also help to clear up the question as to whether death anxiety is a part of general anxiety or whether general anxiety is but a manifestation of death anxiety. On the basis of the factor loadings the answer would seem to be that death anxiety is subsumed under general anxiety or, in other words, the significant correlation between the two is a function of overlap on the part of general anxiety.

The failure of the WAT to correlate with other variables suggested a closer look at that measure. Several questions of importance came to mind. Are there significant longer latencies to death words compared to neutral words? If so, is there a significant correlation between the death words and is there a single theoretical dimension underlying the scale?

## Analysis of Variance

The specific hypothesis of the present study was tested through a one way multivariate analysis. Although originally it was intended to run a two way Manova (treatment by anxiety) this was not statistically feasible as the number of variables exceeded the number of observations

in a number of the cells. As is evident from Table 10 the effects of treatment on decreasing death anxiety was nil. This finding confirms the findings of the majority of recent studies using a variety of independent manipulations. All report negative impact on death anxiety as measured, in the main, by paper and pencil measures. This study supports these findings using both self-report, indirect and behaviouroid measures.

The hypothesis of an effect due to general anxiety was confirmed (Table 11). One half standard deviation (5.7) from the mean (28.6) was the cut off scores for high and low anxious groups. The high anxious group differed significantly from the medium and low anxious groups on the DAS measure of death anxiety ($p < .01$). The high anxious group also differed from the low anxious group on the DIY measure ($p < .05$). These results are not surprising in view of the correlations between these measures. This finding gives added support to the theory that death anxiety is subsumed under general anxiety. It would appear that the death anxiety scores of the subjects are a function of their levels of general anxiety. The one exception is the WAT which once again failed to differentiate between groups. This is of course but a reflection of its failure to correlate even moderately with the other measures of death anxiety.

# DISCUSSION

In order to interpret the results of the present study and, perhaps, add to a better understanding of previous negative results, it is necessary to recall the distinction between death anxiety or dread (which is defined theoretically as unconscious) and fear of death (which is defined theoretically as conscious). It is only in the light of this distinction that the results of the present study and previous studies attempting unsuccessfully to decrease death anxiety can be fully understood. This distinction has such crucial implications for measurement (Kastenbaum and Costa, 1977) and treatment that failure to bear it in mind has been the rock on which positive results have perished. If you are skeptical of the existence of the distinction between unconscious and conscious anxiety I ask that you grant the distinction at this point for the sake of argument.

An important reason why the present study and previously reported studies have failed to have any impact on unconscious death anxiety may be logically expressed in the form:

What is unconscious cannot be consciously changed.

Death anxiety is by definition unconscious.

Therefore it cannot be consciously changed.

The present study using a commonly accepted indirect measure of unconscious anxiety, the WAT, failed to find a significant difference between control and treatment groups precisely because the treatment was geared to the conscious fears of the subjects and not its unconscious underpinnings.

This is not surprising when, according to the view of many philosophers and clinicians (Yalom, 1980), this underlying reaction to death is deep seated, strongly repressed and one of the ultimate givens or realities of our existence. We respond to this ultimate reality with 'mortal terror', albeit unconscious. According to this particular viewpoint death anxiety is not only ubiquitous and of such magnitude, but a considerable portion of our energy is consumed in its denial and repression. It would seem that efforts to modify such deep seated anxiety through awareness workshops, desensitization procedures or seminars are unlikely to be successful. The only method with any hope of success is intensive and probably long term dynamically orientated psychotherapy. If, as Yalom (1980) states, "layers of explicit death anxiety must always be reached through long and intensive therapy", the process of reaching the layers of unconscious anxiety must also demand long and intensive therapy.

The methods used to date to decrease death anxiety experimentally could hardly be termed long and intensive psychotherapy. Furthermore while this unconscious anxiety remains unconscious it would seem to be beyond the reach of even the most intensive forms of psychotherapy. Psychoanalysts and existential therapists point to the necessity of making the unconscious conscious before real change can take place in the individual. It appears, then, that unconscious anxiety is completely resistent or impervious to any type of intervention while it remains unconscious.

Even if, as a consequence of our interventions, change did occur in the person's level of unconscious anxiety, the problem of assessing such change at that level has not been yet resolved. Despite the variety of indirect methods used, their reliability and validity as measures of

unconscious death anxiety have yet to be established.

The more fundamental question regarding the existence of unconscious death anxiety has yet to be scientifically resolved. At present the arguments supportings its existence are purely theoretical or philosophical. Operational referents for the construct are lacking. The use of longer latencies or higher GSRs to death words compared to neutral words as operational referents is open to serious question. It is only through positing the mechanism of perceptual defense, as yet unproven, that unconscious death anxiety can be inferred from longer latencies or higher GSRs to death words. Arguing from longer latencies to the existence of perceptual defense and then using perceptual defense to explain longer latencies is logically indefensible. Erickson (1952) suggest that taboo words have been punished more than non taboo words and therefore "We are in a position to account for perceptual defense effects in terms of nothing more mysterious than the empirically established effects of punishment on the probability of occurrence of responses".

The efforts of researchers to modify subjects' conscious death anxiety or fear of death is on the contrary logically quite sound:

What is conscious can be modified or treated.

Fear of death is by definition conscious.

Therefore fear of death can be modified or treated.

Previous studies have explained negative results in terms of treatment length or quality, or the non-suitability of the sample. Length of treatment has varied from three months to a few hours and yet the dependent measures show no significant difference between control and experimental conditions. With regard to sample suitability one apparently important

finding is that only those with high levels of death anxiety show a significant decrease as a function of intervention (Peal et al., 1981). This finding still requires further replication to confirm it as an important sample characteristic. Even if this finding is accepted the absence of positive results using a representative sample from the population still needs explanation.

The simplest and most parsimonious explanation is that the average person's level of fear concerning death is quite low. Efforts at decreasing this already low level of fear still futher will hardly show very significant differences. This effort might be compared to a programme to reduce the incidence of small-pox in Manitoba and finding that as a consequence no significant difference emerged between Manitobans and other provinces with regard to the incidence of small-pox. No less an authority than Kastenbaum (1977) states:

> Only among groups characterized by general psychological disturbance has death anxiety been found to be a prominent concern. Nevertheless, the assumption that death anxiety is universal continues to be salvaged from such data...among healthy individuals death anxiety (is said to be) successfully defended against ... The more parsimonious interpreatation thatfear of death is an exceptional phenomenon limited to disturbed populations is rarely entertained. While defensive denial of death concerns may or may not characterize most indivividuals, denial of the evidence seems to characterize many researchers.

Krieger et al., (1974) have stated quite emphatically that many

people are not threatened by death. There are many people for whom death is integrated in their view of themselves and their world. In other words death is consistent with their conceptual framework or with their existing 'core' constructs. Those for whom death is not an integrated element of their conceptual or construct system but is alien to their self-view or view of the world will feel threatened by it. The more the reality or idea of death conflicts with their personal construct the greater threat it poses and the greater anxiety it engenders.

This viewpoint is a specific application of Kelly's (1955) 'Theory of Personal Constructs'. According to this view each person employs a system of many bi-polar personal constructs, each of which serves to organize and attribute meaning to some portion of his/her world of experience. Thus, for example, in the realm of personal relationships a person might designate some of his friends as shy, whereas others are different in that they are outgoing. Shy-outgoing is the bi-polar construct dimension generated from dealing with the element friend. This theory holds that each person's system of constructs is organized in an hierarchical fashion. The more superordinate constructs are the person's core constructs. These are especially important in that they govern a person's maintenance processes; they enable the individuals to maintain their identity and sense of continuing existence, and they cannot be changed without disturbing the very roots of a person's existence.

In accordance with this theory, if a person's understanding of the world is challenged through an event which cannot be reconciled with a core system, threat is experienced. The amount of threat is directly proportioned to the amount of reorganization needed to integrate the event into the core structure.

According to Krieger et al., (1974) death is such an event for some but not for all people. Only those who place themselves and death on opposite poles of a construct would be liable to experience threat or dread. In support of their theory they found that subjects for whom death was consistent with their view of themselves were better able to conceive of their own death than those for whom death was a construct alien to their self-view. This approach has not received the attention it deserves from researchers in the area.

The philosophical argument for the absence of universal death fear is very clearly outlined by Walton (1976). By way of introduction he quotes a well known passage from Plato in which Socrates gives us very reasonable arguments for not fearing death:

> Death is one of two things. Either it is annihilation, and the dead have no consciousness of anything, or, as we are told, it is really a change--a migration of the soul from this place to another. Now if there is no consciousness but only a dreamless sleep, death must be marvellous gain. I suppose that if anyone were told to pick out a night on which he slept so soundly as not even to dream, and then to compare it with all the other nights and days of his life, and then were told to say, after due consideration, how many better and happier days and nights than this he had spent in the course of his life--well, I think that the Great King himself, to say nothing of any private person, would find these days and nights easy to count in comparison with the rest. If death is like this I call it gain, because the whole of time,

> if you look at it in this way, can be regarded as no more than one single night.

Walton proceeds to set forth three arguments showing that it is unreasonable to fear death. The first argument states that because we only fear what is painful then death should not be feared. In death we feel no pain. From a purely secular or nonreligious view of death Walton (1976) considers this argument quite plausible. The second argument states that being deprived of what we desire is fearful but only if you are going to be present to experience the deprivation. As the state of death, again from a secular viewpoint, is the ultimate state of nonexperience then it ought not be feared. The final argument set forth is quite often heard. A lifespan longer than normal becomes tedious, repetitious and socially undesirable. Therefore it is not rational to fear death or at least premature death. The author sees this final argument as a nonsequitur for longer life does not of necessity imply boredom or repetition. Also there is nothing unreasonable in wishing to live forever in good health and sound mind.

The author pays particular attention to argument two and agrees that a deprivation might rationally be feared even if we are not present to actually experience it. The experience can be anticipated and that as a consequence it would not be unreasonable to experience fear or anxiety at the prospect. He concludes:

> a certain modicum of apprehension or anxiety about death is reasonable, consonant with its undesirability, indeed the tragedy, of being deprived of the continuation of a worthwhile, pleasant life. What is feared under such an

> interpretation we might say, is not death but the cessation of life. To be so preoccupied to the point where other phases of life are interfered with, to fear death as a child fears the dark, to mistakenly associate death with suffering and pain, to be in rage or existential angst about death, are attitudes that, on the secular conception, lack a rational basis for the reasonable, honest and reflective person.

The statements and arguments of these authors gain some empirical support from the study of Peal et al., (1981) which was reviewed in the introduction. Since the hypothesis that death is universally feared is so widely held even in the face of results to the contrary, denial being always inferred to explain it, high priority should be given to resolving this question since it lies at the root of much research in the area.

It is interesting to note that over 20 years ago Munnichs (1961) stressed the need to assess the personal meaning of death for each subject rather than ignore these differences in the interests of the group approach to measurement and treatment. It would seem that the ideopathic approach is long overdue in the area of thanatology.

Specific findings of the present study

A number of significant findings in the area of measurement emerged from the present study. The use of the DIY and the WVDP as measures of death anxiety are a preliminary step towards meeting the need to assess the more personal and behaviouroid dimensions of fear of death. The fact that these two measures correlated quite highly and significantly

is at least initial evidence of their convergent validity. Their moderate but significant correlation with the DAS also constitutes initial evidence of their construct validity as fear of death measures. The fact that all three measures loaded on only one factor supports the contention that a single theoretical dimension, namely, death anxiety, underlies these measures. How they correlate with other measures still requires investigation. The present author will undertake further refinement and testing of these measures.

The present study points to the need for a more critical appraisal of indirect measures and in particular the word association test as a means of assessing unconscious anxiety. It raises questions as to the validity or arguing from longer latencies, higher GSRs, or longer recognition thresholds, to the presence of unconscious death anxiety. Many researchers have made what might be termed this leap of faith (Meissner, 1958; Alexander and Alderstein, 1960; Templer, 1971; Lester and Lester, 1970). The absence of even modest correlations between the WAT and the other measures, coupled with its failure to factor even mildly on either of the factors generated casts serious doubt on its validity as a measure of death anxiety, whether conscious or unconscious. Conscious and unconscious death anxiety have in common the fact that they are the psyche's reaction to anxiety provoking stimuli associated with death. Measures of these two levels of death anxiety must therefore reflect this commonality through sharing some degree of common variance. Even though it is designed to measure unconscious death anxiety it is inconceivable that it should fail to correlate in any way with measures of conscious death anxiety.

Despite the failure of the death words used in the present study to

correlate with each other or factor together it remains theoretically possible that the word association test as such may be a valid means of tapping unconscious material. Its apparent failure to do so may be a function of the words chosen to constitute the death scale. In the present study and in previous studies these death related words have been chosen on the grounds of their obvious face validity. There would seem to be a need to construct future such scales more empirically bearing in mind the personal meaning death has for the individual. It is obviously false to assume that words like 'death' or 'tomb' are of necessity anxiety provoking for all. The distinction made by Lester et al., (1970) between active and passive death words needs further investigation and could be of invaluable help in refining this particular instrument. Only one previous study reports on cross-validation between latencies to death words and a death anxiety scale. As in the present study no significant correlation was found (Golding et al., 1966). Although Templer (1971) reported a significant correlation between the DAS and a GSR measure of death anxiety, the fact that the GSR failed to correlate with a repression-desensitization scale contraindicates its usefulness as a measure of repressed anxiety.

The negative correlation between age and the DAS, while contrary to the trend of previous reports with two exceptions appears theoretically plausible. Assuming that older people think of the reality of their own deaths more realistically and more frequently than younger people it seems reasonable to assume that completing a death anxiety scale would be less anxiety provoking for older than for the younger subject. It is interesting that age also correlated negatively though not significantly with the DIY and WVDP which reinforces the overall trend in the sample. As this is

the first reported study of its kind using a sample of Irish Catholics, living in Ireland, the finding may reflect a real difference between American and Irish age wise trends. Further investigation of this point will be undertaken by the present author. It is possible that with advancing years death becomes more integrated into the 'core' structure of persons living in the strong religious atmosphere prevailing in Ireland.

The positive correlations between the dependent measures and the IPAT were to be expected in view of previous findings. While correlation tells us nothing about causation, the factor analysis carried out in the present study may have helped to clarify the causal nexus between these two variables. From the factor loadings of the IPAT it can be inferred that it is measuring more than one theoretical dimension. From the factor loading of the death anxiety measures it may be inferred that they are measuring but one theoretical dimension. It might reasonably be concluded that the IPAT is measuring both general anxiety and death anxiety, whereas the death anxiety measures are measuring only death anxiety. There are general anxiety is precisely that, a type of anxiety under which is subsumed more specific types of anxiety. The earlier study by Dickstein (1978) lends strong support to this hypothesis at least in the case of females. Recall that when he partialled out trait anxiety the average correlations between four death scales dropped from .59 to .33 for the female sample. He concluded that for females a substantial portion of the commonality between the death scales appears to reflect their common correlations with trait anxiety. In the case of females it appears that death anxiety is subordinate to general anxiety. The precise relationship between death anxiety and general anxiety is another issue which required clarification.

Summary

Lack of agreement seems to be one of the main characteristics of both correlation and experimental studies in the area of death anxiety. There is little agreement among researchers as to the correlates of death anxiety or the effective means of modifying individuals' death anxiety levels. The principal exception to this lack of agreement among studies is the consistent findings of a significant correlation between general anxiety and death anxiety.

Part of the problem is the wide variety of methods used to measure death anxiety. While a variety of such measures are commendable (Campbell and Fiske, 1959), in the absence of systematic comparison and cross validation it may lead to confusion and lack of agreement among studies. It certainly makes comparisons between results a very difficult, if not impossible task.

There is possibly too much ad hoc experimentation and not sufficient exploration of the meaning and import of the basic concepts used. The normal policy of journal editors does not encourage such exploration with the emphasis placed heavily on significant, even if sometimes trivial, results. One assumption which needs thorough airing and debate is the existence of significant death anxiety in the general population; is it such an important variable in the area of thanatology and is its influence as great as the effort and time expanded in studying or modifying it suggests?

The present study while confirming the negative results of previous experimental studies in the area of death anxiety has also confirmed and clarified the relationship between it and general anxiety. It has also contributed to the assessment of the more behavioural dimensions of anxiety

by introducing two potentially useful measures in order to focus attention on what has been a neglected dimension of death anxiety. Furthermore the in-depth analysis of the WAT should be of some assistance to future researchers using this instrument to assess unconscious anxiety. The lessons learned with regard to the WAT in this study ought to be beneficial in pointing out the need for extreme care and caution in future use of the scale. Finally, the need to take the absence of death fear among the normal population as a serious possibility has been stressed. Consequently, as researchers in this area, we might be better advised to devote our skills to identifying those in the society seriously affected by high levels of death fear and concentrate our research efforts to ameliorating such debilitating anxiety.

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# Appendix A

NOTICE IN CHURCH BULLETIN

Volunteers are needed, between the ages of 20 and 65, to participate in a study of attitudes towards death and dying. The total time involved will be approximately three hours. Even if you do not wish to take part in the study would you kindly complete the form enclosed in the envelope in your pew and return them to me within seven days.

Thank you for your cooperation.

Sincerely,

Joseph P. Campbell

Appendix B

Covering Letter

Dear Friend:

I am very grateful for your interest and time. Even though you may not wish to participate further in this study, completing the enclosed form will be of invaluable help in my work.

The purpose of the study is to investigate the attitudes and concerns most of us have about death and dying. I feel certain that sharing your own feelings on the subject with others will prove a helpful and rewarding experience.

If you decide to volunteer, and I sincerely hope you will, I will contact you within the next few weeks in order to make further arrangements. I promise to take up no more than three hours of your time.

All information will be treated in the strictest confidence. On completing the study, I will be happy to share with you the results.

Very Sincerely,

Jospeh P. Campbell

P.S. If you are willing to take part further please put a check here ( ).

Appendix C

# STRUCTURED INTERVIEW

## Instruction for Interviewer

The purpose of the interview is to elicit from the subject his feelings regarding personal death. Hence all questions and interpretations are to be directed towards facilitating the expression of affect. The interviewer's role is to keep the interview focussed on the subject's personal feelings and not allow the session to develop into a philosophical or theological discussion on death and dying.

EXAMPLE: Subject: Death is not fearful as Christ conquered it.

Interviewer: When you think of death is this how you feel, fearless?

## Instructions for Subject

I am very grateful for your cooperation in our study. The purpose of our meeting is to explore your own personal feelings when you think about your own death and dying. Most people find this a topic they prefer to avoid as it makes them feel anxious and uncomfortable. We all have some feelings of anxiety concerning it but it may be difficult to get in touch with those feelings. My role is to help you explore those feelings, so that you may be able to think about death with less anxiety.

## Questions

1. Have you ever discussed the topic of death and dying previously?

   If YES. With whom?

   On what occasion?

   Do you remember what you spoke about?

How did you feel at the time?

How do you feel right now?

If No. Did you ever have an opportunity to discuss it?

What prevented you?

How do you feel now?

2. Have you ever spoken with anyone regarding your own death and dying?

If YES. On what occasions?

What did you talk about?

How did the other person respond?

How did you feel at the time?

If NO. Did you ever feel like talking to someone about your own death?

What would you have said?

What prevented you?

Do you have similar feelings now and what are they?

3. Has another person spoken to you about their death and dying? How did you react and how did you feel?

4. As you think for a moment about your own death what thoughts and feelings are you experiencing?

5. As you think for a moment about your dying what thoughts and feelings are you experiencing?

6. How frequently and at what times do you usually think about death?

7. (Having ascertained from the interviewee information regarding personal illness or illness in the family explore their feelings and concerns in this regard).

8. Have you found our meeting helpful? (Explore the subject's feelings and impressions).

Appendix D

# GROUP DISCUSSION

## Instructions to group leader

The purpose or task of the group is to explore feelings regarding personal death and dying. The main task of the leader is to facilitate and encourage group members to share their personal feelings about death and dying, and to have them give support and feedback to each other. The group leader is to be firm in keeping the focus of the group on expression of feelings and away from intellectual debate. He/she is expected to participate in sharing personal feelings and not allow himself to be forced into an expert role. All questions are to be reflected back to the group, and, when appropriate, to point out the abstract nature of the interactions and steer the group back to the expression of affect.

Example: Subject: Death is natural, one thing must die to give place to new life.

Leader: (if no other gorup member focusses on the speaker's feelings, or a debate begins) "That seems to be a very matter of fact attitude. I wonder if that is how you really feel about your OWN death".

Member: Oh sure.

Leader: Might there be other aspects of dying and death which might affect you differently?

## Instruction to group members

I am very grateful to you all for coming this evening. The purpose of our meeting is to help each other get in touch with our feelings and

concerns about our own death and dying. This is a topic most of us avoid as it makes us uncomfortable and anxious. We have an opportunity here of sharing these feelings of discomfort and anxiety so that we may be able to think about dying without quite as much fear. My role is to get you started and to encourage you to share your own feelings about death and dying with each other.

NOTE: Group discussion was based on the format of the structured interview.

Appendix E

## THE CHRISTIAN MEANING OF DEATH

In the New Testament death is overcome in the ministry of the death and resurrection of Christ. Since the coming of Christ it is possible to speak of death as conquered and impotent.

Death no longer holds dominion over us for by dying Christ destroyed our death and by rising he restored our life. Christ has died once and for all.

Christ by his death has paid back to the Father the debt of our sins. His resurrection is a confirmation of the Father's acceptance of his sacrifice.

For the Christian death and dying is no longer the wages of sin. Rather death and dying is the means whereby the believer is made comfortable to Christ in His suffering. Death and dying is no longer to be feared as a punishment for sin but as means to be united to Christ in his victory over sin and death.

The purpose of our dying is no longer retribution. Those in the state of grace already possess eternal life. In baptism, the Christian is born again; he receives the seeds of eternal life. Through dying and death the seed reaches maturity.

Appendix F

TEMPLER'S DEATH ANXIETY SCALE

| Q | Key | Content |
|---|---|---|
| 1 | T | I am very much afraid to die. |
| 2 | F | The thought of death seldom enters my mind. |
| 3 | F | It does not make me nervous when people talk about death. |
| 4 | T | I dread to think about having to have an operation. |
| 5 | F | I am not all afraid to die. |
| 6 | F | I am not particularly afraid of getting cancer. |
| 7 | F | The thought of death never bothers me. |
| 8 | T | I am often distressed by the way time flies so very rapidly. |
| 9 | T | I fear dying a painful death. |
| 10 | T | I am really scared of having a heart attack. |
| 11 | T | The subject of life after death troubles me greatly. |
| 12 | T | I often think about how short life really is. |
| 13 | T | I shudder when I hear people talking about World War III. |
| 14 | T | The sight of a dead body is horrifying to me. |
| 15 | F | I feel the future holds nothing for me to fear. |

Appendix G

# THE DO-IT-YOURSELF-DEATH CERTIFICATE

## Instructions

This certificate has been developed for use in the investigation of death attitudes including death anxiety. Although thinking about the data, cause and circumstance of your own death is bound to cause some discomfort, we would like you to fill out as much of the certificate as you can. Please feel free to leave out any items which cause you serious discomfort or to stop at any point.

# CERTIFICATE OF DEATH

DECEASED NAME FIRST MIDDLE LAST

1. _____

2. DATE OF DEATH

_____

3. AGE AT DEATH

_____

4. PLACE OF DEATH

_____

5. DEATH WAS DUE TO:

a) natural causes:

_____

b) Other causes _____

_____

6. DEATH WAS CAUSED BY:

a) Immediate cause:

_____

b) Due to or as a consequence of _____

_____

c) Other conditions contributing to death but not related to a or b:

_____

_____

7. PLACE AND DATE OF BURIAL OR CREMATION: _____

Appendix H

# WILLINGNESS TO VISIT A DYING PERSON

Name: _____

1. I am willing to go ( ).

   Please contact me for an appointment ( ).

   Telephone # _____

2. Thank you but I am not willing ( ).

3. I am not sure ( ).

   Please contact me and I will let you know ( ).

   Telephone # _____

Please indicate your choice by checking the appropriate box.

## SCALE

| Number | Response | Score |
|---|---|---|
| 1 | Thank you but I do not wish to go. | 5 |
| 2 | I am not sure--when contacted say NO. | 4 |
| 3 | I am willing to go--when contacted say NO. | 3 |
| 4 | I am not sure--when contacted say YES. | 2 |
| 5 | I am willing to go--when contacted say YES | 1 |

Table 1

Means, Standard Deviations and Standard Errors

| Variables | Means | Stan. Dev. | Stan Err. |
|---|---|---|---|
| AGE | 42.2 | 10.27 | 1.45 |
| IPAT | 28.62 | 11.48 | 1.62 |
| DAS | 7.1 | 3.22 | .45 |
| DIY | 2.7 | 2.08 | .28 |
| WVDP | 2.1 | 1.6 | .22 |
| WAT | | | |
| neutral words (pre) | 9.55 | 6.08 | 8.6 |
| death words | 12.02 | 7.06 | 9.97 |
| neutral words (post) | 8.04 | 3.58 | 7.9 |

Table 2

Paired t-Tests between the Death Words, Neutral Words (Pre), and Neutral Words (Post)

| Variable | Mean | Mean. Diff. | t-Value | Prob (two-tailed) |
|---|---|---|---|---|
| Death Scale | 12.02 | | | |
| comp. to | | 2.46 | 2.46 | .01 |
| Neutral (Pre) | 9.55 | | | |
| Death Scale | 12.02 | | | |
| comp. to | | 3.91 | 4.79 | .000 |
| Neutral (Post) | 8.11 | | | |

Table 3

t-Tests for Neutral-Death Word Pairs

| Variable | Mean | Mean Diff. | t-Value | Prob. (two-tailed) |
|---|---|---|---|---|
| Holiday | 2.40 | | | |
| and | | .12 | .36 | .72 |
| Coffin | 2.28 | | | |
| Snow | 1.96 | | | |
| and | | 1.58 | 2.79 | .008 |
| Death | 3.54 | | | |
| Picture | 3.39 | | | |
| and | | .38 | .60 | .554 |
| Tomb | 3.01 | | | |
| Shoe | 1.87 | | | |
| and | | 1.40 | 2.83 | .007 |
| Perish | 3.27 | | | |
| Apple | 1.88 | | | |
| and | | 1.56 | 3.54 | .001 |
| Funeral | 3.45 | | | |

Table 4

Pearson Correlation Coefficients between the Words comprising the WAT

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Holiday | 1.0 | .09 | .03 | -.07 | .24' | .59" | .13 | .22 | .17 | .07 | 1 |
| Coffin | | 1.0 | .28' | -.06 | .18 | .21 | .42" | .15 | .31" | .40" | 2 |
| Snow | | | 1.0 | .08 | .23' | .23' | .47" | .62" | .42" | .31" | 3 |
| Death | | | | 1.0 | -.01 | .02 | .13 | -.04 | .05 | .42" | 4 |
| Picture | | | | | 1.0 | -.00 | .27' | .15 | .53" | .18 | 5 |
| Tomb | | | | | | 1.0 | .04 | .33" | .20 | .16 | 6 |
| Shoe | | | | | | | 1.0 | .15 | .32" | .40" | 7 |
| Perish | | | | | | | | 1.0 | .22 | .18 | 8 |
| Apple | | | | | | | | | 1.0 | .22' | 9 |
| Funeral | | | | | | | | | | 1.0 | 10 |

' $p < .05$; " $p < .01$

Table 5

Factor Analysis of Word Association Test

| Variable | Communality | Factor I | Factor II | Factor III |
|---|---|---|---|---|
| **Factor Matrix using Principal Factor with Iterations** | | | | |
| Holiday | .51 | .31 | .45 | .44 |
| Coffin | .28 | .51 | .11 | .08 |
| Pet | .57 | .51 | .46 | -.29 |
| Snow | .66 | .72 | -.02 | -.37 |
| Death | .04 | .07 | -.18 | .04 |
| Cup | .15 | .35 | -.00 | -.16 |
| Picture | .28 | .41 | -.23 | .22 |
| Tomb | .77 | .47 | .71 | .23 |
| Music | .61 | .58 | -.22 | .46 |
| Shoe | .49 | .62 | -.30 | .09 |
| Perish | .37 | .55 | .19 | -.18 |
| Sport | .44 | .48 | -.17 | -.41 |
| Apple | .42 | .63 | -.15 | -.06 |
| Funeral | .36 | .48 | -.27 | .23 |
| EIG. VAL | | 3.6 | 1.35 | 1.05 |
| PER. VAR | | 60.0 | 22.5 | 17.5 |
| **Varimas Rotated Factor Matrix** | | | | |
| Holiday | | -.03 | .18 | .69 |
| Coffin | | .29 | .43 | .11 |
| Pet | | .62 | -.10 | .11 |
| Snow | | .77 | .25 | .05 |
| Death | | .00 | .17 | -.09 |
| Cup | | .36 | .13 | .03 |
| Picture | | .11 | .51 | .05 |
| Tomb | | .26 | .00 | .84 |
| Music | | .06 | .74 | .23 |
| Shoe | | .34 | .61 | .01 |
| Perish | | .54 | .12 | .26 |
| Sport | | .61 | .17 | -.17 |
| Apple | | .47 | .44 | .06 |
| Funeral | | .14 | .58 | .10 |

Table 6

Reliability Analysis of Five-Item WAT Death Measure

| Scale | Item Total Corrl. | If Item Deleted | | |
|---|---|---|---|---|
| | | Mean | Variance | Alpha |
| Coffin | .26 | 13.2 | 6.8 | .44 |
| Death | .16 | 12.0 | 4.9 | .49 |
| Tomb | .27 | 12.5 | 5.8 | .39 |
| Perish | .19 | 12.3 | 5.0 | .46 |
| Funeral | .48 | 12.1 | 4.3 | .21 |

Grand Mean: 3.11

Reliability Coefficients: Alpha = .46; Standardized A pha = .52

Table 7

Reliability Analysis of the Four Item WAT Death Measure

| Scale | Item Total Corrl. | If Item Deleted | | |
|---|---|---|---|---|
| | | Mean | Variance | Alpha |
| Coffin | .36 | 9.7 | 4.3 | .45 |
| Tomb | .34 | 9.0 | 3.4 | .37 |
| Perish | .32 | 8.7 | 2.4 | .41 |
| Funeral | .28 | 8.5 | 2.9 | .43 |

Grand Mean = 3.0

Reliability Coefficients: Alpha = .49; Standardized Alpha = .56

Table 8

Correlation Coefficients: Dependent Measures, Age and IPAT

| | AGE | IPAT | DASI | DIYI | WVDPI | WAT | DAS2 | DIY2 | WVDP2 |
|---|---|---|---|---|---|---|---|---|---|
| AGE | 1.0 | -.11 | -.24' | -.09 | -.11 | .11 | -.26' | .16 | -.20 |
| IPAT | | 1.0 | .26' | .33" | .23' | .03 | .32" | .29' | .31" |
| DASI | | | 1.0 | .33" | .29" | -.02 | .70" | .12 | .30" |
| DIYI | | | | 1.0 | .64" | .11 | .29' | .48" | .48" |
| WVDP1 | | | | | 1.0 | .05 | .33" | .34" | .62" |
| WAT | | | | | | 1.0 | .14 | .08 | .07 |
| DAS2 | | | | | | | 1.0 | .22' | .40" |
| DIY2 | | | | | | | | 1.0 | .39" |
| WVDP2 | | | | | | | | | 1.0 |

' $p < .05$; " $p < .01$

Table 9

Factor Analysis of the Dependent Measures and the Ipat

| Variable | Communality | Factor I | Factor II |
|---|---|---|---|
| Factor Matrix using Principal Factor with Iterations | | | |
| WAT | .01 | .01 | .09 |
| DAS | .19 | .42 | .09 |
| DIY | .65 | .80 | -.08 |
| WVDP | .65 | .76 | -.27 |
| IPAT | .48 | .48 | .49 |
| Eig. Value | | 1.6 | .35 |
| Pct. Var. | | 82.5 | 17.5 |
| Varimax Rotated Factor Matrix | | | |
| WAT | | -.09 | .09 |
| DAS | | .39 | .19 |
| DIY | | .80 | .11 |
| WVDP | | .80 | -.07 |
| IPAT | | .33 | .60 |

Table 10

Analysis of Variance Summary Table

Multivariate Tests of Significance

| Test Name | value | approx. F | Hypoth. DF | Error DF | Sig. of F |
|---|---|---|---|---|---|
| Pillais | .15 | .45 | 16 | 180 | .965 |
| Hotellings | .16 | .41 | 16 | 162 | .977 |
| Wilks | .85 | .43 | 16 | 128.95 | .971 |

Univariate Tests of Significance

| Variable | Hypoth. SS | Error SS | Hypoth. MS | Error MS | Sig. of F |
|---|---|---|---|---|---|
| WAT | 212.06 | 2423.52 | 53.31 | 539.45 | .98 |
| DAS | 16.1 | 491.9 | 4.15 | 10.93 | .82 |
| DIY | 11.9 | 185.7 | 2.9 | 4.12 | .58 |
| WVDP | 4.12 | 123.9 | 1.03 | 2.75 | .82 |

Table 11

Comparison of High, Medium and Low Anxious Subjects on levels of Death Anxiety

| Variable | N | Mean | Stan. Dev. | df | T-Value | Prob." |
|---|---|---|---|---|---|---|
| DAS | | | | | | |
| Low Anx | 15 | 6.4 | 2.4 | 28 | -2.22 | .01 |
| High Anx | 15 | 8.8 | 3.2 | | | |
| DIY | | | | | | |
| Low Anx | 15 | 2.1 | 1.7 | 28 | -1.74 | .04 |
| High Anx | 15 | 3.3 | 2.4 | | | |
| WVDP | | | | | | |
| Low Anx | 15 | 1.9 | 1.38 | 28 | -.88 | .19 |
| High Anx | 15 | 2.4 | 1.8 | | | |
| WAT | | | | | | |
| Low Anx | 15 | 11.27 | 7.06 | 28 | -.15 | .885 |
| High Anx | 15 | 11.65 | 7.33 | | | |
| DAS | | | | | | |
| Med Anx | 20 | 6.3 | 3.5 | 33 | -2.21 | .01 |
| High Anx | 15 | 8.8 | 3.2 | | | |
| DIY | | | | | | |
| Med Anx | 20 | 2.6 | 1.7 | 33 | -1.15 | .12 |
| High Anx | 15 | 3.4 | 2.4 | | | |
| WVDP | | | | | | |
| Med Anx | 20 | 2.05 | 1.6 | 33 | -0.71 | .24 |
| High Anx | 15 | 2.4 | 1.8 | | | |
| WAT | | | | | | |
| Med Anx | 20 | 12.8 | 7.15 | 33 | .49 | .31 |
| High Anx | 15 | 11.65 | 7.33 | | | |

" one-tailed.