

1983

A study of the relationship of death anxiety to openness toward change and sense of well-being

Joan Ruth. Moore

College of William & Mary - School of Education

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**A STUDY OF THE RELATIONSHIP OF DEATH ANXIETY TO OPENNESS
TOWARD CHANGE AND SENSE OF WELL-BEING**

The College of William and Mary in Virginia

Ed.D. 1983

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A STUDY OF THE RELATIONSHIP OF DEATH ANXIETY
TO OPENNESS TOWARD CHANGE AND
SENSE OF WELL-BEING

A Dissertation
Presented to the
Faculty of the School of Education
College of William and Mary in Virginia

In Partial Fulfillment
Of the Requirements for the Degree
Doctor of Education

by
Joan Ruth Moore
May 4, 1983

APPROVAL SHEET

We the undersigned do certify that we have read this dissertation and that in our individual opinions it is acceptable in both scope and quality as a dissertation for the degree of Doctor of Education.

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Dedication

To Cindy, my daughter
and best friend.

ACKNOWLEDGMENTS

To those who have had a meaningful part in the preparation of this report, I would like to express my sincere appreciation:

To Cindy, my daughter, who lived through this experience with me, who gave so much love, support, help and encouragement, who kept me going in times of discouragement and whose belief in me never wavered,

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So live, that when thy summons comes to join
The innumerable caravan, which moves
To that mysterious realm, where each shall take
His chamber in the silent halls of death,
Thou go not, like the quarry-slave at night,
Scourged to his dungeon, but, sustained and soothed
By an unfaltering trust, approach thy grave
Like one who wraps the drapery of his couch
About him, and lies down to pleasant dreams.

William Cullen Bryant

. . . never send to know for whom the bell tolls;
it tolls for thee.

John Donne

A STUDY OF THE RELATIONSHIP OF DEATH ANXIETY
TO OPENNESS TOWARD CHANGE AND
SENSE OF WELL-BEING

Chapter 1

Introduction

Throughout the ages, the meaning of death and dying and its meaning within the life process have been of much concern to humankind. Philosophers and theologians have speculated and written about the relationship of death to life. However, in the past, the influence of this relationship has been relegated to philosophy, religion or even the mystical realm of thought. With the growth of Existentialism, the Humanistic movement and the work of Elisabeth Kubler-Ross with terminally ill patients, the contemporary climate is ready for deeper inquiry and empirical measurement of the relationship of life and death.

In the last 20 years some attempts have been made to determine influencing variables in the life-death relationship. The rise in public awareness of the experiences of the dying person and their significant others has brought a surge of inquiry concerning death attitudes in relationship to dynamics of individuals in the process of living. This interest has produced a diversity of studies and a diversity of results (Pollak, 1979). To date, none have directly addressed empirically the possibility of a dying process, similar to that of the dying individual, as being part of change or transition (positive or negative). Some researchers have, however, suggested from post-hoc observations of their own study or review of other's research that a death quality may be experienced in life changes by having to relinquish old patterns and ways of being (Dickstein, 1972; Pollak, 1979). That is, change contains a death quality signified by the losses involved.

This concept may be more easily seen when negative changes occur, changes that involve obvious loss and sadness to the individual such as loss of a job, divorce and, for some, retirement. Positive changes may contain less explicit expressions of loss but still contain this element. The wedding could be an example of this. Though the change is generally considered one of joy and moving forward in life, there is also an ending to a previous period of one's life which may be experienced as occasional sadness or nostalgia.

In other areas, such as counseling where change is a common component of the therapeutic process, this concept may be readily observed. The college counselor notes the student expressing eagerness for independence while simultaneously resisting the loss of parental dependencies. The therapist may be baffled by a client's resistance to making a change even though the client strongly desires the change or the improved mental patient's reluctance to leave the institutional setting. The vocational counselor may wonder why one individual makes needed occupational changes smoothly yet another individual will not move from an unwanted position in which that change could be facilitated. When the therapeutic resistance is reached in counseling and the client seems blocked in his/her therapeutic progress, one could wonder if mourning of losses is needed to bridge previous therapy with continued future progress in therapy. Finally, at some point during therapy, clients will sometimes express thoughts or dreams concerning death. The symbolization in dreams (Freud, 1965) and the integration of conflict into solution through symbolism (Breger, Hunter, and Lane, 1971) suggest the use of these symbols in resolving stress situations. Therefore, thoughts and

dreams concerning death may be expressions of the losses in change that the client is presently experiencing.

In several areas of counseling, a model for mourning losses in change is already in use (Froiland and Hozman, 1977; Heikkinen, 1979). Divorce counseling is one example in which the model is applied to resolve the death of a relationship (Froiland and Hozman, 1977; Hozman and Froiland, 1977). Death resolution has also been an integrated part of psychodrama for many years (Blanter, 1973). These represent counseling efforts in which the theory has been translated into practice and with apparent success yet research has not, to date, substantiated the reality of the logic.

Another element incorporated within this change concept is the sense of well-being, as a belief by the individual of his/her capability to cope with change and the losses involved. If an individual has high death anxiety and cannot comfortably make needed changes in his/her life, logically it would seem that he/she would not experience a sense of well-being. That is, the individual would not be able to move to the higher level of Existential functioning which also seems to imply sense of well-being. Therefore, the element well-being was included in the study.

Need for the Study

The benefits this study was striving toward were the following:

Theory

1. to begin to understand in what ways life and death are related,
2. to identify a possible dynamic involved within the change process which may lend understanding as to why some individuals make desired

changes smoothly while others either do not make desired changes or have more difficulty in the process.

Counseling

1. to aid individuals in making desired changes by awareness of losses and the mourning process involved,
2. to provide a framework in which the counselor can devise new tools to aid the client through understanding of the deeper underpinnings of change, resistance to change and sense of well-being,
3. to substantiate or reject present counseling methods in specific areas such as divorce counseling.

Education

1. to suggest death education as beneficial to the individual in accepting and understanding the losses that are involved in change and the influence of their own death attitudes upon their life patterns.

Purpose of the Study

This paper poses two specific problems within the life-death relationship:

1. Is there a death quality in the losses involved in change (positive or negative) which influences the smoothness of transition through the various changes required in life, and
2. Does anxiety concerning death relate to resistance in making needed changes (positive or negative), reluctance to give up losses and a low sense of well-being?

This study is an attempt to give some resolution to the questions for use in theory, counseling and education. A more general attempt of the study is to begin identification of elements involved in the

life-death relationship and empirically investigate that which has previously been considered mystical. The premise of the paper is based on the concept that there is a loss process in life change similar to losses experienced in the death and dying situation. Further, that the individual's attitude toward death relates to his/her making or not making needed changes and moving or not moving through life transitions relatively smoothly. In the behavioral science field these ideas are presently only conjecture.

The purpose of this study was to investigate as part of the life-death relationship the specific question, does death anxiety relate to openness to change, willingness to give up losses and a sense of well-being.

Theoretical Background

Several contemporary theorists have attempted to deal with the problem of a life-death relationship and the development of a theory seems to move from general and philosophical connections between life and death to the more specific concept of the relationship between death and change as concluded from study and observation. This section reviews the theoretical thinking in terms of the life driving force, existentialism and humanism, futurism, postponement and the specific relationship of death to change.

Life Driving Force

One of the more intriguing possibilities is presented by Ernest Becker (1973), in his book The Denial of Death. In this writing, Becker rejects Freud's theory of sexual energy as the life driving force and postulates instead that death attitudes serve this function. That is,

the individual's death attitude will influence the direction of his/her life, choices and decisions. Peter Koestenbaum (1976) lends some agreement to this idea when he writes, "The analysis of death is not merely one of many approaches to understanding life - it is the fundamental one" (p. 31). Though Becker does not evaluate the process of change specifically, certainly one's direction, choices and decisions involve change or the lack of it.

Existentialism and Humanism

Existentialists, who initiated the contemporary interest concerning death (Koestenbaum, 1976), have maintained as a basic tenet in their theory that awareness of one's own death is central to the highest levels of mental health. They hold generally that in the confrontation of death one becomes more aware of his/her aliveness, noticing and attending to the fact that one is alive rather than taking life for granted and allowing the awareness to become lost in mundane daily activity. Humanistic theorists have not been greatly concerned with the concept of death but instead stress the joy and meaning of life. Peter Koestenbaum (1976) and Irving Yalom (1975) attempt to bring together the Existential emphasis on death and the Humanistic emphasis on the meaning of life (considered the pessimistic vs the optimistic dimensions) into a workable compromise by relating the two.

Both Koestenbaum (1976) and Yalom (1975) agree that the Humanistic approach alone, with the emphasis only on optimism, is too simplistic. They contend that by facing pain and tragedy (Existential emphasis) one can then reach meaning in life and optimism (Humanistic emphasis). Yalom, who has worked with groups of terminally ill patients, suggests

a compromise between the two theories in "coming to terms with one's own death in a deeply authentic fashion permits one to cast the troublesome concerns of everyday life in a different perspective. It permits one to trivialize life's trivia" (p. 87). Koestenbaum supports this when he writes, "meaning comes from experiencing the anxiety of death" (p. 43).

In the merging of Existential and Humanistic theories, the relatedness of death and life begins to take form and both writers seem to agree that there is some kind of relationship. Koestenbaum suggests that in facing death, one becomes aware of time limitations and the movement of time and that life can then be seen in its totality. Yalom writes that when one faces death, reality is sharpened and the loneliness of death is experienced. Yalom goes a step further and links this to life changes when he states also that, "Choice and freedom invariably imply loneliness . . ." (p. 88). Though he does not expand this idea, he does suggest a connection between the experience of death and the experience of change.

Victor Frankl (1959), from his experiences in the concentration camps in Germany where death was common, advanced the concept of the individual's need to put meaning into his/her life. He noted that when individuals in the camp seemed to lose meaning to their lives and specifically lost the belief that their imprisonment had some meaning in a larger plan, they would tend to sicken and die. This observation includes Frankl's interpretation of the behavior. It is perhaps equally possible that when the individuals began to feel ill and that death was close, they ceased searching for meaning. Cause and effect are not

clear although this may represent a rare observation to support the idea that there is a relationship between life's meaning and death.

Futurism

Expansion into the future and a future orientation become important to growth and change. Though the individual is always moving into future time, change brings this into sharper awareness and requires relinquishing of the past. This produces losses for the individual. Further, change is part of growth, growth is future oriented and death lies in the future. Therefore, the future becomes important in terms of the ability to cope with change and death.

Rejecting Freud's reductionism and his idea of the past as a pushing force, several theorists have postulated the future as a pulling force and the basic motivator of human growth. An early theorist to break with Freud and incorporate futurism in his own theory was Alfred Adler with his concept of goal directedness and goal strivings. Though Adler (1964) saw the striving as motivated by seeking superiority from feelings of inferiority in childhood, striving for a goal and movement toward the future are basic dimensions of his theory. Along similar lines, Gordon Allport (1955), with his concept of propiarte striving, also emphasizes future direction in terms of goal directedness. He stresses that "striving is apparent, always has a future reference . . . (and that) long range goals regarded as central to one's existence, distinguishes the human from the animal . . ." (p. 51).

Victor Frankl's emphasis on the search for meaning in one's life would seem to imply that the search itself lends a future direction to his theory. In his book, The Unheard Cry for Meaning, (1978), he

considers the past more as a tool. He refers to his concept as the "activism of the future" in which opportunities of choosing new possibilities are important with the past serving only to provide information which may be pertinent to those possibilities (p. 110). He had previously stated in The Unconscious God (1975) that ". . . man's being responsible can never be traced back to his being driven - the self can never be traced back to any drives or instincts" (p. 57). Further, he sees the highest level of human functioning as involvement with social direction and occupation "with something or someone out there (p. 78) . . . a cause for which to fight" (p. 92). Supporting this he quotes Abraham Maslow that self-actualization is best done in "commitment to an important job" (p. 78).

Abraham Maslow (1968, 1970, 1971) could also be considered futuristic in his ideas as he sees growth as a continuing process. Though he rejects goals per se, his concept of the highest level of mental health and functioning as being committed to a job of importance in the environment could also be considered, in a sense, committed to a goal. Certainly Maslow's theory of the resolution of needs in a hierarchical and upward or forward direction gives a futuristic slant to his thinking. As each need is satisfied, movement to the next need indicates that change must occur. To move through the various levels of this hierarchy would seem to require the capability and willingness to make changes.

In general, the futuristic concept suggests that the well functioning individual is open to the future and moves into the environment with goals and dedications that also have a futuristic direction. In this situation the individual is required to relinquish previous life patterns

and old ways of being. This means accepting loss as part of the process. Further, the future contains death, the final and ultimate loss.

If individuals have high anxiety about death, they may not wish to look to the future. They may not wish to make changes because this brings the awareness of the passage of time. They may not wish to experience present losses that remind them of the final loss. In a sense they use the avoidance of change in order to avoid the reality of death. Of course, this is perceptual. They move toward the future and death anyway but reject the realization of this. Likewise, they avoid the reality of the final loss by not making present changes. Therefore, death attitudes may well influence willingness to make changes and/or the amount of difficulty incurred if change is thrust upon them.

Postponement and Awareness of Life

A major endeavor in the area of understanding death and the dying process has been done by Elisabeth Kubler-Ross (1969, 1975) working with terminally ill patients. From her experiences, she identified a process of dying and loss organized in terms of stages the individual passes through. In the last chapter of her book, Death the Final Stage of Growth (1975) Kubler-Ross concluded from her experiences that:

Death is the key to the door of life . . . it is the denial of death that is partially responsible for people living empty, purposeless lives: for when you live as if you'll live forever, it becomes too easy to postpone the things you know that you must do. (p. 164)

Koestenbaum (1976) supports Dr. Kubler-Ross's conclusion when he states, "And we compulsively postpone the realization that we are dying. Unfortunately, what this also does is to postpone our living" (p. 49).

Along this line of thought, clinical social worker Dorothy Paulay (1977), relating her experiences of the 5-year dying process of her husband may best summarize the situation when she states "Fear of death may be more a problem for the living than for the dying" (p. 178). She also supports much of the previous thinking when she says,

Only by coming to terms with death, by accepting it as a companion and knowing that it will eventually possess me, can I possess my life and make it richer and more meaningful,

and of the experience she writes,

It has heightened my awareness of the shortness of life by emphasizing its quality and beauty. (p. 179)

At this point, the concepts are still philosophical and diverse.

Relationship of Death to Change

One of the early identifications of the relationship of death to change was made by Louis Dickstein (1972). Studying death concerns he postulated that,

The reluctance to experience change is consistent with a high level of concern about death. Clinging to the familiar may be a defense against the passage of time leading to inevitable death. In addition, change itself is a form of death insofar as it represents the abandonment and loss of past modes of being. (p. 570)

Application of the concept that death and change are related is being practiced in several types of counseling today, most commonly divorce counseling. Donald Froiland and Thomas Hozman (1977) related the stages of dying from the work of Kubler-Ross to their observations

and methods in working with divorcing and divorced clients. They approached the divorcing process as a death of a relationship and noted clients progressing through the stages of the mourning process, similar to that experienced by the dying and their relatives. In their report, they present techniques for each stage of the process that they have found to be effective and successful with clients in their own clinical practice. They also related this concept for children of divorcing parents (Hozman and Froiland, 1977). In a recent paper, Charles Heikkianan (1979), suggested that the grief process and need for mourning occurs in "all life changes" including the change brought about through counseling. He also presents a model and techniques (similar to those used in Psychodrama) that he employs in counseling to facilitate the mourning process.

Finally, Pollak (1979), in a review of ten years of research, supports these observations when he writes that,

Change itself may be experienced as a form of death insofar as it can represent the jettisoning and loss of past ways of thinking and being which have been viewed as significant adaptations in one's life. (p. 104)

In sum, theoretical background available concerning the concept of a relationship between life and death is general in nature. Several writers, Becker, Koestenbaum, Yalom, Kubler-Ross, Frankl, and Pauley indicate agreement that there is some kind of a life-death relationship and that it is influential to human existence. Other theorists such as Adler, Alport, and Maslow have elements within their theories which are applicable to this study but do not deal directly with the life-death

issue. Observations concerning the specific relationship of death to change are presented by Dickstein, Froiland, Hozman, Heikkinen and Pollak.

Empirical studies supporting the theory of a relationship between death attitudes and openness to change and the losses involved are lacking. Though some of the recent studies are indirectly related, this specific relationship has not been empirically researched at this time.

Definition of Terms

The following terms are defined to clarify and operationalize the concepts as they are used in this investigation.

Death Anxiety

The anxiety produced by thoughts concerning death as measured by the Templer Death Anxiety Scale (Templer, 1970).

Openness to Change

The willingness to accept new experiences, move beyond the trauma of crisis and relinquish losses in life situations as measured by the Flexibility Scale from the California Psychological Inventory (CPI), the Change Scale from the Edwards Personal Preference Schedule (EPPS), and the Change Scale and Lability Scale from the Adjective Check List (ACL) provided in the respective manuals (Gough, 1975; Edwards, 1959; Gough and Heilbrun, 1965).

Well-being

Comfort and general sense of satisfaction and freedom from unsubstantiated fear and physical complaints as measured by the Well-being Scale and the Intellectual Efficiency Scale from the California Psychological Inventory (Gough, 1975).

General Hypotheses

There are three hypotheses presented in this study:

Hypothesis 1

There will be a significant negative correlation between performance on the Templer Death Anxiety Scale and the measures of openness to change by the subjects.

Hypothesis 2

There will be a significant negative correlation between performance on the Templer Death Anxiety Scale and the measures of well-being by the subjects.

Hypothesis 3

There will be significant positive inter-correlations between performance on all measures representing openness to change and well-being by the subjects.

Overview

In this chapter, the writer has presented the introduction, need for the study, purpose of the study, the theoretical background, definition of terms and the general hypotheses. In Chapter 2 a review of related research is discussed. Chapter 3 describes the organization of methodology which encompasses a description of the sample selected for the study, procedures for measuring the population, ethical safeguards, instrumentation used, and the research design chosen for the study including the statistical hypotheses and statistical analyses. Chapter 4 contains the analysis and results of the data. Chapter 5 presents the summary, conclusions, recommendations for future research and limitations of the study.

Chapter 2

Review of Related Research

In the empirical studies of death, dying and loss, there has been a large diversity of variables measured. Results have shown inconsistencies in many areas and the struggle to devise adequate measuring instruments and methods during the time of these studies seems typical of investigation in a new dimension of human dynamics. Studies supporting the theory of a relationship between death attitudes and change are minimal and inconclusive. However, other indirectly related studies lend some support to the concept.

Some Aspects of Change and Sense of Well-being as Related to Death Anxiety

Areas of related studies to the concept of this paper are general future orientation, change, self actualization and purpose in life and well-being. These areas are not distinct. There is much overlap and occasionally the supportive evidence is an unexpected result from the research not the original quest of that research. Further, the concept of future orientation underlies all the areas of supportive research.

General Future Orientation and Death Attitudes

Robert Kastenbaum (Feifel, 1959) made one of the early attempts to measure death attitudes in relationship to time orientation and structuring principle with a population of 260 adolescents fifteen, sixteen and seventeen years of age. Using a variety of objective measurement techniques including stimulus words with paired opposites and a line drawing technique, he discovered that the majority of his subjects

structured death as a separate self-contained construct. That is, when the subjects were presented with the stimulus words death, good, real, life, bright and myself (order of presentation was not reported) and requested to relate these to a list of paired-opposite words choosing one from each pair, the subjects tended to group all concepts together except death. He stated "the adolescent has one frame of reference in terms of which he regards most things; but death is separated from this dominant view, and structured much differently" (p. 102). Suggesting the possible objection that the stimulus words presented a bias and words such as despair or oblivion might produce different results, Kastenbaum expressed that,

The important point is that death, as representative of one particular class of emotionally loaded ideas, does stand diametrically opposed to another class of emotionally loaded ideas which we know to include the adolescents' identity (myself), sense of urgency, and significance (real), and positive value (good), etc." (p. 105)

The subjects were also asked to draw lines in which the length of the line represented time in response to three questions;

1. "What is a long time alone?"
2. "What is a long time to be in a dark room?"
3. "How long is it from youth to old age?" (p. 108)

These lines were then measured and the results showed that the lines for the first two questions were quite short while the line for the third question was quite long. Further, the measured length of the lines per question was relatively equal and consistent across subjects.

Kastenbaum also noted that his subjects regarded "their remote time fields as risky, unpleasant, and devoid of significant positive values" (p. 104) and that this applied to both future time and past time. He concluded that the adolescents lived in an "intense present", that "extremely little explicit structuring is given to the remote future" and that though more explicit structuring is given to the past than the future it is also "seen as a risky, unpleasant place" (p. 104).

Interesting to Kastenbaum's study is that a small number of subjects (15%) did not organize death and time in this manner. Kastenbaum reported concerning these subjects that,

Instead of keeping the thought of death separate from their present functioning, they attempt to structure their life in terms of goals and experiences far removed in time. The prospect of death is very much alive for them; it enters actively into the decisions they are making while still in the transitional world of adolescence. (p. 109)

Kastenbaum did not suggest an evaluation of the meaning of this in terms of anxiety or acceptance but it would seem to indicate that the inclusion of death in present structuring relates to an orientation toward the future. For these adolescents, openness to the idea of death as a reality allowed them to be willing to plan, prepare and make or accept change in the future.

Dickstein and Blatt (1966) in a correlative study of 28 male undergraduates enrolled in an Introductory Psychology course at Yale University (14 measuring high death concern and 14 measuring low death concern) reported a relationship between high death concern and fore-shortened time perspectives. That is, individuals with high death

concern tended to be significantly more present oriented. The Picture Arrangement subtest of the WAIS and four story completion roots were used to measure time perspective. Important to the results of this study was that measurement for death attitudes was non-linear. The subjects involved had been pre-tested a month earlier for their death concern attitudes using an author originated questionnaire (which later was developed and refined into the Dickstein Death Concern Scale). Only those individuals scoring in the lowest and highest quartiles were chosen to be measured for time perspective. Therefore, this result gives information in one direction (the high death concern group) but this does not necessarily apply to the opposite direction (the low death concern group). This would be reasonable since high death concern is a fairly straight forward measurement of the existence of uneasiness or concern about death while low death concern could involve opposing factors. That is, the expression of low death concern could represent resolution (acceptance) of death supporting the Existential Philosophy or it could represent denial as a defense mechanism to avoid awareness of the presence of death concern. If the low death concern subjects are a mixture of these two possibilities, then one might equalize the other and interfere with obtaining a significant relationship. Until such time as instruments are devised to distinguish these possible variables with low death concern subjects, this will remain an underlying factor and question throughout the research.

The low death concern group in the Dickstein and Blatt study did express longer time extension in their stories than did the high death-concern group. This result did not, however, reach significance except

for story roots three and four combined which were less structured and involved less interpersonal situations than the other two roots. This result could indicate a trend of subjects with low death anxiety to be more future oriented or it could indicate that the more unstructured roots allows more freedom of expression.

The small sample (N = 28) used for the correlative measurement and the undeveloped death concern measurement could be problematic in this study.

However, Dickstein and Blatt considered the results as indicating an inverse relationship between future time orientation and death anxiety, at least for the high death concern group and some indication of the same for the low death concern group and proposed three postulates to explain their results;

1. People who plan far into the future are not highly concerned with death because it is perceived as remote. People who live more in the present may not see death as so remote because they have not filled their future time with activities and goals. (p. 15)

2. People who are concerned about death feel less rooted in the world and hence are unable to engage in practical planning for the future (and further that) people less concerned with death would be more free to utilize their energies in coping with the world's challenges . . . (p. 15)

3. Both death concern and foreshortened time span may reflect underlying despair. (p. 16)

Postulate one would suggest perceived proximity of death as the influential factor and implies behavior as the possible causative factor. However, it is not necessarily adverse to Existential Theory in that there is a relationship between death concern and behavior suggested and the causation could as easily be in the other direction, death concern as effecting behavior.

Postulate two and to a lesser extent postulate three would seem to support the Existential view of death resolution in that perceiving oneself as more rooted in the world and having more energy for coping with the challenges of the world (the low death concern group) would lead to a higher level of functioning. Conversely the high death concern group would produce the opposite situation. Also, in light of Existential Theory, one might wonder if the underlying despair in postulate three is related to avoidance of thoughts of death.

Though the discussion in this study to some extent considers both high and low death concern groups, it is important to reiterate that significance was found for only the high death concern group and that speculations concerning the low death concern group are quite tenuous.

In a factor analysis identifying a positive (natural) and negative meaning of death and a positive and negative attitude toward the future among 29 college students (both male and female), Hooper and Spilka (1970) reported that, "attractiveness of the future loads in the same direction as the negative death views" (p. 53). Their intercorrelations among the death and time scales were low but still in a positive direction. This was contrary to their hypothesis which predicted that positive attitudes toward the future and toward death would be related.

They suggested the possibility of acquiescent responding by their subjects.

This result would also, in a sense, be contrary to the Dickstein and Blatt (1966) study. If one considers a negative attitude toward death as representing possible death concern, Hooper and Spilka's results indicate that the subjects did not turn away from the future because of it. On the other, Dickstein and Blatt's subjects tended to be present oriented if they also expressed death concern and to a lesser degree more future oriented if they did not express death concern. Hooper and Spilka used author-originated measurements for death and time attitudes in their study and this may have been a confounding element in the results.

Complicating the situation further, Kahana and Kahana (1972), studying death attitudes of 90 college students (ages 19 to 43; both male and female) reported that the majority of their subjects expressed "little fear of awareness of death when it was impending" and would wish to be informed of impending death but were unwilling "to face knowledge of their life expectancy" (p. 42). The writers suggested the latter represented fear of premature death.

Further, concerning attitudes of impending death, Kahana and Kahana reported that "future oriented students were significantly less likely to portray a fear than were present-oriented subjects" (p. 42). This supports the concept of an inverse relationship between death concern and futurity (at least in one area, that of impending death). The researchers proposed that,

These findings suggest that present-orientation in discussing death may be a defensive maneuver on the part of the individuals who wish

to avoid the ambiguities and anxieties involved in facing the future. (p. 42)

This result would seem to lend at least partial support to the findings of Dickstein and Blatt (1966) but oppose the results reported by Hooper and Spilka (1970). Kahana and Kahana also used an author-originated questionnaire as their measuring device which contained open ended questions that were scored for both death attitudes and time-orientation.

These early studies were undertaken before objective instruments for death concern had been developed. One could speculate that this lent to the reporting of diverse results, however, later studies using developed scales also tend to show diverse results.

Bascue (1973) in his dissertation research, which he later reviewed in a publication (Bascue and Lawrence, 1977), studied the importance of both time orientation and time attitudes in relationship to death anxiety. Using the Time Reference Inventory (TRI) measuring time orientation, the Time Attitude Scale (TAS) representing time anxiety, and the Templer Death Anxiety Scale (DAS), he measured 88 elderly females (62 years of age or older) in two different institutional care settings in Virginia. The TAS consisted of four attitudinal scales:

1. time anxiety - "need to control time"
2. time submissiveness - "seeing time as offering no freedom"

(p. 87)

3. time possessiveness - need to know the future and disturbed by quick passage of time

4. time flexibility - comfortable use of time.

Bascue found significant positive linear correlations between death anxiety and time orientation, time anxiety, time submissiveness and time possessiveness. That is, subjects tending toward future orientation and reporting the presence of three of the four time attitudes (which seem to express some distress about time) also reported high death anxiety. Since this was a linear measurement, the opposite would be the case for those expressing low death anxiety. He concluded that these results are consistent with the belief that the elderly turn away from the future as a means of avoiding the concept of death. His correlations were moderate but from the mean scores and standard deviations of the DAS, he suggested support also for the idea that "death anxiety is not necessarily inordinately high in normal elderly people" (Bascue and Lawrence, 1977, p. 87). He further concluded from scores on the time orientation measure that though most of the elderly in his sample were not future oriented, they were also not particularly past oriented. According to Bascue, his sample as a group expressed mostly present orientation. What part the routine organization of an institutionalized setting played in the need to make future plans was not identified.

Several points can be made comparing this study to the other previously reported. The positive relationship which Bascue found between death anxiety and future orientation (and between low death anxiety and present orientation) are contrary to the results reported by Dickstein and Blatt (1966) and Kahana and Kahana (1972) but in some agreement to the Hooper and Spilka (1970) reporting of a positive but weak relationship between negative death attitudes and future orientation. Bascue and earlier Kastenbaum (cited Feifel, 1959) suggested proximity to death as

influential in one's attitude and that this is more salient to the elderly populations because of their closeness to death in time. Yet proximity was not an issue in the Hooper and Spilka study using a college population. Further, Bascue's results oppose those found by Kahana and Kahana where proximity seemed to be an issue (subjects wanting to know of impending death but not distant death). The subjects (college population) showed less fear and more future orientation in the measurement of attitudes toward impending death. The influence of a hypothetical situation of impending death as in the Kahana and Kahana study compared to a real impending death situation as with the elderly in Bascue's study is not clear at this time.

Dickstein (1975), in support of the earlier study with male subjects (Dickstein and Blatt, 1966) measured 185 female undergraduates predicting a similar relationship in that subjects with high death concern would be more past oriented and less future oriented than subjects with low death concern. Using the Thematic Appreciation Test (TAT) and the Dickstein Death Concern Scale, he reported a significant relationship between high death concern and retrospective time span as predicted. That is, " S_{S} with high death concern had the highest retrospective span mean while S_{S} of low death concern had the lowest retrospective span" (p. 153). Retrospective time span was determined by TAT stories that extend further back into the past. Significant results were again unidirectional in that no significance was found between prospective time span (futuraity) and high and low death concern subjects. In Dickstein's previous study (Dickstein and Blatt, 1966) he had obtained a trend of futurity in low death concern subjects in that he

reported significance by combining 2 of the 4 stories though he did not get overall significance. He did not obtain even a trend with this sample using TAT measurement but also did not indicate any combining of scores on individual stories in his statistical analysis. Again one wonders if low death concern and the possible combination of acceptance and denial attitude of the subjects is influencing the results.

Concerning the significant relationship between death concern and retrospective time span, Dickstein suggests that "it is possible that an orientation toward the past is a direct consequence of the awareness of death and represents an attempt to hold onto experience and to resist the swift passage of time" (p. 155).

In a later study Wexler (1978) measured 139 subjects 30 through 50 years of age using the Threat Index (TI, a death orientation instrument based on construct theory) and a modified form of Ezekiel's mock personal future autobiographical method. He reported an inverse relationship between death orientation scores (TI) and the future autobiographical measures. This represents one of the few studies in which a post-college pre-elderly population was used, yet this study lends support to most of the college population research.

Summary

In sum, the results of the research relating death concerns to time orientation is quite diverse. The study presented by Peter Kastenbaum (Feifel, 1959) provided the base for much of the research that followed. His use of adolescents as subjects would require some caution in generalizing the results to older populations. Yet, comparing his subjects that structured death separately from other constructs and

were present oriented with the subjects that did not structure death separately and tended to plan more for the future, a relationship between death attitude and time-orientation seems plausible.

An inverse (negative) relationship between the high or lowness of death concern and future time orientation was supported, at least in part, by Dickstein and Blatt (1966), Kahana and Kahana (1972), Dickstein (1975) and Wexler (1978). Conversely, Hooper and Spilka (1970) and Bascue (1973) reported a direct positive relationship between high death concern and future orientation.

The fact that both linear and non-linear methods were used and that several researchers tried to determine differences in the meaning of death to their subjects may have contributed to the discrepancies rather than refining them. However, some substantial inferences do appear to have developed. These studies indicate, at least in a general way, that one's time orientation (past, present or future) and one's death concern are relative, that the relationship is influential in one's choices of how to live his/her life, and the evidence weighs in the direction of the relationship as being inverse in terms of high death anxiety and future orientation. Proximity to death has also been suggested as influential in this relationship.

These studies tend to have a common theme that the death concern or lack of it is based on concern for the final death, the ending of life, which is somewhere in the future. The premise of this paper does not deny that theme but adds to it the dimension of change (with the losses involved) as representing a death-like experience, possibly small deaths throughout the life span. Change that brings awareness of moving into

the future may be anxiety producing if the individual is anxious about the final death. Therefore, avoidance of needed and/or desired change or a pathological reaction to involuntary change may result. Perhaps change may even provide the illusion of close proximity to death by bringing death qualities into the present situation.

Change, Future Orientation and Death Attitudes

The more specific relationship of change and death attitudes tends to also involve future orientation, that is, making changes requires future planning and the willingness to think about the future. One of the early studies indicating a relationship between death concern and change was reported by Dickstein (1972). However, the relationship reported and conclusions made were from an unexpected (post hoc) result and were not part of the original intent of the study.

Dickstein (1972), as part of the development of his Death Concern Scale measured 66 female college undergraduates in three categories (high, medium and low death concern) on a variety of measures which included the Edwards Personal Preference Schedule (EPPS). He did not present a hypothesis with the EPPS measure, however, his results included a significant negative correlation between death concern and the need of Change scale from this instrument. He further reported that the medium group was more like the low death concern group and concluded,

The high death-concern group is discrepant with regard to change.

These S_s tend to avoid the endorsement of items indicating a desire to do new and different things, to travel, to experience novelty, to experiment, etc. The reluctance to experience change is consistent with a high level of concern about death. (p. 570)

Dickstein presents the idea that change is a form of death as it means giving up past ways of being as noted in the Theoretical Background, Chapter 1, of this paper. He also relates this to futurity in that holding on to the familiar is used as a defense against the awareness of the movement of time toward the future and the inevitability of the final death. He states,

This finding is consistent with the report of Dickstein and Blatt (1966) that high death concern males tend to have low future time-perspective. Avoidance of thoughts about the future is a way of defending against the perception of change and the passage of time. (p. 570)

About the same time, Mishara, Baker and Lostin (cited in Pollak, 1979) presented similar findings of death concern and time orientation in a paper presented to the American Psychological Association annual convention, 1972. They reported that augmentors defined as individuals who did not like and therefore tended to avoid high stimulus intensity, particularly unpleasant stimuli also tended to avoid thoughts of death and planning for the future as compared to reducers who sought intense stimulation because of their ability to weaken the intensity. Reducers were less threatened by stimulation of an unpleasant nature, less threatened about death and dying and more willing to seek greater enrichment of experience in their lives by thoughts of the future. In a sense, it seems that reducers (expressing low death concern) were more willing to make changes and therefore did not avoid future planning than augmentors who avoided change, the future and thoughts of death.

In a later study in 1975, Dickstein attempted to replicate his earlier study (Dickstein, 1972) but substituted the external-sensation subscale of the Pearson Novelty Experiencing Scale for the n Change scale of the EPPS. His population consisted of 185 female undergraduates. He did not obtain the expected significant relationship between the Dickstein Death Concern Scale and the subscale used and suggested that this was possibly because "the external-sensation subscale focused upon adventurous and somewhat dangerous experiences whereas the n Change measure concerns less dramatic changes such as traveling, meeting new people and trying new jobs" (p. 156). He did find a significant direct relationship between high death concern and past-orientation (as reported in the previous section of this chapter), which could represent resistance to change.

Kuperman and Golden (1978), studying death attitudes and personality correlates with 142 male undergraduates, also found no significant relationship between death concerns as measured by both the Dickstein Death Concern Scale and the Templer Death Anxiety Scale with the Pearson Novelty Experiencing Scale. The results of this study confirm the Dickstein study of 1975 (also using The Novelty Experiencing Scale) but not what would necessarily have been expected from Dickstein's earlier study in 1972 (using the EPPS) or the Mishara et al. (cited in Pollak, 1979) study of augmentors and reducers.

Either the instruments used in these studies were measuring different and/or specific aspects of the concepts or the homogeneity of the populations in the studies, that of all college undergraduates, was having an effect on the results, or both. Possibly the college

population is receiving ample novelty in the institutional environment.

Nelson (1979) in a study using a random population of Virginia residents, compared death attitudes with personality variables measured by Cattell's 16-Personality Factor Questionnaire. Results showed negative correlations with several factors including surgency and venturesomeness and a positive correlation with apprehensiveness. These results would seem to support earlier findings of time-orientation as inverse to high or low death attitudes as well as Dickstein's 1972 study and the Mishara et al. paper cited in Pollak (1979) in that surgency and venturesomeness would seem to require both change and future direction while apprehensiveness could represent resistance to both. Some aspects of the Nelson study are different from the other studies in this section. Nelson used an author-originated measure for death anxiety, with limited data of its reliability and validity, instead of the more commonly used measures available. Also, the population sampled, though large (N = 699), consisted of all males with an underrepresented number of low-income persons and nonwhites as pointed out by Nelson. The method was a door-to-door canvass, college students were not used.

Summary

The summation of the studies concerning change in terms of stimulus and novelty seeking and death anxiety comes down to a vote of 3 to 2. Three studies found significant inverse relationships between death anxiety and measures presumed to represent stimulus and novelty seeking (Dickstein, 1972; Mashara et al., cited in Pollak, 1979; Nelson, 1979) and two did not (Dickstein, 1975; Kuperman and Golden, 1978). The two studies not finding the relationships both used The Novelty Experiencing

Scale. It is possible that the problem is with this particular measurement.

Though the number of studies relating change and death anxiety are few, there does seem to be some evidence that the relationship exists. In a review of empirical studies concerning death attitudes and both time orientation and change, Pollak (1979) concluded that high death anxious subjects tend to avoid thoughts about the future, eschew novelty, experimentation and change in their lives and cling to the familiar, at least in part as a defense against the perception of change and the passage of time which magnifies the omnipresence and inevitability of death. (p. 104)

Self-Actualization and Death Attitudes

Self-actualization could be considered a forward directional movement in that resolving certain tasks and moving to new ones would necessitate change and willingness to change. Further, self-actualization is generally considered as high level functioning and would seem to require or enhance a sense of well-being. Therefore, the relationship of death attitudes to this concept would be a viable approach to the issues under study. Because the identification of self-actualizers is not concrete, the research is tenuous.

Probably one of the more systematic methods of identifying self-actualizers is with Shostrom's Personal Orientation Inventory (POI) developed from Maslow's theory. Measuring a college sample (N = 91, male and female) Wesch (1971) compared scores on the POI and the Templer Death Anxiety Scale (DAS), hypothesizing an inverse relationship between the two instruments. His reported results confirmed his hypothesis, the

more death anxiety expressed the less self-actualization reported and conversely lower death anxiety equated with a higher level of self-actualization. Pollak (1978), replicating Wesch's measures but with a graduate population, found a relationship to only one scale of the POI, the Time Competence Scale. In his review, Pollak (1979) suggests "death anxiety and self actualization variables are not necessarily related in any systematic fashion" (p. 106).

Two other researchers, however, have reported results supporting Wesch's study. Wexler (1978), measuring a non-college population (139 adults 30 through 50 years of age) found an inverse relationship between the Threat Index (TI) and the POI and a direct relationship between the Threat Index and the Templer Death Anxiety Scale. In the same study he reported an inverse relationship between death anxiety and future orientation (discussed previously in this chapter). This begins to bring together the interrelationship between self-actualization futurity and death anxiety. From his overall results he concluded that "cognitive acceptance of one's own death is related to emotional well-being" (1507-B).

Gamble and Brown (1981) also reported that self-actualized persons have more ability to face death than non-actualized persons. However, their method was considerably different than the other self-actualization studies reported. They compared two groups of 10 subjects each matched on demographic variables but different in terms of actualization. One group consisted of persons in the 'helping' professions and chosen according to life-style and certain beliefs identified in an interview designed by the author. The non-actualized group consisted of persons

from a state mental institution that exhibited behaviors believed to block actualization. Death attitude was measured by a personal fantasy method. The procedure used in selecting the subjects and the subjective measurement for death anxiety would seem to raise questions as to the validity of this study. Yet the results are compatible with earlier research.

There has been some indication that self-actualization is directly related to creativity, as reported by Pollak (1979) and death anxiety would be lower in creative people. In an earlier study with college students, measuring time experiences, self-actualizing values and creativity, Yonge (1975) reported several scales of the POI as significantly related to measures of creativity one of which was the Time Competence Scale. However, when this scale is scored with respect to past, present or future time competencies, only the future time competency related significantly with creativity. Self-actualizing values also related to creativity. These findings, in light of both earlier and later research in self-actualization may indicate that future time orientation is also related to creativity and self-actualization. The missing variable in Yonge's study was that of death attitudes which was not included in his measurements. Schwartz, Reynolds, Stout, and Spelka in a paper to the Rocky Mountain Psychological Association in 1976 (cited in Pollak, 1979) did examine the relationship between creativity and death attitudes in college students. Their results indicated a low, tenuous, inverse relationship between these two concepts and they suggested more support might be available with an older population having had more time and opportunity to reach an actualized level of their capabilities.

Summary

Identifying creativity is also a nebulous and inexact undertaking and relating it to death anxiety as the equivalent to self-actualization may confuse the situation more than clarify it. The difficulty may also be more in the difference between actualizing and actualized. The average college undergraduate student may be in the process of actualization, still resolving the lower level deficiency needs while the older population may have reached the actualized beta level of functioning. According to Maslow (1968, 1970, 1971), however, many people never reach the self-actualized level. It is, therefore, plausible that death anxiety is a contributing factor of non-actualizing and meaninglessness. The research indicates some support in that direction.

Purpose in Life, Well-being and Death Attitudes

Closely aligned with self-actualization is a sense of purpose and meaning in life. Pollak (1979) identifies these as constructs of a general sense of personal well-being. Relating these constructs to death attitudes suggests the validity of Frankel's (1971) theory of confronting death and suffering to find meaning in life. The relationship between death anxiety and purpose in life has been examined in several studies with a variety of subjects.

Durlak (1972) measured death anxiety and purpose and meaning in life using the Lester Fear of Death Scale, an attitude scale measuring the degree of purpose and meaning in life that is experienced by the individual and the Crumbaugh and Maholick Purpose in Life Test with a variety of subjects (2 college samples of 40 Ss each, a high school sample of 40 Ss and a later replication study of 94 Vanderbilt students).

All results indicated a strong negative relationship between death anxiety and purpose in life ($p < .001$). The two college samples and the high school sample, combined, showed correlations of $r = -.54$ and the Vanderbilt sample showed a correlation of $r = -.68$. Durlak (1973) later replicated his study again with an elderly female population in retirement and nursing homes ($N = 39$, ages 67 to 88), using the same instruments, and found the same significant inverse relationship ($r = -.38$, $p < .02$). Though this result was not as strong, the N was smaller. Still significance was reached. He concluded that these studies present strong support to Frankl's theory.

At about the same time, Blazer (1973) measured 400 adult persons (200 males and 200 females ranging in age from 18 to 52) with two of the same scales used by Durlak; the Lester Fear of Death Scale and the Purpose in Life scale to determine the reality of Frankl's theory. Blazer also reported a high negative relationship between the two measures ($r = -.83$, $p < .001$) and suggested predictive capabilities in the relationship. Using a different death anxiety scale, namely the Templer Death Anxiety Scale, with the Purpose in Life Test, Bolt (1978) also reported the same inverse relationship ($r = -.27$, $p < .02$) between his measures and those previously reported. His subjects were 78 male and female college students. Bolt further requested all of his subjects to rank order seven death concerns relative to importance. He noted that a "greater perceived purpose in life is associated with a higher ranking of concern for having life's plans and projects end" (p. 160). He further suggests that:

it is certainly possible that awareness that life's plans and projects will eventually end makes these plans and projects more meaningful. However, it is also possible that the experience of purpose in life results in a willingness to accept one's own mortality, less fear of death, and at the same time greater awareness that life's plans and projects will end. (p. 160)

These studies provide firm support to Frankl's existential theory. Further, this relationship is linear in that low death anxiety equates with high purpose and meaning; conversely, high death anxiety equates with low purpose and meaning.

In a broader context of a general sense of well-being as related to death attitudes, several studies have reported a similar inverse relationship as has been found for the other concepts of futurity, change, self-actualization and purpose in life.

Smith (1977), in a factor analysis of the California Psychological Inventory (CPI) with the Templer Death Anxiety Scale (DAS) reported a significant negative correlation between death anxiety and the factor he termed Personal Adequacy ($r = -.251$) which included the Wb scale. Five scales loaded under this factor, Wb being the second highest loading exceeded only by the Tolerance scale. From the findings of his analysis, he concluded that "individuals with a greater sense of well-being, who are generous, good natured, and reasonable; and who generally unconflicted within themselves tend to be less death anxious", further, ". . . persons low in death anxiety tend to be generally better adjusted and to relate more effectively with their environment and with other people therein" (p. 142).

Along similar lines Davis, Martin, Wile and Voorhees (1978), measuring self-esteem by use of Form A of the Texas Social Behavior Inventory and death attitudes with Templer's Death Anxiety Scale found a negative relationship between these two instruments for all subgroups of their population except one, black females. They did not speculate on this subgroup but did conclude that their results overall indicated an inverse relationship between self-esteem and death anxiety. Self-esteem would seem to be a viable part of the sense of well-being. Nelson (1979), previously discussed in this chapter, also found inverse relationships of his own death anxiety measure and certain variables of Cattell's 16 PF Questionnaire that could be considered elements of well-being. They were ego strength, assertiveness, super ego strength and self-sentiment. His result of a positive correlation of death anxiety with apprehensiveness could also represent a lack of well-being.

Finally, Aronow, Rauchway, Peller and De Vito (1980) using Templer's DAS and several measures for self-esteem and well-being, including the Well-being scale extracted from the CPI, found death anxiety to be negatively related to the Well-being scale of the CPI ($r = -.28$, $p < .01$) as well as self-esteem as measured by self-ideal discrepancy. This finding was in the opposite direction of their hypothesis. They concluded that the results support Frankl's Theory of purpose in life and Durlak's research in that "individuals who have positive feelings toward themselves and their lives do not appear to be more afraid of death" (p. 41). These results also support the studies of Smith (1977) and Davis et al. (1978).

Of these four studies concerning well-being, only one, Nelson, did not use a college population. The other three studies measured undergraduate populations with sample size as follows: Smith, N = 180; Davis et al., N = 383; Aronow et al., N = 117.

Summary

The studies in the area of purpose in life and well-being in relationship to death attitudes seem quite conclusive by virtue of the consistent results reported across studies. Even with different measurements of well-being the findings tend to be singular.

Overall Literature Review

Much of the research for this paper is related indirectly to the concepts under study. However, these studies begin to bring together the theoretical base of a relationship between life and death. Throughout the literature there is an underpinning of the importance of having a future orientation in order to make needed changes and the relationship of this to death anxiety. The research specific to the relationship of death anxiety and future orientation is mixed but indicates a trend in the direction of the relationship as being inverse. Two studies, Hooper and Spilka (1970) and Bascue (1973) reported the opposite relationship, that high death concern equated with future orientation in a linear manner. Examination of the two studies revealed no commonalities between them. It was suggested that age (elderly subjects) and proximity of death influenced the findings in the Bascue study. However, the similar results obtained by Hooper and Spilka were from a college population. Further, Kahana and Kahana (1972) reported the inverse relationship, opposite of the Bascue study in a situation of

hypothetical proximity. A number of the early studies in this area were undertaken before objective instruments for death attitudes had been developed and the influence of this is unclear. Overall, the studies favor an inverse direction of the relationship between death concern and future orientation. The most direct support for the inverse relationship of death anxiety to openness to change and loss is the Dickstein (1972) study in which he found a negative correlation of death anxiety to the Change scale of the Edwards Personal Preference Schedule. The follow-up studies to support his finding but substituting the Novelty Experiencing Scale for the measurement of change did not produce expected results. The difficulty may lie in the scales used and the differences between the scales was identified. Other supporting studies in this area were peripheral in that the measurements for change were not specifically for that use and the intent of the studies, though related, was not for the purpose of measuring change. The studies in this area produced mixed results, several providing tenuous support but the idea of an inverse relationship between death anxiety and change is based predominantly on Dickstein's first study in 1972.

The relationship of self-actualization to death anxiety and in the context of well-being and change indicated tentative support for an inverse direction between these variables. The relationship of creativity to self-actualization and therefore death anxiety was weak.

The strongest support for the need of a sense of well-being and therefore willingness to make changes and the relationship of this to death anxiety comes from the purpose in life and general well-being studies.

The purpose and meaning in life studies consistently reported strong inverse correlations of the variables. Replications of the studies using the same instruments, Crumbaugh and Maholick's Purpose in Life Test and Lester's Death Anxiety Scale with different populations and one study substituting Templer's Death Anxiety Scale gave common results. Likewise, in the area of general well-being, consistent results of an inverse relationship were found between death anxiety and the Well-being scale of the California Psychological Inventory. Self-esteem studies with different measures also were in agreement with an inverse relationship to death anxiety. This support for death attitudes as relating to purpose and well-being in life would also suggest support for death attitudes and change in that openness to change would be necessary in order to obtain and maintain purpose and well being.

The general methodology of the related research was mixed but predominantly descriptive in nature and used a variety of measuring instruments. Except for the purpose in life and general well-being studies, there does not seem to be direct replications of the studies. The empirical findings, however, are consistent to the issues of this study. Though sparse and diverse, the general trend in the research seems to support the present study. From this background, the concept of this study becomes plausible, namely, 1) that there is a death quality in change and the losses involved in change, 2) therefore one's attitude toward death relates to openness to change and the willingness to relinquish those losses and 3) that this relates to a sense of well-being.

Chapter 3

Methodology

The relationship between death attitudes and human behavior is believed by many, at least philosophically, to be influential in the choices made by individuals toward their particular life style and the functional level of mental health obtained. This relationship has been studied with a variety of human dynamics but only minimally from the standpoint of death attitudes as related to the process of change. Yet several areas of counseling incorporate this relationship into their therapeutic process. The purpose of this investigation is to examine the relationship of death attitudes to openness to change and sense of well-being. This chapter is organized to include the following, (a) population and sample selection, (b) procedures to include data collection and treatment, (c) ethical considerations and safeguards, (d) instrumentation, and (e) research design and statistical analysis.

Population and Sample Selection

Subjects for this study were adult individuals, 18 years of age or older, living in the Tidewater area of Virginia. Participation was on a voluntary basis and 206 persons chose to take part in the study. Of these, 15 participants were disqualified due to incompleteness of test materials. The remaining subjects (N = 191) were retained as representative of the sample population under study. This sample consisted of both males (N = 120) and females (N = 71) with a mean age of 37.38 years and was predominately caucasian (91%). Mean age, age range and sex

distributions for each group and for the total sample are shown on Table 1. Race distribution for each group and for the total sample is reported on Table 2.

Because most of the standard scores of the instruments used were different for males and females, all 191 subjects were those that indicated either male or female. Any subjects not doing so was disqualified. Age, however, was not a disqualifying factor. Subjects not disclosing their age were included in the study. Of the total sample ($N = 191$), 8 subjects did not disclose their age. Therefore, the reported mean ages are tenuous and not fully representative of the sample. Since the number not disclosing age is small, it would seem reasonable that the true average age would be close to the means reported.

For the purpose of heterogeneity within the total sample, five different and specific groups were chosen for the sample. They were: (1) students enrolled in psychology courses, other than Introductory Psychology, at a local university ($N = 39$), (2) volunteers from an area hospital ($N = 44$), (3) military officers on temporary duty at one of the military installations in the Tidewater area ($N = 29$), (4) Non-commissioned Officers (NCOs) also on temporary duty at the same military installation ($N = 35$) and Engineers working in the field of aerospace ($N = 44$).

Composition of the groups within the larger sample are as follows:

1. College Students. This group consisted of both males and females enrolled in psychology courses but not necessarily psychology majors. This college sample represented an age range predominately between 18 and 26 years with only 2 older students, one 38 years and

Table 1
 Number, Mean Age, Age Range and Sex Distribution
 of Each Group and Total Sample

| Subjects | <u>n</u> ^a | Mean Age | Age Range | Male | Female |
|--|-----------------------|-------------|--------------|------|--------|
| College Students | 39 (39) | 21.74 | 18-48 | 12 | 27 |
| Hospital Volunteers | 44 (41) | 59.80 | 32-78 | 9 | 35 |
| Military Officers | 29 (28) | 28.75 | 25-42 | 23 | 6 |
| Military Non- Commissioned Officers (NCOs) | 35 (32) | 32.06 | 27-38 | 35 | 0 |
| Engineers | 44 (43) | 39.74 | 22-63 | 41 | 3 |
| Total Sample | 191 (183) | 37.38 | 18-78 | 120 | 71 |

^a Numbers in parentheses indicate the number of subjects who reported their age.

Table 2
 Number and Race Distribution For Each
 Group and Total Sample

| Subjects | <u>n</u> ^a | Caucasian | Black | Oriental | American Indian |
|---------------------|-----------------------|-----------|-------|----------|--------------------|
| College Students | 39 (39) | 37 | 1 | 1 | |
| Hospital Volunteers | 44 (42) | 42 | | | |
| Military Officers | 29 (28) | 25 | 2 | | 1 |
| Military NCOs | 35 (32) | 27 | 3 | 2 | |
| Engineers | 44 (43) | 42 | 1 | | |
| Total Sample | 191 (184) | 173 | 7 | 3 | 1 |

^a Numbers in parentheses indicate the number of subjects who reported their race.

one 48 years of age. These subjects could be considered in a transition period in which change is both present in their lives and predictable in the near future. College students have been studied extensively at various times for each of the measures in this study. Pertinent to this study were the findings of an inverse relationship between the Dickstein Death Concern Scale and the n Change Scale of the Edwards Personal Preference Schedule (Dickstein, 1972) and an inverse relationship of the Templer Death Anxiety Scale with the Well-Being Scale of California Psychological Inventory as reported by Aronow et al. (1980), both with a college population.

2. Hospital Volunteers. This group was predominately female and contained a number of older persons, the oldest being 78 years of age. Of the subjects in this group, 59% were 60 years of age or older and 36.3% were 65 years of age or older. These elderly were continuing active participation in society and were relatively independent and self-sufficient. Also included in this group were nine individuals who volunteered with the Hospice program ministering to patients in the process of dying.

The 44 subjects as a whole were involved in various activities within the hospital environment in which death is not an unknown. Further this group would seem to represent a stabilized life cycle with fewer changes, outside their control, occurring.

Little research has been done in this area with hospital volunteers in general. However, Bascue (1973), studying females 65 years of age or older, found a direct positive relationship between the Templer Death Anxiety Scale and future-orientation. His subjects were institutionalized

in nursing homes or retirement homes and he did not indicate whether or not they were still actively participating in society.

3. Military Officers. This group was predominately male and representative of individuals in the early working years. Further, military officers move frequently and change types of work and positions in the jobs, sometimes often. They also are trained to meet the possibility of death both personally and in the delivery of death in a war situation.

Studying 100 military officers at the University of California, Gough (1975) found significant correlations between the Well-being scale of the CPI and both staff ratings of vitality and health and personal ratings of physical fitness. He also found a relationship between the Intellectual Efficiency scale of the CPI and both the Terman Concept Mastery Test and ratings by staff for "intellectual competence" of his subjects.

4. Non-Commissioned Officers. This group represented military individuals who had reached the higher ranks within the enlisted personnel category and all subjects in this group were male. They are similar to the officer group in that they also represent individuals in the early working years, are required to make frequent changes, and are trained for war, a death situation. They are dissimilar compared to the officers in the type of work they do, and the type of responsibilities and decisions required of them.

A note of interest, both the military groups, officers and the NCO's, were individuals living in the area for a period of less than one year. They did not generally reside in the Virginia Tidewater Area.

5. Engineers. This group was predominately male and represented the full range of what is generally considered the working years of adult life. These subjects tended to be somewhat stabilized in their locale in terms of change and in the type of work they performed. However, they would need to be open to technological changes and new discoveries in their fields.

Using a variety of measures including the California Psychological Inventory, Wylie (1977) reported engineers as more rigid than male teachers and Scott and Sedlacek (1975) found engineering students to be less flexible than physical science majors. However, this may not apply directly to aerospace engineers. Though the work of engineers tends to be precise and detailed, possibly requiring less need for flexibility, the work in aerospace may require at least technological flexibility due to the rapid changes occurring in this field.

Procedures

Data collection, treatment and ethical safeguards and considerations were facilitated in the following manner:

Data Collection

This study was conducted during the summer months of 1981. A request for volunteer participation in this study was made by contacting the department head, instructor or individual responsible for each group, and working with them to secure the participation of subjects. Care was taken to insure that all individuals in the line of responsibility within the organization had full knowledge of the study and procedures to be used. These individuals were provided with a short summary of the purpose and procedures of the intended study and a copy

of the instruments to be used. Voluntary participation was obtained through an oral presentation by this researcher. The nature of the study was disclosed to supervisors and individuals in the line of responsibility who did not participate in the study. However, the nature of the study was not disclosed to the participants, (see Appendix A).

Treatment

Subjects were requested to answer questions on a composite inventory instrument and a demographic data sheet. All materials needed for the testing were provided in individual manila envelopes (packets) for each subject. These envelopes were sealable and each packet was numbered for coding purposes. Each packet contained the following:

1. a name and address slip,
2. a letter of appreciation which also contained information about the measuring instruments (generally and briefly), the receiving of results and the maintaining of confidentiality (see Appendix B),
3. a demographic data sheet (see example - college students, Appendix C),
4. the measuring instrument (see Appendix D),
5. a set of two special answer sheets (see Appendix E),
6. a number 2 pencil (sharpened).

Subjects were informed of the confidentiality of their responses in the study and were requested to answer the questions as honestly as possible and as best they could. Written instructions were provided for each part of the composite inventory instrument (see Appendix C). The participants answered the questions on their own time and returned the envelopes to the department head or instructor of their group. This

researcher then collected the packets from the department heads or instructors.

Subjects were offered the opportunity to receive personal and research evaluations of the study, if they wished, by filling out the enclosed name and address slip, otherwise their responses would remain completely anonymous. All materials in the packet were marked with the same number as the packet number. This coding system provided confidentiality of personal results. The results were mailed to the participants with a cover letter (see Appendix F). General results of the study were made available to the department heads and instructors if they wished.

Ethical Considerations and Safeguards

The potential risks to the participant involve the use of an instrument which contains items of a personal nature and about the subject of death. The participants were not necessarily from the behavioral science field and the type of test may have seemed new to them. However, the instrument contains scales from commonly used tests which have been safely given to a large number of people in the past including those similar to the participants of this study. It was stressed in the instructions that there are NO right or wrong answers (see Appendix B).

All subjects participating in the study did so anonymously and on a voluntary basis. Any personal identification of data was number coded by this investigator and complete confidentiality of individual test results was maintained. Subjects were given the opportunity to receive their personal results but only this researcher had access to the code and to those results. Participants were so informed (see Appendix B).

The participants were told of the general nature of the items on the instrument but were not informed of the specific variables being compared or the intent of the study until they received the results, if they requested it. The personal evaluations were written in a positive manner to reduce the possibility of threat. One hundred and fifty-nine participants requested evaluations. Subjects also had access to this researcher's phone number in the event that they were bothered by the nature of the items, the procedures or the results they received (see Appendix B). The department heads and instructors involved had knowledge of the specific variables being measured and were requested to contact this researcher if they noticed any of the participants showing concern about this matter.

Because of the sensitivity of the material, a committee of volunteer counselors was available to talk with the participants if needed at no cost to the participant. This committee included this researcher, Dr. Pamela Dorman-Turner (counselor at Thomas Nelson Community College), Mr. Carl Cooper (M.Ed. in counseling, ordained minister, and licensed professional counselor), and Rev. Floyd Chambers (ordained minister, pastoral counselor and counseling doctoral candidate).

Instrumentation

The following measurements were used in the study.

Templer Death Anxiety Scale (DAS)

The DAS consists of 15 forced choice true or false items by which Templer (1970) operationalized emotional responses (feelings) and cognitive attitude (thoughts) concerning death and the passage of time. A high score on this scale indicates high death anxiety conversely a low

score indicates low-death anxiety. Six items are keyed false and nine items are keyed true.

The Templer Death Anxiety Scale (DAS) is one of the most widely used instruments for assessment of death attitudes and has the most normative data available concerning death attitudes (Kurlychek, 1978). In the original scale construction and norming procedures, Templer (1970) reported test-retest reliability over a 3-week interval of .83 with 31 college subjects. A Kuder-Richardson Formula 20 coefficient of .76 was also found with this group supporting internal consistency. Content validity was obtained by judgmental ratings and comparison of three different college sample populations in a point-biserial correlation study. Construct validity was initially obtained with psychiatric patients, presumed to have higher death anxiety and who, when administered the DAS, did show significantly higher scores than control patients. The DAS also was correlated with Boyer's Fear of Death Scale for criterion validity ($r = .74$, $p < .01$). Templer found no correlation of the DAS with the Marlowe-Crown scale ($r = .03$), a measure of socially desirable responding. Socially desirable responding had been reported for both the Dickstein Death Concern Scale and the Boyer Fear of Death Scale (Pollak, 1979). Embedding of the DAS with other items was also shown as not having an effect on the scores (Templer and Ruff, 1971).

No standardization scores have been devised for the scale to date, however, Bascue and Lawrence (1977) reported a mean of 4.98 and standard deviation of 3.08 with his 88 elderly females which agrees with earlier findings of Templer and Ruff (1971) for normal adults. The previous studies (Templer and Ruff, 1971) had reported means "roughly between

4.5 and 7.0; the standard deviation a little over 3.0", composite of seven studies with 3,600 normal adults and adolescents (p. 173). Though this indicates a trend, no official norm has been established for this scale. Therefore, for the purpose of the present study, raw scores of the DAS will be used for comparisons with other scales.

Composite Inventory for Change and Well-being Measurement

This inventory contains a selection of specific scales taken from the California Psychological Inventory (CPI), the Edwards Personal Preference Schedule (EPPS) and the Adjective Check List (ACL). These scales were chosen on the criterion of measuring openness to change and a sense of well-being and combined in a random manner for the composite measurement testing instrument. Information for each scale used from the three instruments is reported in the following format;(1) characteristics measured by the scales as described in the manuals, (2) reliability as reported in the manuals, (3) validity as reported in the manuals and (4) other supportive research. There is some overlap between three and four in making research comparisons. The specific scales used are:

California Psychological Inventory (CPI)

This inventory was designed from a "folk concept" and developed by the "empirical" method. It is intended for use by non-psychiatrically disturbed populations. It consists of 480 statements about behavior and perceptions of the individual to be answered true or false by the subject according to how it applies to him/her. The specific scales from the Inventory used in the present study were the Well-being Scale, the Intellectual Efficiency Scale and the Flexibility Scale (Gough, 1975).

Well-being Scale (Wb). This is a state scale, containing 44 items, which measures persons who are relatively free from self doubt and who do not tend to over-worry. High scores on this scale indicate health and energy and persons are often described as energetic, enterprising, alert, ambitious and versatile. They tend to be productive and active and value work and effort for its own sake. Low scorers tend to have diminished vitality and are described as unambitious, leisurely, cautious, self-defensive and constricted in thought and action.

This scale reflects the presence or lack of physical complaints and general fear. It also measures socially appropriate answering and faking and was therefore included in this study as a 'check' for this type of responding as well as for a measure of well-being.

Test-retest reliability was obtained with high school juniors re-tested one year later in their senior year and male prisoners with a retest lapse of 7 to 21 days. Correlations were:

HS females $\underline{r} = .72$

(N = 125)

HS males $\underline{r} = .71$

(N = 101)

Prison males $\underline{r} = .75$

(N = 200)

Gough reported, with 100 military officers, agreement between both staff opinions of "health and vitality" and self rating of physical fitness with scores on this scale. Comparing a general sample of college students (N = 2,800), psychiatric patients (N = 915) and college students (N = 354) requested to fake in a manner that would indicate

mental problems, significant differences were found between all three groups supporting the validity of this scale.

Several studies have compared the Wb scores of individuals that have psychological problems and persons not exhibiting these difficulties as reviewed by Megargee (1972). A sufficient number of these studies indicated differences between these two groups for Megargee to conclude that the "Wb reliably reflects differences in adjustment" (p. 55). As previously reported in this paper, Aronow et al. (1980) found death anxiety as inversely related to the Wb scale.

Intellectual Efficiency Scale (IE). This scale (52 items) measures freedom from unsubstantiated fear, efficiency of application of intellect and reflects presence or lack of presence of physical complaints. High scorers tend to be capable, efficient, progressive, thorough, clear-thinking and value intellectual and cognitive matters. Low scorers are more confused, cautious, easy going, defensive, unambitious and lack self discipline and self-direction. Reliability for high school students (1 year interval) and male prisoners (1 to 3 weeks) were:

HS females $\underline{r} = .74$

HS males $\underline{r} = .74$

Male prisoners $\underline{r} = .80$

This scale was originally designed to correlate personality with intelligence. However, it is now considered a measure of the efficient use of intellectual ability. In the assessment of 100 military officers, the IE correlated with both the Terman Concept Mastery test and with ratings by staff members of intellectual competency of the subjects, at the .58 and .41 respectively. A correlation of .44 between the Miller

Analogies Test (MAT) and the IE was reported for 70 University of California Psychology graduates and 691 high school students had correlates of .50 between scores on the IE scale and the Kuhlman-Anderson intelligence test (Gough, 1975). The IE scale also tended to differentiate gifted from non-gifted students. However, in the area of achievement the results were mixed as reviewed by Megargee (1972). Megargee suggests that the construct validity of the scale is unclear at the present time.

It is important to note here that though much of the research has been concerned with the intelligence aspect of this scale, the IE was included in the present study because it also measures self-assurance and self-confidence, a lack of unsubstantiated fears and absence of debilitating complaints (Gough, 1968). This would seem to compliment the Well-being scale and, in fact, the two scales do correlate at .58 for males and .66 for females (Gough, 1975). Smith (1977) reported the IE scores as loading fourth and last under the factor termed Personal Adequacy. However, this correlation was close to that of the Wb scale which loaded second (IE $r = .70$; Wb $r = .719$). The factor Personal Adequacy was then shown to correlate inversely and significantly with the DAS ($r = -.251$). Hyché (1978) also reported that individuals expressing high fear of death tended to "exhibit a greater degree of bodily concern" and worry more about illness or injury (p. 6158-B).

Flexibility Scale (FX). This 22 item scale is designed to measure the degree of adaptability and flexibility a person exhibits in his/her thinking and social behavior. High scores on this scale indicate the person is adventurous, confident, insightful, assertive and informal,

can be rebellious and cynical and is highly concerned with diversion and pleasure. Low scorers are cautious, mannerly, industrious, worrying, rigid, traditional, methodical, formal in thought and deferent to authority.

This scale was chosen in the present study for a number of reasons. High scorers on adventure and concern with diversion seems relative to openness to change, confidence would seem to relate to well-being and needed for change, and assertiveness was also identified by Nelson (1979) as inversely related to death anxiety using the 16 PF as his measurement. Reliability of test-retest for this scale with high school students (1 year interval and male prisoners 1-3 week interval) were:

HS females $\underline{r} = .67$

HS males $\underline{r} = .60$

Prisoners, male $\underline{r} = .49$

Original validity studies done by Gough (1975) with 40 University of California graduate students, 40 medical school seniors and 180 college students were reported. Scores on the FX correlated with ratings by staff of "rigidity" for both the graduate students and the medical school seniors. Correlations were $-.48$ and $-.36$ respectively. The FX scores of the college students was compared with an authoritarian personality scale, the California F Scale, and a correlation of $-.58$ was obtained. Other studies reviewed by Megargee (1972) comparing the FX and Creativity measures produce mixed results. Megargee concludes that "It appears that the FX scales does correlate negatively with measures of rigidity but fails to relate positively to criteria of flexibility" (p. 90). For the purposes of the present study, it seems

reasonable that a lack of rigidity is important in making changes and that the issue of a flexibility construct versus a rigidity construct is not as relevant.

Though the rigidity aspects of the scale would seem to be important in change and well being, according to Gough (1975) the FX scale does not tend to correlate with the Wb ($r = .04$ for males, $r = .01$ for females) and the IE ($r = .11$ for males; $r = .16$ for females) scales. Further, Smith (1977) previously discussed, found that the FX factored separately from all other scales of the CPI into its own singular category and did not show a significant relationship to the Templer Death Anxiety Scale ($r = -.082$). It is important to note that the purpose of Smith's study was for factor analysis in which he manipulated the statistical analyses by extracting the 22 questions from the CPI which represented the Levanthal Anxiety Scale and used these as a separate scale. In doing this, questions were removed from the FX scale but not from the Wb or the IE scales. This would seem to have a compromising effect on the reported correlation between the DAS and the FX scales as applied to the present research in which the anxiety questions were not removed.

In sum, overall results from studies using the FX scale are mixed and inconclusive. This scale seems to be as stated by Megargee "one of the least valid CPI Scales" (p. 90).

Edwards Personal Preference Schedule (EPPS)

This instrument was designed around concepts of needs by H. A. Murray and others. The schedule consists of pairs of statements (in various combinations) in which the subjects choose one from each pair

that he/she believes is more characteristic of himself/herself. Raw scores are then converted to percentile scores for both male and females. These percentiles were derived from large samples of college populations and a large nation-wide sample of adult male and female heads of household. Standard scores were generated for the college populations but not for the nation-wide adult sample (Edwards, 1959).

Only one scale from this instrument was used in the present study, namely the need for Change scale.

Change Scale. This scale measures the willingness to try new and novel experiences such as travel and/or moving about the country living in different places, meeting new people, trying new things and becoming involved in new fads.

Split-half reliability was determined for internal consistency by correlating the rows and columns of the parent instrument with the college sample (N = 1,509). Test-retest reliability of a one-week interval was identified with 89 college students. Coefficients for the Change Scale were:

Split-half $\underline{r} = .79$

Test-retest $\underline{r} = .83$

Original validity studies were instituted by correlating the EPPS with both the Taylor Manifest Anxiety Scale (a scale measuring general anxiety) and the Guilford-Martin Personnel Inventory (which consists of three scales measuring cooperativeness, agreeableness and objectivity) given to 106 college students. The Change scale did not correlate significantly with any of the scales. This was expected (Edwards, 1959).

Measuring 45 males, Gough (1975) reported a correlation of .20 between the EPPS Change scale and the Wb scale of the CPI. He also found low correlations of .10 and .02 between the Change scale and the IE and FX respectively. Significant levels were not indicated but these coefficients were quite weak. Correlation of .19 (not significant) between the Change scale of the EPPS and the Change scale of the ACL was reported by Gough and Heilbrun (1965). Important to the present study was the significant inverse relationship between the Change scale of the EPPS and death concern reported by Dickstein (1972) though he used a different measurement for death concern than was used in the present study.

Adjective Check List (ACL)

The ACL consists of 300 adjectives representing a variety of human behaviors presented on a single sheet of paper. Subjects were requested to mark those adjectives they believe best describe them most of the time. Test time is between 10 to 15 minutes (Gough and Heilbrun, 1965). The particular scales to be measured for the present study are the Lability scale (Lab) and the Change scale (Cha).

Lability Scale (Lab). This scale identifies such characteristics as flexibility, need for change, spontaneity, delighting in adventure and new, unusual and challenging experiences for high scorers. However, very high scores may indicate an inner restlessness and lack of tolerance for routine and consistency. Low scores indicate a need for regularity, order, planfulness and routine. These individuals tend to have stricter ideas of right and wrong and are more conventional. They are often described by others as steady, organized and thorough.

Test-retest reliability was measured with four groups of subjects at varying intervals: 56 college males and 23 college females (10 week interval), 100 adult males (6 month interval) and 34 medical students (5½ year interval). The correlations for this scale were:

College males $\underline{r} = .56$

College females $\underline{r} = .59$

Adult males $\underline{r} = .50$

Medical students $\underline{r} = .26$

Reviewing several studies Gough and Heilbrun reported the Lability scale significantly discriminated between creative and less creative persons and correlated significantly with 5 other instruments, the Bennett Mechanical Comprehension Test, the General Information Survey, the Gottschaldt Figures Test, The Terman Concept Mastery Test and the Wesman Personnel Classification Test. The significant correlation with the Terman Concept Mastery Test is suggested to indicate Lability as related to cognitive and intellectual ability. Though the Lab scale correlated with several scales of the CPI it did not significantly correlate with the Wb, IE and FX scales. No correlation for this scale with the EPPS was given.

Change Scale (Cha). This scale measures individuals seeking novelty and who tend to avoid routine. As with the Lab scale, very high scores may indicate instability. Persons scoring reasonably high on this scale are likely to be alert and spontaneous, able to comprehend problems rapidly and enjoy variety and change. They tend to be confident and welcome the challenges in complexity. Low scorers are more likely to seek stability in their world, become apprehensive of unclear

situations, and do not tend to take risks. They are patient, concerned about others but tend to lack energy. Reliability of this scale with the same samples described previously for the Lability scale are;

College males $\underline{r} = .69$ (10 wks)

College females $\underline{r} = .78$ (10 wks)

Adult males $\underline{r} = .55$ (6 mo)

Medical students $\underline{r} = .31$ (5½ yrs)

In the validity studies, the change scale correlated with Sociability and Self-acceptance scales on the CPI and the Welsh repression measure but did not correlate with the Wb, IE, or FX scales of the CPI. Intercorrelation of the Cha scale with Lability was .37 for a total sample consisting of 400 males and 400 females but significant level was not identified (Gough and Heilbrun, 1965).

It is important to note that reliability of both ACL scales described dropped considerably with the 5½ year interval. This is not of concern to this study as subjects were asked to respond to the instrument only once.

Further, the reliability and validity studies of the scales used from the CPI and EPPS are based on the scales being presented as part of their original instrument. Extracting scales from parent instruments to measure specific variables is not uncommon in psychological research. However, reliability and validity of the CPI and EPPS scales as separate from the original instruments or in combination with scales from other instruments is lacking. The particular combination used in the present study has never been done.

This difficulty may not necessarily negate the past research in that the scales will be combined in a random manner, not administered as individual scales. The influence of combining these into an instrument which produced less variety of personality factors measured is unknown at this time. The ACL was given in the original format.

Evaluating these findings, two points become relevant:

1. that the two scales in the present study used for measuring a sense of well-being seem to be also measuring similar aspects to each other but differ from the scales chosen to represent change. Yet there is minimal support in the literature that both well-being and change relate inversely to death anxiety (Dickstein, 1972; Smith, 1977; Aronow, 1980). It must be noted that the literature is quite scarce on these issues especially studies relating death anxiety to the instruments used in this study.

2. Intercorrelation with validity studies between scales used to measure change in the present study (n of Change from the EPPS, FX from the CPI and Lab and Cha from the ACL) do not tend to show relationships between these scales. However, the descriptions of these scales and the human attitudes and behaviors allegedly measured by these scales seem to have a great deal of similarity and overlap. Furthermore they also seem to measure some of the same elements as the Wb and IE scales such as confidence and versatility. Combining these scales into a single instrument measuring change and well-being may produce a biased responding effect.

It is for these reasons that a third hypothesis provides for the statistical interrelationships of the scales used. This also provided

information concerning the instrument construction bias issue. The third hypothesis takes the bias that the instrument used in this study measures openness to change and a sense of well-being, both necessary to make desired life changes. However, the possibility that the scales used may actually measure different aspects of change was kept under consideration.

Composite Inventory Incorporation and Presentation Format

The scales described were incorporated in a composite inventory, called The Information Inventory Booklet, in the following manner;

Part 1. The 15 items of the Templer Death Anxiety Scale and the three scales from the California Psychological Inventory (Well-being, Intellectual Efficiency and Flexibility) were combined in a random manner. All items required a true or false answer and represented the first section of the test booklet. This section contained a total of 133 items (see Appendix D Part 1).

Part 2. The Change scale of the EPPS consisting of 30 items was integrated in a random manner with 17 randomly selected items from other portions of the EPPS. The purpose was to prevent the subjects from identifying a bias of the questions. After the test had been completed by the subjects, the Change scale was extracted for statistical purposes and the other 17 items were disregarded. These items required that a choice be made between pairs of statements and represented the second section of the test booklet. This section contained 47 pairs of items (see Appendix D Part 2).

Subjects placed their answers to Part 1 and 2 of the inventory on special answer sheets provided in the packets. These answer sheets were clearly marked as to Part 1 and Part 2 (see Appendix E).

Part 3. The Adjective Check List was attached to the inventory booklet and represented the third section of the test. After the tests had been completed and returned by the subjects, only the Change and Lability scales were scored for statistical purposes. The other scales of the ACL were disregarded.

Instructions were provided with each section of the test booklet and all answers were hand scored by this researcher (see Appendix D Part 3).

Demographic Data

The subjects were requested to give information concerning age, sex, race and major field of interest, work or area of the hospital in which they volunteered. This was used for description of the population and for possible generalization of results. Information from the demographic data was not used as variables in the study (see Appendix C).

Research Design and Data Analyses

The design for this study was descriptive in nature and tested for self-reported attitudes and behaviors toward death anxiety, openness to change and loss and a sense of well-being. Standard scores were available for the scales used in this study from the CPI, the ACL and for college students from the EPPS. These scores, presented in the respective manuals, were derived from the original norming samples of each instrument (Gough, 1975; Gough and Heilbrun, 1965; Edwards, 1959). No standard scores were provided for adult populations using the EPPS. However, raw score means and standard deviations from the original adult norming sample for both males ($N = 4,031$) and females ($N = 4,932$) were reported by Edwards (1959). Converted scores were derived for

the non-college adult populations in this study for the EPPS scale by this researcher. They were generated by comparison of the participants' scores with the means and standard deviations of the original general adult norming sample. For convenience, all standard scores and converted scores will henceforth be referred to as "converted" scores in this paper. Both raw and converted scores for the three CPI scales, the two ACL scales and the EPPS scale were compared to the DAS and to each other. Within the design, the specific relationships studied were:

Hypothesis 1. The relationship of death anxiety to each of the four scales used to measure openness to change and loss (previously described) was tested by use of a Pearson product-moment correlation analysis. This analysis indicated the strength and direction (sign) of the relationships and any significant differences were accepted at the .05 level or better.

Hypothesized results are:

| Scales | Direction of Coefficients | Significance Level |
|-------------------|---------------------------|--------------------|
| Flexibility (CPI) | - | .05 |
| Change (EPPS) | - | .05 |
| Change (ACL) | - | .05 |
| Lability (ACL) | - | .05 |

Hypothesis 2. Using the scales measuring a sense of well-being (previously discussed) as independent variables, a Pearson product-moment correlation analysis was performed to determine any significant relationships to death anxiety. The analysis indicated the strength and direction (sign) of the relationships and determined any significant differences at the .05 level or better.

Hypothesized results are:

| Scales | Direction of Coefficients | Significance Level |
|------------------|---------------------------|--------------------|
| Well-being (CPI) | - | .05 |
| Intellectual | | |
| Efficiency (CPI) | - | .05 |

Hypothesis 3. All scales used to measure openness to change and loss and a sense of well-being were subjected to a Pearson product-moment correlation analysis to determine any interrelationships among scales. This analysis indicated the strength and direction (sign) of the relationships and any significant differences were accepted at the .05 level or better.

Hypothesized results are:

| Scales | Direction of Coefficients | Significance Level |
|-------------------|---------------------------|--------------------|
| Flexibility (CPI) | + | .05 |
| Change (EPPS) | + | .05 |
| Change (ACL) | + | .05 |
| Lability (ACL) | + | .05 |
| Well-being (CPI) | + | .05 |
| Intellectual | | |
| Efficiency (CPI) | + | .05 |

Summary

Adult subjects from various target groups in the Virginia Tidewater area were measured by a composite inventory instrument. This instrument included the Templer Death Anxiety scale and scales chosen from other instruments to represent an openness to change and a sense

of well-being. Demographic data was obtained for the purpose of describing the population. Ethical safeguards were provided for the benefit and protection of the subjects. A Pearson product-moment correlation was chosen for analysis of the data. Statistical hypotheses were presented in this chapter.

Chapter 4

Results

The purpose of this study was to investigate the relationship of death anxiety to openness to change and sense of well-being. Inter-correlations of scales used to measure these concepts were also identified.

To test the data, the three hypotheses were subjected to a Pearson product-moment correlation procedure. Results are reported in the same order as the hypotheses were presented in Chapter 3. Acceptance or rejection of each hypothesis is based on the data obtained for the total sample. However, discussion of results for the individual groups that comprised the total sample is included for each of the three hypotheses. Further, results are reported for both raw and converted scores, the latter obtained from standardized tables presented in the manuals and statistically converted scores where no standardized tables were available (previously discussed). Tables 3 through 10 are presented for clarity of data.

Hypothesis 1

There will be no significant relationship between performance on the Templer Death Anxiety Scale (DAS) and the measures of openness to change by the subjects.

Four scales were used to measure openness to change. They were: (a) the Flexibility scale (Fx) from the California Psychological Inventory (CPI), (b) the Change scale (n of Cha) from the Edwards Personal Preference Inventory (EPPS), (c) the Lability (Lab) scale from the

Adjective Check List (ACL) and (d) the Change (Cha) scale also from the ACL. Since two scales bear the titles of Change Scales, the n of Cha scale from the Edwards Personal Preference Inventory will be referred to as the EPPS scale and the Change scale from the ACL will be referenced simply as the Change scale.

To test the hypothesis, each scale representing change was subjected to a Pearson product-moment correlation. Coefficients were obtained from both raw scores and converted scores for the total sample and for each group that comprised the total sample. These coefficients are presented in Table 3 for clarification of data.

Results for the total sample ($N = 191$) indicated that only one of the four scales representing change reached a significant correlation with the DAS, namely, the EPPS scale from converted scores ($r = -.1636$, $p < .025$). This result was in the direction of the research hypothesis. Correlation coefficients obtained for the EPPS scale using raw scores, approached significance but failed to meet the designated criteria ($r = -.1162$, $p < .055$). Coefficients obtained for the other three scales measuring change failed to reach significance using either raw or converted scores. Results for these three scales from raw scores are as follows: (a) Fx ($r = -.0786$, $p < .140$), Lab ($r = -.0613$, $p < .20$) and Cha ($r = .0059$, $p < .468$). Coefficients for the same scales from converted scores are: (a) Fx ($r = -.0671$, $p < .178$), Lab ($r = -.0969$, $p < .091$) and Cha ($r = .0147$, $p < .42$).

The evidence would suggest a lack of relationship between the DAS and the measures of change. The only indication of a possible relationship was with the EPPS and only for the coefficient derived from

Table 3
 Correlation Coefficients of the Death Anxiety Scale (DAS)
 With Scales Representing Openness to Change For
 Each Group and the Total Sample

| Populations | <u>n</u> | DAS With | | | |
|---------------------|----------|----------|----------|----------|---------|
| | | FX | EPPS | LAB | CHA |
| Raw Scores | | | | | |
| Psychology Students | 39 | - .3193* | - .1844 | - .0438 | - .1288 |
| Hospital Volunteers | 44 | .0116 | - .1181 | .1747 | .2318 |
| Military Officers | 29 | .1102 | .1902 | .1403 | .2950 |
| Military NCOs | 35 | .1763 | - .1761 | - .3514* | - .1562 |
| Engineers | 44 | - .2141 | - .1310 | - .1464 | - .0214 |
| Total Sample | 191 | - .0786 | - .1162 | - .0613 | .0059 |
| Converted Scores | | | | | |
| Psychology Students | 39 | - .3149* | - .2531 | - .1750 | - .1567 |
| Hospital Volunteers | 44 | .0610 | - .1277 | .1310 | .1827 |
| Military Officers | 29 | .1113 | .0579 | .2814 | .3825* |
| Military NCOs | 35 | .1772 | - .1827 | - .2654 | - .1214 |
| Engineers | 44 | - .2225 | - .4191 | - .2727* | - .0422 |
| Total Sample | 191 | - .0671 | - .1636* | - .0969 | .0147 |

* $p < .05$.

converted scores of this scale. Therefore, the results of this study indicate failure to reject the hypothesis that there is no relationship between the DAS and the four measures of openness to change, noting the one exception.

Review of results from the five groups that comprised the total sample indicated some differences from the total sample and between the groups. None of the groups individually produced significance between the DAS and the EPPS scales in contrast to the results of the total sample. However, a few other relationships with the DAS were obtained for some of the groups.

The Psychology Students (N = 39) obtained significant correlations in the predicted direction of the research hypothesis for the Fx scale from both raw and converted scores. They are as follows: (a) Fx from raw scores ($r = -.3193$, $p < .024$) and (b) Fx from converted scores ($r = -.3149$, $p < .025$). The Lab, Cha, and EPPS scales did not reach significance for this group from either raw or converted scores.

For the Hospital Volunteers (N = 44), none of the four scales representing change (from raw or converted scores) reached significance with the DAS. Further, only the EPPS coefficients were in the predicted direction of the research hypothesis.

One significant coefficient was obtained for the group of Military Officers (N = 29), specifically, the Cha scale from converted scores ($r = .3825$, $p < .02$). However, this correlation was in the opposite direction than predicted in the research hypothesis and represents a positive or direct relationship to the DAS. All other coefficients for this group were non-significant and all correlations were in the opposite direction of the research hypothesis.

The Military NCOs (N = 35) and the Engineers (N = 44) both obtained significant correlation coefficients between the Lab scale and the DAS in the direction of the research hypothesis. However, these two groups differed in that the Military NCOs obtained a significant coefficient ($r = -.3514$, $p < .019$) from raw scores but not converted scores of the Lab scale while the reverse was the case for Engineers who produced a significant coefficient ($r = -.2727$, $p < .037$) from converted scores but not from raw scores. All other coefficients for these two groups failed to reach a significance of at least .05.

In an overview of all possible relationships between the DAS and scales measuring openness to change for the total sample and all groups within the total sample, a total of 48 coefficients were generated from both raw and converted scores. From this number, only six coefficients reached the significant level of .05. None of the significant coefficients exceeded the .01 level of probability. Further, one of the six significant coefficients was not in the predicted direction of the research hypothesis, namely, the Cha scale from converted scores obtained by the group of Military Officers as previously noted. The significant coefficients generated within the different groups were varied, non repetitive and did not tend to form any pattern nor identify any scale as particularly representative of the relationship. None of the five groups that comprised the total sample indicated agreement with the significant results produced by the total sample between the DAS and the EPPS.

Of the 42 non-significant coefficients, 18 were not in the predicted direction of the research hypothesis. Though this represents the area of

chance for direction as well as coefficient strength, it is noted that the Military Officers produced no coefficients in the hypothesized direction while Psychology Students and Engineers generated all coefficients (significant and non-significant) in the hypothesized direction.

Hypothesis 2

There will be no relationship between performance on the Templer Death Anxiety Scale (DAS) and the measures of well-being by the subjects.

The two scales used to measure well-being were the Well-being scale (Wb) and the Intellectual Efficiency scale (IE), both extracted from the California Psychological Inventory (CPI).

Both raw and converted scores of each scale measuring well-being were subjected to the Pearson product-moment correlation procedure to test the hypothesis. Coefficients were obtained for the total sample and for each group within the total sample. Results are presented on Table 4.

Coefficients for the total sample indicated a strong significant relationship between the DAS and both the Wb and IE scales. All correlations reached the .001 level of confidence and were in the predicted direction of the research hypothesis. Coefficients obtained were as follows:

| | |
|--------------------------|---------------------------|
| WB from raw scores | $\underline{r} = - .4930$ |
| Wb from converted scores | $\underline{r} = - .4872$ |
| IE from raw scores | $\underline{r} = - .3482$ |
| IE from converted scores | $\underline{r} = - .3449$ |

These results indicate strong support for an inverse relationship between the DAS and the measures for well-being. Therefore, the

Table 4
 Correlation Coefficients of the Death Anxiety Scale (DAS)
 With Scales Representing Sense of Well-being For
 Each Group and the Total Sample

| Populations | <u>n</u> | DAS With | |
|---------------------|----------|------------|------------|
| | | WB | IE |
| Raw Scores | | | |
| Psychology Students | 39 | - .7380*** | - .5884*** |
| Hospital Volunteers | 44 | - .5706*** | - .0317 |
| Military Officers | 29 | - .3721* | - .1472 |
| Military NCOs | 35 | - .5640*** | - .5745*** |
| Engineers | 44 | - .1867 | - .2343 |
| Total Sample | 191 | - .4930*** | - .3482*** |
| Converted Scores | | | |
| Psychology Students | 39 | - .7377*** | - .5897*** |
| Hospital Volunteers | 44 | - .5733*** | - .0320 |
| Military Officers | 29 | - .3620* | - .1370 |
| Military NCOs | 35 | - .5618*** | - .5769*** |
| Engineers | 44 | - .1887 | - .2260 |
| Total Sample | 191 | - .4872*** | - .3449*** |

* $p < .05$.

** $p < .01$.

*** $p < .001$.

hypothesis that there is no relationship between the DAS and the measures of well-being is rejected.

Of the five groups that comprised the total sample, two groups, the Psychology Students (N = 39) and the Military NCOs (N = 35), obtained significance coefficients on both the Wb and IE scales, from raw and converted scores. These results indicated agreement with results obtained by the total sample and at the same level of probability ($p < .001$). Two groups obtained significant coefficients for the Wb scale only (from raw and converted scores) but failed to reach significance with either raw or converted scores on the IE scale. They were the Hospital Volunteers and the Military Officers. Only the Engineers produced no significant coefficients for either the Wb or IE scales from raw or converted scores.

Viewing the scales independently, the Engineers were the only group that did not reach significance on the Wb scale from either raw or converted scores. The other four groups did obtain significance. However, the Military Officers reached only the .05 level for both raw and converted scores, a more moderate result than those of the other groups. Three of the five groups did not reach significance for the IE scale from converted or raw scores specifically the Hospital Volunteers, Military Officers and Engineers.

Review of the five groups that comprised the total sample indicated good support for the Wb scale but only moderate support for the IE scale. All coefficients were consistent in significance between those derived from raw scores and those from converted scores. That is, each group that generated significance from a raw score also produced

significant for that particular scale's converted score. This also held true for results obtained for the total sample. The strength of the significant coefficients obtained, except for the Military Officers with the Wb scale, were consistently high. All coefficients were in the predicted direction of the research hypothesis.

Hypothesis 3

There will be no interrelationship between performance on all scales representing openness to change and sense of well-being by the subjects.

The scales included are the Wb, IE, FX, Lab, Cha and EPPS scales but not the DAS. Using a Pearson product-moment correlation procedure, 30 coefficients were obtained for the total sample (15 coefficients from raw scores; 15 coefficients from converted scores). Results are presented for clarification of data on Table 5.

All intercorrelations reached the significant level of .05 or better for the total sample (N = 191) except the Cha scale with the Wb scale (from both raw and converted scores). That is, from a total of 30 coefficients generated, 28 met the criteria of significance. Further, of those 28 reaching significance, 5 reached the .01 level of significance and 15 reached a significant level of .001 or better. All coefficients were in the predicted direction of the research hypothesis (see Table 5).

The two strongest intercorrelations of scales from both raw and converted scores, (those that exceeded an \underline{r} of .5) were Wb with IE and Cha with Lab. Results are as follows: (a) Wb with IE from raw scores ($\underline{r} = .6342$, $\underline{p} < .001$), (b) Wb with IE from converted scores ($\underline{r} = .6436$, $\underline{p} < .001$), (c) Cha with Lab from raw scores ($\underline{r} = .6399$, $\underline{p} < .001$) and (d) Cha with Lab from converted scores ($\underline{r} = .5979$, $\underline{p} < .001$). The

Table 5
 Intercorrelation Matrix of Scales Representing
 Sense of Well-being and Openness to Change
 For the Total Sample
 (n = 191)

| | WB | IE | FX | EPPS | LAB | CHA |
|------------------|----------|----------|----------|----------|----------|--------|
| Raw Scores | | | | | | |
| WB | 1.0000 | | | | | |
| IE | .6342*** | 1.0000 | | | | |
| FX | .1682** | .4688*** | 1.0000 | | | |
| EPPS | .1818** | .1960** | .2073** | 1.0000 | | |
| LAB | .1421* | .2683*** | .2729*** | .1576* | 1.0000 | |
| CHA | .0261 | .1643* | .2358*** | .2295*** | .6399*** | 1.0000 |
| Converted Scores | | | | | | |
| WB | 1.0000 | | | | | |
| IE | .6436*** | 1.0000 | | | | |
| FX | .1736** | .4668*** | 1.0000 | | | |
| EPPS | .1607* | .1392* | .1247* | 1.0000 | | |
| LAB | .1223* | .2530*** | .3284*** | .2216*** | 1.0000 | |
| CHA | .0097 | .1390* | .2546*** | .2598*** | .5979*** | 1.0000 |

* $p < .05$.

** $p < .01$.

*** $p < .001$.

intercorrelation of the Wb scale with Cha scale that failed to reach significance are as follows: (a) from raw scores ($r = .0261$, $p < .360$) and (b) from converted scores ($r = .0097$, $p < .447$).

With the exception of the two coefficients for Wb with Cha, the preponderance of evidence would indicate a direct positive relationship between these scales. Therefore, the hypothesis that the scales representing openness to change and sense of well-being is not interrelated is rejected, noting the exceptions.

Review of results for the five groups that comprised the total sample are reported in Tables 6 through 10. These represent separate tables for each group and provide the summary results for that particular group. Thirty coefficients were generated for each group.

Intercorrelations of scales for the group of Psychology Students ($N = 39$) produced 23 significant coefficients from 30 possible (10 from raw scores; 13 from converted scores) and represented results most complementary with the total sample (see Table 6). The Engineers ($N = 44$) obtained the second highest number of significant intercorrelations of 15 (6 from raw scores; 9 from converted scores) (see Table 10). The lowest number of significant coefficients was produced by the Military NCOs ($N = 35$) with only 8 coefficients reaching significance (see Table 9) from the possible 30. The remaining two groups, the Hospital Volunteers (see Table 7) and the Military Officers (see Table 8) obtained 11 and 10 significant intercorrelations respectively.

The intercorrelations of Wb with IE and Cha with Lab were the only two sets which reach significance consistently across all groups (see Tables 6 through 10). These relationships were also the two strongest

Table 6
 Intercorrelation Matrix of Scales Representing
 Sense of Well-being and Openness to Change
 For Psychology Students
 (n = 39)

| | WB | IE | FX | EPPS | LAB | CHA |
|------------------|----------|----------|----------|---------|----------|--------|
| Raw Scores | | | | | | |
| WB | 1.0000 | | | | | |
| IE | .7383*** | 1.0000 | | | | |
| FX | .4049** | .6148*** | 1.0000 | | | |
| EPPS | .2083 | .2885* | .4888*** | 1.0000 | | |
| LAB | .1896 | .2048 | .2065 | .3252* | 1.0000 | |
| CHA | .1901 | .3397* | .2816* | .4338** | .8179*** | 1.0000 |
| Converted Scores | | | | | | |
| WB | 1.0000 | | | | | |
| IE | .7378*** | 1.0000 | | | | |
| FX | .4011** | .6172*** | 1.0000 | | | |
| EPPS | .2561 | .3363* | .5146*** | 1.0000 | | |
| LAB | .3586* | .4101** | .3397* | .4329** | 1.0000 | |
| CHA | .2344 | .4168** | .3250* | .4436** | .7899*** | 1.0000 |

*p < .05.

**p < .01.

***p < .001.

Table 7
 Intercorrelation Matrix of Scales Representing
 Sense of Well-being and Openness to Change
 For Hospital Volunteers
 ($n = 44$)

| | WB | IE | FX | EPPS | LAB | CHA |
|------------------|--------|----------|---------|--------|----------|--------|
| Raw Scores | | | | | | |
| WB | 1.0000 | | | | | |
| IE | .2771* | 1.0000 | | | | |
| FX | .0261 | .5251*** | 1.0000 | | | |
| EPPS | -.0227 | -.0761 | -.1089 | 1.0000 | | |
| LAB | .0082 | .2802* | .4111** | .1367 | 1.0000 | |
| CHA | -.1872 | .0184 | .2606* | .2239 | .5584*** | 1.0000 |
| Converted Scores | | | | | | |
| WB | 1.0000 | | | | | |
| IE | .2733* | 1.0000 | | | | |
| FX | .0405 | .5458*** | 1.0000 | | | |
| EPPS | -.0428 | -.0896 | -.1322 | 1.0000 | | |
| LAB | -.0585 | .1511 | .3226* | .1659 | 1.0000 | |
| CHA | -.1753 | -.0625 | .2123 | .2836* | .4791*** | 1.0000 |

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 8
 Intercorrelation Matrix of Scales Representing
 Sense of Well-being and Openness to Change
 For Military Officers
 (n = 29)

| | WB | IE | FX | EPPS | LAB | CHA |
|------------------|----------|--------|---------|---------|----------|--------|
| Raw Scores | | | | | | |
| WB | 1.0000 | | | | | |
| IE | .8083*** | 1.0000 | | | | |
| FX | .0490 | .0147 | 1.0000 | | | |
| EPPS | .1297 | .0862 | .2969 | 1.0000 | | |
| LAB | .1258 | .2458 | .3817* | .2227 | 1.0000 | |
| CHA | .0303 | .1232 | .2562 | .4793** | .7551*** | 1.0000 |
| Converted Scores | | | | | | |
| WB | 1.0000 | | | | | |
| IE | .8065*** | 1.0000 | | | | |
| FX | .0516 | .0107 | 1.0000 | | | |
| EPPS | .1453 | .0253 | .2084 | 1.0000 | | |
| LAB | .0999 | .2038 | .5285** | .3739* | 1.0000 | |
| CHA | .0040 | .1048 | .3247* | .5139** | .7715*** | 1.0000 |

*p < .05.

**p < .01.

***p < .001.

Table 9
 Intercorrelation Matrix of Scales Representing
 Sense of Well-being and Openness to Change
 For Military NCOs
 (n = 35)

| | WB | IE | FX | EPPS | LAB | CHA |
|------------------|----------|--------|--------|--------|----------|--------|
| Raw Scores | | | | | | |
| WB | 1.0000 | | | | | |
| IE | .7709*** | 1.0000 | | | | |
| FX | .0119 | .1180 | 1.0000 | | | |
| EPPS | .1332 | .2588 | .3690* | 1.0000 | | |
| LAB | .2874* | .2685 | -.1554 | .1166 | 1.0000 | |
| CHA | .1060 | .1273 | .1424 | .2545 | .5474*** | 1.0000 |
| Converted Scores | | | | | | |
| WB | 1.0000 | | | | | |
| IE | .7766*** | 1.0000 | | | | |
| FX | .0159 | .1151 | 1.0000 | | | |
| EPPS | .1375 | .2555 | .3592* | 1.0000 | | |
| LAB | .1267 | .1872 | .0445 | .2652 | 1.0000 | |
| CHA | .0169 | .0687 | .2637 | .3521* | .4305** | 1.0000 |

*p < .05.

**p < .01.

***p < .001.

Table 10
 Intercorrelation Matrix of Scales Representing
 Sense of Well-being and Openness to Change
 For Engineers
 ($n = 44$)

| | WB | IE | FX | EPPS | LAB | CHA |
|------------------|----------|----------|--------|--------|----------|--------|
| Raw Scores | | | | | | |
| WB | 1.0000 | | | | | |
| IE | .5478*** | 1.0000 | | | | |
| FX | .1051 | .2623* | 1.0000 | | | |
| EPPS | .4252** | .4922*** | .3237* | 1.0000 | | |
| LAB | -.0409 | .0792 | .1260 | .0520 | 1.0000 | |
| CHA | .1604 | .2489 | .2332 | .0767 | .5153*** | 1.0000 |
| Converted Scores | | | | | | |
| WB | 1.0000 | | | | | |
| IE | .5395*** | 1.0000 | | | | |
| FX | .1119 | .2625* | 1.0000 | | | |
| EPPS | .4534*** | .5217*** | .3150* | 1.0000 | | |
| LAB | .0477 | .1426 | .2611* | .1490 | 1.0000 | |
| CHA | .2125 | .2892* | .2627* | .0694 | .4092** | 1.0000 |

* $p < .05$.

** $p < .01$.

*** $p < .001$.

for the total sample. Further, across the five groups, these relationships were significant at the .001 level (from both raw and converted scores) with the exception of Cha with Lab from converted scores for Engineers ($p < .01$) and Military NCOs ($p < .01$) and Wb with IE ($p < .05$) from both raw and converted scores for Hospital Volunteers. These exceptions, though significant, were at a more moderate level.

The intercorrelation coefficients for Cha with Wb from both raw and converted scores did not reach significance for any of the five groups. This is also consistent with the result of the total sample and represents the only intercorrelation that did not reach significance by at least one of the groups or the total sample. Other significant coefficients obtained by the various groups appeared to be varied and/or group specific and did not tend to produce any patterns.

The intercorrelations of Wb with IE and Cha with Lab also produced a larger number of coefficients with strengths of $r = .5$ or better (see Tables 6 through 10). The Military Officers obtained the highest for the Wb with IE relationship (from raw scores $r = .8083$; from converted scores $r = .8065$) accounting for approximately 65 percent of the variance with that particular group (see Table 8). Similarly, Psychology Students obtained an $r = .8179$ for the relationship between Cha and Lab but from raw scores only. A few coefficients generated between the other scale pairs also produced correlations of $r = .5$ or better. However, these varied among groups and scale pairs and did not indicate any particular patterns.

In sum, results indicated that the intercorrelations obtained between the Wb and IE scales and between the Cha and Lab scales from

both raw and converted scores were the strongest results for the total sample and also represented the only coefficients which reached significance by all five groups. Intercorrelation of the scales Wb with Cha (from both raw and converted scores) were the only coefficients which failed to reach significance for either the total sample or any one of the five groups.

The direction of the results for the intercorrelations varied some. However, all significant correlations across the five groups were in the predicted direction of the research hypothesis. Non-significant results produced only an occasional coefficient which opposed the predicted direction.

Means of the converted scores obtained for the total sample and the five groups within the total sample indicated a predominance of answering within the average range (40 to 60). The one exception was the group of Psychology Students (N = 39) who obtained a slightly higher than average mean for the Fx scale ($\underline{M} = 61.21$). (See Table 14, Appendix G).

Means and standard deviations are reported on Tables 11 through 17, Appendix G for clarity of data.

Pertinent to this study is the Wb scale from converted scores which measures "faking" as well as a general sense of well-being and freedom from worries, (previously discussed). Means on this scale were within the average range (40 to 60) for the five groups with a consolidated mean for the total sample of 48.37. (See Table 12, Appendix G). Means obtained by the total sample and the five groups on the DAS (a nonstandardized scale with a score range of 0 through 15) were consistently lower than the median for the scale. ($\underline{Mdn} = 8$). The total

sample mean for the DAS was 4.99 with a standard deviation of 2.92 (see Table 11, Appendix G).

Summary

Based on the results of the total sample, the data indicated failure to reject the hypothesis that there is no relationship between death anxiety and measures of openness to change (Hypothesis 1). The hypotheses that there is no relationship between death anxiety and measure of well-being (Hypothesis 2) and that there is no interrelationship between scales used to measure openness to change and sense of well-being (Hypothesis 3) were both rejected. Pertinent results were discussed for the total sample and for the five groups that comprised the total sample for each hypothesis. Means and standard deviations were reported. Summary tables of results appropriate to each hypothesis were provided for clarity of data.

Chapter 5

Conclusions

This chapter will discuss and analyze the data generated by the study, present conclusions, and suggest directions for future research. Evaluation of the data will include results for the total sample in relationship to the hypotheses. Limitations of the study will also be presented.

Evaluation of Death Anxiety and Openness to Change

Considering first the possibility of an inverse relationship between the Templer Death Anxiety Scale (DAS) and the four measures chosen as representative of openness to change, (previously reviewed as the scales of Flexibility [FX] from the CPI, the need of change from the EPPS [EPPS] and Lability [Lab] and Change [Cha] from the ACL) the overall results indicate the lack of such a relationship. This would mean that death anxiety does not relate to openness to change, at least, in terms of the scales used in this research. This result was based on evaluations of the total sample and was supported by results from the five groups that comprised the total sample. However, a closer look at the data reveals some possible alternative interpretations.

Though the research hypothesis was rejected, some relationships did occur. The total sample (N = 191) obtained significant results between the DAS and the Change scale from the EPPS in the predicted direction. This finding agrees with the study by Dickstein (1972) who also found a significant inverse relationship between death concern and the Change scale of the EPPS but with a sample of college students

enrolled in an introductory psychology course. However, the results from the group of Psychology Students in the present study, though approaching significance failed to obtain the necessary level of confidence ($p < .05$) between the DAS and the EPPS. Further, several measurement variables used by Dickstein differ from those used in the present study and may reduce the comparability of the two studies. They are as follows:

First, Dickstein used a non-linear measurement in that he administered the instruments to selected subjects with high, medium and low scores on his death concern scale. The present study utilizes a linear measurement to include all scores obtained on the DAS.

Second, Dickstein administered the Dickstein Death Concern Scale rather than the DAS utilized in the present study. Since the results for the total sample in the present study did reach significance using the DAS and since the DAS has been shown to correlate with the Dickstein Death Concern Scale (Kuperman and Golden, 1978), this difference would seem of least relevance.

Third, the number of subjects measured constitutes another difference between the studies. Dickstein's college sample consisted of 66 subjects while the college sample of the present study consisted of 39 participants. This difference does not seem particularly large, however, the total sample ($N = 191$) of the present study does represent a large difference and the size of N may have had influence on the results. The possibility of a pattern developing here may be indicated in that the college sample ($N = 39$) of the present study approached significance, the college sample ($N = 66$) of the Dickstein

study with a non-linear measurement reached significance and the total sample (N = 191) of the present study reached significance with a linear measurement. Therefore, it would seem that the size of the N is influential in the results since increasing N tends to equalize variances within the population. However, these results must be interpreted cautiously. Though these studies may indicate that the Change scale of the EPPS has some relationship to death attitudes, it is important to note that the significant relationship obtained by the total sample in the present study was moderate in strength ($p < .05$). Further, Dickstein found (using his middle group as a normative group) that high death concern is discrepant with regard to change but that this did not hold true for low death concern. Considering also that his results were not hypothesized in advance and that the measurements utilized were different between the two studies, the present research and the Dickstein study do not provide strong validity for the use of the Change scale of the EPPS with the DAS but do seem to indicate a possibility or trend.

Fourth, the characteristics of Dickstein's college sample and the college students in the present study differed somewhat. Dickstein's population consisted of students in an introductory course in Psychology. The college subjects in the present study were in more advanced courses of Psychology which may indicate more exposure to psychological ideas and information. Further, Dickstein measured 66 female students from Wellesley College while college students in the present study were both male and female. Results of past research to determine possible sex differences in death anxiety have been mixed (Pollak, 1979) and the data

suggests no difference between male and female except possibly in specific areas of death concern. However, this has not been considered definitive to date. Therefore, this issue could be considered influential in the comparisons of the two studies. It would be of minimal concern since Templer (1970) using the DAS (the same instrument used in the present study) found no differences between males and females. Further, the present study measured a large non-college adult population (N = 152) as well as the college population (N = 39).

The results of the five groups that comprised the total sample showed varied relationships among the scales with the DAS and did not tend to produce a pattern for the identification of a scale (or scales) as representative among the group. That is, no two or more groups produced significant results on the same scales from specifically raw or converted scores. The Military NCOs and the Engineers did both obtain significant results between the DAS and Lab scale but the result for the NCOs was produced from raw scores while the Engineers obtained significance from converted scores. Summation of the results for hypothesis 1 indicates that (1) all groups obtained at least one relationship except the Hospital Volunteers, (2) results varied as to whether the significant correlation was derived from raw or standard scores, and (3) one group (the Military Officers) obtained a result opposite to the predicted direction of the research hypothesis. The Psychology Students were the only group to obtain significance on a scale from both raw and converted scores.

Though none of the groups obtained agreement as to the relationship of a scale representing openness to change to the DAS, the fact that

some relationships did occur suggests that death anxiety may have some relationship to change but perhaps not in a systematic manner. This study was designed to identify linear relationships. It is possible that the relationship between death anxiety and openness to change is non-linear. It is also plausible that the meaning of change to individuals or the type of change (such as a major life change) may consist of more variables or deeper constructs than measured by the four scales. The scales used to measure openness to change in this study were chosen for various elements deemed to be part of attitudes toward change. The four scales (together) were then considered a reasonable representation of a comprehensive measurement of the concept. The erratic results, however, may suggest that this was not the case. Therefore, a re-evaluation of these scales may provide some enlightenment.

Two of the scales used represent a preference for novelty, specifically the EPPS and the Cha scales. The EPPS is concerned with novelty such as eating in different places, doing new things, traveling and moving about the country and trying new fads (Edwards, 1959). The Cha scale from the Adjective Check List measures novelty in the avoidance of routine and suggests a perception of disorder and complexity as challenging and welcome (Gough and Heilbrun, 1965). These two scales do not necessarily measure the same type of novelty though it was originally thought that both were appropriate to openness to change. However, results suggest that other factors may be influential here. Though the Change scale from the Adjective Check List did not show similar results as the EPPS scale when compared to the DAS (see Table 3), the Cha and the EPPS scales did intercorrelate for the total sample and

several groups (see Tables 5 through 10). The intercorrelations will be discussed in more detail later in this chapter but there is some indication that the Cha scale is measuring something quite different than the EPPS.

One possible explanation may be in the type of novelty measured. The EPPS measures novelty which may be somewhat superficial and/or not part of daily routine or those events that are part of daily life-style. Dickstein (1975) alluded to this when he suggested that "the n of Change measures concerns less dramatic changes" than the external sensation subscale of the Pearson Novelty Experiencing Scale in which he failed to obtain a similar relationship as he did with the EPPS (p. 150). This writer suggests that perhaps the EPPS is less threatening to the test taker and therefore defensiveness is avoided on the part of the subject in the test-taking process. Though defensiveness of subjects in responding to the instruments may be a confounding variable, this evaluation must be considered tenuous. Significance was obtained in the present study between the DAS and the EPPS for only the total sample with a larger N and was not obtained for any of the individual groups that comprised the total sample. Though Dickstein (1975) obtained significance between death concern and the EPPS with a college population, he did not use the DAS as a measure of death attitude (previously discussed).

A third possibility is simply that some types of novelty are more viable to openness to change than others. In this case the EPPS seems to be marginally better than the other measures used.

Concerning the other two scales used in this study to measure openness to change, the Lab scale measures spontaneity and flexibility, openness to the unusual and challenging but suggests inner restlessness for high scorers in which change may be used as a defense mechanism to avoid problems (Gough and Heilbrun, 1965). The FX scale, though questionable as a measure of flexibility, does tend to measure non-rigidity, adventurousness, rebellion and concern with personal pleasure (Gough and Heilbrun, 1965). It is plausible that though some dynamics measured by these scales may represent openness to change, other characteristics such as rebellion and the use of change to avoid problems may be counter to the concepts of this study.

There is a sense of adventurousness with all the scales used. However, the type of adventure may be more viable than a general sense of adventure in order to be open to major life changes, change due to traumatic events, or personality and behavioral changes. Overall, there seems to be three major possibilities for the sparse and varied results; (1) that there is no relationship between openness to change and death anxiety, (2) that the scales used in this study to measure openness to change, though measuring some dynamics of the concept, are not comprehensive enough in scope and/or (3) some characteristics measured by these scales may be counter to openness to change and, therefore, dilute the results.

Another perspective for examination of these results would be the characteristics of the different groups measured in this study. Though direct differences between groups was not the purpose of this study, some characteristics of the groups do seem to differ and were chosen

for that reason in an attempt to add some heterogeneity to the total sample. Therefore, what is viable to one group for openness to change may not be the same for another group. That is, some characteristics for the concept may be group specific. The variety of results would seem to indicate that at least some heterogeneity was obtained.

Evaluation of Death Anxiety and Sense of Well-being

Results for the measures of well-being and death anxiety indicate a strong relationship between the DAS and both the Wb and IE scales for the total sample. This would seem to support the Existential Theory that death resolution provides a high level of mental health functioning in that a sense of well-being would be experienced at that high level of mental health. More specifically, the results seem to relate to Frankl's theory concerning purpose in life which he derived from Existential thought (Frankl, 1971).

There has been sufficient research indicating purpose in life as inverse to death anxiety (Durlak, 1972; Durlak, 1973; Blazer, 1973; Bolt, 1978). Results of the present study indicate a strong inverse relationship between the DAS and well-being supporting the findings of Aronow et al. (1980). Aronow, et al. found a significant inverse relationship between the DAS and the Wb scale from the CPI as well as a self-esteem measure and related this to Frankl's theory. However, he measured only a college population and suggested research of non-college populations. The present study includes several non-college populations producing similar results.

It would seem that a general sense of well-being would be involved in having a purpose in life (considered a high level of mental health).

In this sense the results of a strong inverse linear relationship between death anxiety and well-being provide support for the Existential Theory. Though correlation does not prove causation, one could speculate that the Existential confrontation with death does enhance one's mental health and functioning keeping in mind that the reverse may also be the case. That is, increase of a sense of well-being may also reduce one's concerns about death. A note of caution for this conclusion is necessary. Since the death attitude instruments do not tend to distinguish between death "resolution" (as in the Existential thought) and the defense mechanism of denial of death for individuals with low death anxiety scores, and, since the influence of denial is therefore unknown for low scorers, support for the Existential Theory must be considered speculation at this time. However, evidence is certainly indicating support for that speculation.

A review of results for the five groups shows a significant relationship between the DAS and the Wb scales for all groups except one, the Engineers. Further, all groups that obtained the relationship, did so at a substantially significant level ($p < .001$) except the Military Officers. This group obtained significance but at a more moderate level ($p < .05$).

Comparing the DAS with the IE across groups, results indicated less strength of results than was obtained for the DAS with the Wb. Only two of the groups, the Psychology Students and the Military NCOs obtained a significant relationship of the DAS with the IE scale. Though these relationships were strong in the significant level obtained ($p < .001$), the other three groups failed to reach significance on this scale. A

closer evaluation of the characteristics of the measures would seem important to these differences.

The commonality between the Wb and the IE scales (though there is little actual item overlap) is that both scales identify concern or lack of concern for physical complaints (Megargee, 1972). The scales were chosen for the present research partially for this specific measurement. Further, Hyche (1978) reported that individuals with high death fear tended to have more bodily concerns and worries over illness or getting hurt. This evidence suggests that physical concerns and worries are related to the existence or non-existence of a sense of well-being. However, one could wonder from the results of the present research if there is more than bodily concern involved in well-being or indicative of well-being. Evaluation of the differences between the two scales offers some understanding of the discrepancies across groups.

The Wb scale is designed to measure a general sense of physical and mental health, freedom from self doubt and feelings of capability in coping with daily problems. The IE scale measures predominately the effective application of intellectual ability by the individual (Gough, 1968; Gough, 1975; Megargee, 1972). The Wb scale seems to be more general and comprehensive while the IE is more specific and may represent only one of many aspects involved in a sense of well-being. Therefore the IE may also be group specific.

An interesting note concerning these results is that all results were in the predicted direction, all significant and non-significant results were consistent between raw scores or converted scores and only

one group, the Engineers, failed to indicate a relationship of the DAS with either the Wb or IE scales.

Overall, results of the total sample with the larger N indicate a linear relationship with both the Wb and IE scales. That is, individuals with low death anxiety have a high sense of well-being, the reverse being the case for individuals with high death anxiety. The trend for differences between the Wb and IE scales across the groups suggests the Wb scale as a more consistent and comprehensive measurement than the IE scale.

The Wb scale was also chosen for this research for its identification of "faking" responses. The means from converted scores reported in Table 12, Appendix G were within the average responding range of 40 to 60 across groups and for the total sample. This suggests that, as groups and as a total sample, responding was in an honest and straightforward manner.

Evaluation of Intercorrelations

The intercorrelations of the scales used to measure well-being and openness to change indicated that all scales were either measuring the same characteristics or similar related characteristics for the total sample except the Wb with the Cha scale. This held true for coefficients derived from both raw and converted scores. This further suggests that by extracting scales from various instruments and recombining them into one instrument, perhaps a bias or response set was influencing the results of the study. However, the recombined instrument used in this study represented three different answering modes, namely true or false statements, choice between two statements and

identification of descriptive adjectives. The first two modes are forced choice while the third mode was more open-ended. This would seem to reduce set responding.

Further, the lack of results obtained for the relationships of the DAS with scales measuring openness to change compared to the strong results obtained for well-being seems to indicate that a response set was not influencing the results to any great degree. If a responding bias had been strongly influential in the results, it would seem that the comparison of the scales for well-being and openness to change with the DAS would have produced results more closely aligned whether in a direction of significance or non-significance. This would also seem to be the case if the scales for well-being and openness to change were measuring the same characteristics. Therefore, it appears that influence from a responding set was minimal and that the scales were likely measuring different but related characteristics.

The relationship between the Wb scale (one of the well-being measures in this study) and the Cha (one of the scales measuring openness to change) was the only combination that failed to reach significance for the total sample. This was the case from both raw and converted scores. This particular combination was also the only relationship that did not reach significance for any of the five groups. The Wb scale appears to measure very different and unrelated characteristics from the Cha scale. The seeking of novelty of experiences and avoidance of routine, measured by the Cha scale, seems to be quite different than freedom from bodily concern, self-doubt and disillusionment as measured by the Wb scale (Gough and Heilbrun, 1965; Gough, 1975).

Though these two scales correlate with other scales used in this study that have similar characteristics, the differences between Wb and Cha appear to be more delineated. Clearly, these two scales measured different characteristics as perceived by the subjects in this study.

Two intercorrelations reached significance at a strong level for the total sample, specifically, the Wb with the IE and the Cha with the Lab. These combinations were also the only two relationships that reached significance with all the five groups and were consistent from both raw and converted scores. This result supports those reported by Gough (1975) in the norming data in which both scales were part of the parent instrument. The similarities between the Wb and IE scales (concern for physical complaints, previously discussed) could indicate that they are measuring the same characteristics. However in the present study, fewer of the groups measured obtained significance when comparing the IE to the DAS than when comparing the Wb to the DAS. This would suggest that other characteristics of each scale are related but not identical and that these characteristics are discriminatory for the scales especially with groups having a smaller N and therefore more individual variance within the group.

The relationship between the Cha and the Lab also indicate some strong correlations ($\underline{r} = .5$ or better) for the total sample and also reach significance with all five groups. Results were consistent from both raw or converted scores. The scale descriptions for Lab and Cha as presented by Gough and Heilbrun (1965) do seem to identify several similar characteristics such as spontaneity, adventurousness and pleasure in change. The intercorrelations of the Cha and Lab with

the other scales measuring openness to change and well-being are varied, do not tend to produce any pattern but may indicate that some similar but distinct characteristics are being identified. Yet the lack of a pattern would seem to suggest that this is not the case to any major degree. Further, the weak results of these scales with the DAS seem to indicate minimal discrimination between them. (See Tables 3 through 10.) Though some discriminating characteristics between these two scales may be operative, it appears that the Lab and the Cha are predominately measuring the same characteristics.

As previously identified, results of the intercorrelations for the total sample indicated that most of the scales used to measure well-being and openness to change in this study were interrelated. However, results across the five groups showed less intercorrelations and more inconsistencies from group to group, except for the scale combinations discussed. The smaller N of the individual group likely accounts for these differences.

Summary and Conclusions

In summary, several conclusions can be made from the results of this study.

1. Death anxiety does not relate to openness to change in a systematic way as measured by the scales used in this study. An exception to this was that individuals with low death anxiety tend to enjoy novelty such as eating in new places, traveling, trying new things and enjoying new fads. Conversely, individuals having high death anxiety do not enjoy this type of novelty. There is an indication that some attitudes concerning change are related to death anxiety for specific groups but exactly what is involved is unclear at the present time.

2. Death anxiety is inversely related to a sense of well-being. Individuals expressing low death anxiety also tend to be free from self-doubt, are not overly concerned with bodily complaints, are intellectually efficient and tend to minimize worries. The reverse is the case for individuals expressing high death anxiety. The Well-being scale from the California Psychological Inventory (CPI) is a more comprehensive and general measurement of well-being than the Intellectual Efficiency scale from the CPI.

3. All scales measuring openness to change and sense of well-being are interrelated, measuring similar or related characteristics, except the Well-being scale from the California Psychological Inventory with the Change scale from the Adjective Check List. These two scales measure distinctively different characteristics. The two strongest and most consistent interrelationships for the total sample and all five groups were the Well-being scale with the Intellectual Efficiency scale, both from the California Psychological Inventory and the Lability scale with the Change scale both from the Adjective Check List. The Well-being scale and the Intellectual Efficiency scale appear to measure related characteristics while the Lability and Change scales appear to be measuring the same characteristics.

Limitations of the Study

Several areas of this study were problematic and constituted limitations to the investigation. The major limitation resided in the instrumentation used to measure the subjects. First, there are no available instruments to measure openness to change and acceptance of loss per se. The scales compiled from the California Psychological

Inventory, the Edwards Personal Preference Schedule and the Adjective Check List were chosen as a close representation of measurement of the concept. These scales were chosen for specific personality characteristics which, in a theoretical sense, would seem to apply to the concept. These scales may not represent a true measure of openness to change and loss attitudes and/or may not be comprehensive in scope or depth for the concept. This was also the case for the incorporation of the Intellectual Efficiency scale as a measure of well-being.

Second, standard scores were not available for the EPPS n of Change scale for non-college adults. In the present research, the converted scores for the EPPS for the four non-college adult groups were obtained by comparing the participants' scores with the means and standard deviations of the original norming population reported by Edwards (1959). Therefore, the correlations obtained between this scale and the scales extracted from the California Psychological Inventory, the Adjective Check List and the EPPS for college students may not be completely representative. Third, extracting the scales from the parent instrument may also reduce the validity and reliability of the scales producing some limitation of confidence in the results. Fourth, objective instruments measuring death anxiety have been available for about 10 years, still somewhat early in their development. The Templer Death Anxiety Scale has been used more often than any other and presents the best reliability and validity data to date. However, the comprehensiveness of this scale still comes under question and there are no standardization norms for this scale. Other instruments in the process of development may, in the future, prove to be more

concise measurements of death attitudes. Fifth, the objective scales of death anxiety do not tend to discriminate between death acceptance (or resolution) and death denial for individuals with low death anxiety scores. Finally, all instruments used in this study were self-report and may not represent true behavior or how the subjects are seen by others.

Another limitation to this study lies in the population measured. Though heterogeneity was obtained by the use of various different groups, the total sample was not obtained by randomization and therefore the results may represent responses of a specific combination of groups. The population measured was predominately Caucasian. Few non-whites participated in the study. Further, though the total sample consisted of both males and females, the individual groups represented a variety of different ratios of males to females as reported on Table 1. Only a few females were represented in the groups of Military Officers and Engineers while the Hospital Volunteers consisted of only a small number of males. The group of Military NCOs were all males. The group of Psychology Students were over two-thirds female. These differences may be of minimal concern since standard or converted scores were provided for the scales representing openness to change and well-being and the research on death anxiety indicates little if any difference between males and females especially with the DAS used in this study (Templer, 1970; Pollak, 1979).

Generalization of the results of the total sample (N = 191) to a large population would seem reasonable since a fairly high degree of

heterogeneity was obtained in this study. However, generalization to small specific groups would need to be considered tenuous.

Suggestions for Future Research

Several areas of continued research could be explored concerning the concepts in the present study of a relationship of death anxiety to openness to change. The research, to date, is minimal leaving this area wide open to new ideas and new methodology. Though the present study did not find a strong relationship between the DAS and the measures chosen for openness to change, some relationships were obtained. This would seem to indicate that more study would be warranted before the concept could be considered as non-existent.

The basic difficulties within this concept at the present time are the identification of specific characteristics and attitudes that represent openness to change or the lack of it, adequate instrumentation to measure these characteristics and attitudes and identification of denial vs. resolution of death in low death anxious individuals.

Identification of specific characteristics and attitudes representing openness to change might be obtained through structured interviews or by identification of consistent responding to specific items on scales measuring attitudes to change by high, medium or low death anxious persons. Compiling these responses into a scale or instrument of measurement could produce a more concise measurement. Other measurements of change than the scales used in the present research might also be more appropriate and representative of the concept.

Distinguishing between denial and resolution or acceptance of death may prove more difficult to obtain. Several researchers have

attempted identification of denial through use of Galvanic Skin Response to death related and neutral words, as reviewed by Pollak (1979). Results have been mixed. Further, Pollak concludes concerning defensive denial that, "this has not been reliably and incontrovertibly demonstrated" (p. 115). The Thematic Appreciation Test and the Rorschach have been used in research concerning death attitudes and mental disturbance (reviewed by Pollak, 1979). These studies were not for the specific identification of denial. However, using normal populations, the projective tests might indicate suppressed anxiety, or the lack of it, in low death anxious persons. Use of these projective tests is limited to researchers qualified to administer and evaluate them. Therefore, identifying characteristics of denial or resolution from the projective tests and converting these to objective instrumentation might prove more useful. Further, a clearer and more operational definition of what is meant by "death acceptance" or "Existential death resolution" is certainly needed.

Additionally, since Dickstein (1972) and the present study found some relationship between death attitudes and the n of Change scale from the EPPS, further study using the EPPS scale could be informative. Replication with a different variety of groups and/or pre-post testing of death education courses might add validity for the use of the EPPS scale with death attitudes scales.

Another area of study for the relationship of death anxiety to openness to change could be linear vs. non-linear measurement. Comparison of results between subjects measured in a linear manner with those in a non-linear manner would be desirable to distinguish the type of

relationship that exists between death anxiety and openness to change. The problem with this type of comparison, at the present time, is the lack of standardization of death attitude scales and therefore identification of the non-linear parameters. However, Bascue and Lawrence (1977) reported the means and standard deviations of the DAS in his research as aligned with several results previously reported (Templer and Ruff, 1971) for 3,600 normal adults and adolescents (means ranged from 4.5 to 7.0; standard deviations were a little more than 3). The means and standard deviations of the present study also tended to agree with the earlier results (see Tables 10 through 16 Appendix G). Therefore, compiling means and standard deviations from various studies that employed the DAS measurement could produce a standardization of that scale.

Another area of interest to the concept of death attitudes as related to openness to change might be in the comparison of various groups. Though Pollak (1979) reviewed a variety of studies that indicated no differences between groups concerning death fear, attitudes toward change may differ and therefore any relationship of death to change may also show differences.

Concerning the relationship of death anxiety to well being, the present research compared to the studies by Aronow et al. (1980) and Smith (1977) indicates that the relationship does seem to exist. However, since the studies incorporated general differences in variables and causation is not yet identified further study using more experimental methods would seem useful.

Understanding whether the reduction of death anxiety is needed for a sense of well-being or the reverse, a sense of well-being is needed to reduce death anxiety, would seem to be the next step in research of this concept.

Pre-post comparison of well-being and death anxiety scores could be obtained for individuals receiving death education courses. This could be further compared to the reverse situation of pre-post scores on death attitudes and well-being scales with psychological education to increase a sense of well-being. If well-being increased with reduced death anxiety, this could measure whether the beneficial psychological education was the death education course or the psychological course to increase well-being. It would also apply to individuals who showed increased death anxiety as to whether they decreased in a sense of well-being in relationship to either course. In this manner cause and effect could be identified. Since Existential theory tends to be directional in that death resolution is alleged to improve mental health and functioning, research in the relationship of well-being and death anxiety might present some understanding of the Existential view.

APPENDICES

APPENDIX A
INFORMATION PERSPECTUS FOR SUPERVISORS

Research Perspectus

Philosophers, Theologians and Existentialists have historically spoken and written of life and death as related. This has been considered by some as "truth" and has lent to eloquent thought and language. Yet, there is no hard data concerning the reality of this relationship and therefore remains in the realm of assumption. Though it is reasonable to think that there may be many ways life and death relate to each other, for practical reasons, this study will research one possible relationship, namely the relationship of death anxiety to openness to change and a sense of well-being.

Several writers have expressed the observation, from their own research, that death may be experienced in life changes by having to relinquish old patterns and ways of being. That is, changes contain a death quality within them signified by the losses involved. This researcher suggests that one's attitude toward death may have a direct influence on whether the individual is open and willing to make changes or, when change is thrust upon them, how well they will make changes. In the Behavioral Science field, these ideas are presently only conjecture.

In the area of counseling, a death resolution process is being used in divorce counseling as resolution of the death of a relationship. Counselees have been noted to pass through "stages" in the divorcing process similar to the stages of death resolution, now considered a "loss model". This may even be part of all change. However, this too is only conjecture. There is no research validating or repudiating this concept. This study poses the question, does one's death attitude (death anxiety)

relate to one's change attitude (openness or resistance to change). This paper hypothesizes that the relationship is inverse, low death anxiety relates to openness to change and high death anxiety relates to resistance to change.

Some of the benefits of this study are projected to be:

In the Area of Theory

(a) to begin to understand in what ways life and death are related.

(b) to identify a possible dynamic involved within the change process which may lend understanding as to why some individuals make desired changes smoothly while others either do not make desired changes or have more difficulty in the process.

In the Area of Counseling

(a) to aid individuals in making desired changes by awareness of losses and the mourning process involved including the impasse which contains elements of change in order to continue movement in therapy.

(b) to substantiate present counseling methods in specific areas such as divorce counseling.

In the Area of Education

(a) to suggest death education as beneficial to the life change that individuals choose or must make.

Intended participants for this study will be members of different adult populations within the Tidewater area. The researcher hopes to obtain at least 40 participants from four different populations.

This study will measure individuals 18 years or older and on a volunteer basis only. They will be given a manila envelope containing

the materials needed for the testing and which is a sealable envelope. This researcher's telephone number will be included in the envelope for the purpose of contact if desired by the participant. The participant will answer the questions on their own time and return the envelope to the department head or instructor of each group in the study. This researcher will collect the envelopes from the department heads or instructors.

Within the envelope the participants will be asked demographic data of age, sex, race and field of interest or work. The measuring instrument contains scales from commonly used tests which have been safely administered to a large number of people in the past including those similar to the participants of this study. It will be stressed in the instructions that there are NO right or wrong answers. The specific scales used in this instrument are: the Templer Death Anxiety Scale, the Well-being, Intellectual Efficiency and Flexibility scales from the California Psychological Inventory and the Change scale from the Edwards Personal Preference Schedule. The participants will also be asked to respond to the Adjective Check List.

A name and address slip will be included in the manila envelope for the participants to fill out only if they wish to receive a written evaluation of their personal results and/or the results of the general study. These results will be mailed to the participants.

All subjects participating in the study will do so anonymously and on a volunteer basis. Any personal identification of data will be number coded by this investigator and complete confidentiality of individual results will be maintained. Only this researcher will have access

to the code. General results of the study will be made available to the department heads and instructors if they wish.

The participants will be informed of the general nature of the items on the instrument but will not be informed of the specific variables being compared until they receive the results if they request it. The personal results will be written in a positive manner to reduce the possibility of threat. Subjects will have access to this researcher's phone number in the event that they are bothered by the nature of the items, the procedures or the results they may receive. The department heads and instructors involved will have knowledge of the specific variables being measured.

Because of the sensitivity of the material, a committee of volunteer counselors is available to talk with the participants if needed at no cost to the participant. This committee includes this researcher, Ms. Pamela Dorman-Turner (counselor at Thomas Nelson Community College and counseling doctoral candidate), Mr. Carl Cooper (M.Ed. in counseling, ordained minister, and marriage counselor) and Rev. Floyd Chambers (pastoral counselor and counseling doctoral candidate).

Dr. Fred Adair, faculty advisor for the Department of Education at the College of William and Mary, will supervise and approve all procedures in this study. Clearance for this study has been obtained from the Ethics Committee, School of Education, College of William and Mary.

APPENDIX B

APPRECIATION AND INFORMATION PAGE IN PACKET

Please Read Carefully

Dear Participant,

I would like to express my sincere thanks for your willingness to participate in this study. It is truly appreciated.

This packet contains a booklet of questions and statements concerning attitudes, beliefs, likes and dislikes and information about you. It takes generally less than one hour to complete and there are NO right or wrong answers. To protect your right of privacy, complete confidentiality of your answers will be maintained.

I will be glad to provide you with a personal written evaluation of your results and/or the results of the study. Therefore, you will find in your packet a name and address slip. If you wish either of the results mentioned, please fill out the slip, indicate the results you wish and return it with your packet. If you do not wish either results, return the slip blank with your packet. Please make this decision before returning your packet as I will not be able to determine which answers are yours at a later date.

The packets are numbered for purposes of confidentiality. Any relationship of name and number will be known only to me and only for the purpose of providing you with the information you wish. Please do not put your name on either the Information Inventory Booklet or the answer sheets.

Thank you again for your personal contribution to this study. If you have any questions regarding the procedures, please feel free to call me, Joan Moore at 877-1040.

APPENDIX C

DEMOGRAPHIC DATA EXAMPLE

General Information

Please answer the following:

Age _____

Sex _____

Race _____

Area(s) in the hospital that I do volunteer work _____

APPENDIX D
MEASUREMENT INSTRUMENT

INFORMATION INVENTORY

BOOKLET

General Instructions

Within your packet you will find:

1. an Information Inventory Booklet
2. a special answer sheet
3. an Adjective Check List answer sheet
4. a number 2 pencil

The Information Inventory Booklet is divided into three parts with separate instructions for each part. Please read the instructions for each part carefully and answer according to the best of your knowledge. You are requested to answer Part 1 and Part 2 on the special answer sheet. The division between Part 1 and Part 2 is indicated on the answer sheet for your convenience. Part 3 has its own answer sheet.

Please use the number 2 pencil for marking your answer sheets. It is best not to linger on any one question or statement and please try to be frank in your choices.

PLEASE NOTE:

Copyrighted materials in this document have not been filmed at the request of the author. They are available for consultation, however, in the author's university library.

These consist of pages:

Appendix D, pages 131-148

University
Microfilms
International

300 N. ZEEB RD., ANN ARBOR, MI 48106 (313) 761-4700

APPENDIX F
COVER LETTER ACCOMPANYING PARTICIPANTS '
PERSONAL RESULTS

Dear Participant,

Enclosed are your personal results from the survey that you answered in conjunction with my dissertation research. I hope this will be of interest and help to you.

These results are based on the characteristics of a large number of people whose answers are similar to yours. If you feel that something does not apply to you, then probably it does not. Also, since this study measured certain specific traits with the personality survey, some additional aspects of yourself may not be identified by these results.

The final research has not been completed yet. However, when it is completed and the general results have been evaluated, I will see that you receive a copy of the summary.

Thank you again for your participation in this project.

Sincerely,

Joan R. Moore

APPENDIX G

MEANS AND STANDARD DEVIATION TABLES

Table 11
Means and Standard Deviations From Raw Scores of the
Death Anxiety Scale For Each Group
and the Total Sample

| Populations | <u>n</u> | Means | Standard Deviations |
|------------------------|----------|-------|---------------------|
| Raw Scores | | | |
| Psychology Students | 39 | 5.08 | 3.13 |
| Hospital Volunteers | 44 | 5.41 | 2.59 |
| Military Officers | 29 | 4.55 | 2.59 |
| Military NCOs | 35 | 5.34 | 3.60 |
| Engineers | 44 | 4.50 | 2.67 |
| Total Sample | 191 | 4.99 | 2.92 |

Table 12
Means and Standard Deviations From Raw and Converted Scores of the
Well-being Scale of the California Psychological Inventory
For Each Group and the Total Sample

| Populations | <u>n</u> | Means | Standard Deviations |
|---------------------|----------|-------|---------------------|
| Raw Scores | | | |
| Psychology Students | 39 | 37.33 | 4.47 |
| Hospital Volunteers | 44 | 37.73 | 3.57 |
| Military Officers | 29 | 36.52 | 5.36 |
| Military NCOs | 35 | 34.03 | 6.17 |
| Engineers | 44 | 37.84 | 3.33 |
| Total Sample | 191 | 36.81 | 4.73 |
| Converted Scores | | | |
| Psychology Students | 39 | 49.74 | 10.54 |
| Hospital Volunteers | 44 | 50.73 | 8.33 |
| Military Officers | 29 | 47.69 | 12.82 |
| Military NCOs | 35 | 41.31 | 15.40 |
| Engineers | 44 | 50.86 | 8.30 |
| Total Sample | 191 | 48.37 | 11.51 |

Table 13

Means and Standard Deviations From Raw and Converted Scores of the
Intellectual Efficiency Scale of the California Psychological
Inventory For Each Group and the Total Sample

| Populations | <u>n</u> | Means | Standard Deviations |
|------------------------|----------|-------|---------------------|
| Raw Scores | | | |
| Psychology Students | 39 | 43.41 | 4.46 |
| Hospital Volunteers | 44 | 38.66 | 4.20 |
| Military Officers | 29 | 40.00 | 3.56 |
| Military NCOs | 35 | 36.20 | 5.87 |
| Engineers | 44 | 41.75 | 4.10 |
| Total Sample | 191 | 40.09 | 5.10 |
| Converted Scores | | | |
| Psychology Students | 39 | 58.90 | 9.01 |
| Hospital Volunteers | 44 | 49.09 | 8.59 |
| Military Officers | 29 | 51.59 | 7.70 |
| Military NCOs | 35 | 43.26 | 12.62 |
| Engineers | 44 | 55.34 | 8.68 |
| Total Sample | 191 | 51.84 | 10.75 |

Table 14
Means and Standard Deviations From Raw and Converted Scores of the
Flexibility Scale of the California Psychological Inventory
For Each Group and the Total Sample

| Populations | <u>n</u> | Means | Standard Deviations |
|---------------------|----------|-------|---------------------|
| Raw Scores | | | |
| Psychology Students | 39 | 12.95 | 3.63 |
| Hospital Volunteers | 44 | 8.66 | 3.97 |
| Military Officers | 29 | 9.86 | 3.41 |
| Military NCOs | 35 | 7.71 | 3.31 |
| Engineers | 44 | 10.50 | 3.62 |
| Total Sample | 191 | 9.97 | 4.01 |
| Converted Scores | | | |
| Psychology Students | 39 | 61.21 | 10.37 |
| Hospital Volunteers | 44 | 49.41 | 11.86 |
| Military Officers | 29 | 52.45 | 9.66 |
| Military NCOs | 35 | 46.34 | 9.50 |
| Engineers | 44 | 54.32 | 10.29 |
| Total Sample | 191 | 52.85 | 11.51 |

Table 15
Means and Standard Deviations From Raw and Converted Scores of the
Need of Change Scale of the Edwards Personal Preference
Inventory For Each Group and the Total Sample

| Populations | <u>n</u> | Means | Standard Deviations |
|---------------------|----------|-------|---------------------|
| Raw Scores | | | |
| Psychology Students | 39 | 12.54 | 4.04 |
| Hospital Volunteers | 44 | 13.64 | 4.97 |
| Military Officers | 29 | 14.21 | 3.03 |
| Military NCOs | 35 | 11.23 | 4.07 |
| Engineers | 44 | 12.30 | 4.02 |
| Total Sample | 191 | 12.75 | 4.22 |
| Converted Scores | | | |
| Psychology Students | 39 | 41.31 | 8.63 |
| Hospital Volunteers | 44 | 45.86 | 10.02 |
| Military Officers | 29 | 49.66 | 5.84 |
| Military NCOs | 35 | 44.46 | 8.66 |
| Engineers | 44 | 46.32 | 8.64 |
| Total Sample | 191 | 45.36 | 8.92 |

Table 16

Means and Standard Deviations From Raw and Converted Scores of the
 Lability Scale of the Adjective Check List For Each
 Group and the Total Sample

| Populations | <u>n</u> | Means | Standard Deviations |
|------------------------|----------|-------|---------------------|
| Psychology Students | 39 | 8.72 | 4.83 |
| Hospital Volunteers | 44 | 6.80 | 4.40 |
| Military Officers | 29 | 7.45 | 4.41 |
| Military NCOs | 35 | 6.60 | 3.54 |
| Engineers | 44 | 8.11 | 3.95 |
| Total Sample | 191 | 7.56 | 4.28 |
| Converted Scores | | | |
| Psychology Students | 39 | 51.72 | 11.67 |
| Hospital Volunteers | 44 | 46.27 | 10.01 |
| Military Officers | 29 | 49.00 | 10.90 |
| Military NCOs | 35 | 48.57 | 9.82 |
| Engineers | 44 | 50.30 | 9.27 |
| Total Sample | 191 | 49.15 | 10.38 |

Table 17
Means and Standard Deviations From Raw and Converted Scores of the
Change Scale of the Adjective Check List For Each
Group and the Total Sample

| Populations | <u>n</u> | Means | Standard Deviations |
|---------------------|----------|-------|---------------------|
| Raw Scores | | | |
| Psychology Students | 39 | 5.26 | 4.29 |
| Hospital Volunteers | 44 | 3.34 | 2.74 |
| Military Officers | 29 | 4.93 | 3.75 |
| Military NCOs | 35 | 5.46 | 2.90 |
| Engineers | 44 | 4.43 | 3.05 |
| Total Sample | 191 | 4.61 | 3.42 |
| Converted Scores | | | |
| Psychology Students | 39 | 47.56 | 11.41 |
| Hospital Volunteers | 44 | 42.43 | 7.53 |
| Military Officers | 29 | 46.48 | 10.70 |
| Military NCOs | 35 | 48.54 | 8.12 |
| Engineers | 44 | 44.41 | 8.05 |
| Total Sample | 191 | 45.67 | 9.34 |

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VITA

Joan Ruth Moore

Education

Doctorate of Education in Agency Counseling at the College of William and Mary, May 1983, dissertation completed May 4, 1983.

Master of Science in Counseling at Shippensburg State College, Pennsylvania, August 1975.

Bachelor of Arts in Psychology at the University of Oklahoma, August 1973.

Experience

1981-1982 Psychologist Co-op, National Aeronautics and Space Administration (NASA) - Langley Research Center, Hampton, Virginia.

1980-1981 Counselor, Private Practice Internship-Marriage and Family, E. P. Burdick M.D. Psychiatrist, Poquoson, Virginia.

1979-1980 Auxiliary Volunteer, Hospice Unit, Riverside Hospital, Newport News, Virginia.

1979 Counselor, Internship, Chaplain's Department, Riverside Hospital, Newport News, Virginia.

1978-1979 Counselor, Internship-Geriatrics, Patrick Henry Hospital, Newport News, Virginia.

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1976 Outreach Counselor, part time, Minorities Program, Shippensburg State College, Shippensburg, Pennsylvania.

1976 Psychology Instructor, part time, Harrisburg Area Community College, Harrisburg, Pennsylvania.

1976 Group Facilitator and Assistant to Instructor,
Shippensburg State College, Shippensburg, Pennsylvania.

1975-1976 Assistant Pre-practicum Supervisor, Counselor
Education, Shippensburg State College, Shippensburg, Pennsylvania.

1975 College Counselor, Practicum, Shippensburg State College,
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1965-1968 English Language Instructor, Department of Language
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ABSTRACT

A STUDY OF THE RELATIONSHIP OF DEATH ANXIETY TO OPENNESS TOWARD CHANGE AND SENSE OF WELL-BEING

MOORE, JOAN RUTH, Ed.D.

THE COLLEGE OF WILLIAM AND MARY IN VIRGINIA, 1983

CHAIRMAN: FRED L. ADAIR, Ph.D.

Several writers have suggested a similarity between the loss process experienced by the dying person and the loss process experienced by individuals making changes in their lives. This concept has been incorporated into several areas of therapy yet little research has been done to substantiate the idea. A sense of well-being has also been suggested as an important factor within the Existential concept that death resolution enhances mental health and functioning. This study explores the possible influence and relationship between death attitudes and both openness to change and sense of well-being. Three hypotheses were investigated: 1. there is an inverse relationship between death anxiety and measures of openness to change, 2. there is an inverse relationship between death anxiety and measures of a sense of well-being and 3. there is a positive relationship between measures of openness to change and measures of a sense of well-being.

To investigate these hypotheses, a variety of scales considered representative of openness to change and a sense of well-being were extracted from three instruments, namely, the California Psychological Inventory, the Adjective Check List and the Edwards Personal Preference Schedule. The Templer Death Anxiety Scale was used to measure death attitudes.

The scales were combined into a single instrument in a random manner and administered to 191 adult individuals from five diverse occupational and age groups. These groups were chosen for the purpose of gaining heterogeneity within the total sample measured. Participation was voluntary and subjects were naive as to the specific variables being measured.

Statistical analysis consisted of subjecting the hypotheses to a Pearson Product-Moment correlation designating the .05 level as significant.

Results for the total sample (N = 191) indicated that:

1. There was no relationship between death anxiety and measure of openness to change except for the n Change Scale from the Edwards Personal Preference Schedule. Significance was obtained between this scale and death anxiety in an inverse direction.
2. There was a significant inverse relationship between death anxiety and measures of a sense of well-being.
3. There was a significant positive relationship between 14 of the 15 scales used to measure openness to change and sense of well-being. Only one combination failed to reach significance.

Results for each of the five groups were also evaluated and included in the discussion and limitations of the study were presented. Several directions for future research were suggested including improvement of instrumentation for more precise measurement of openness to change and a more concrete identification of the traits involved in this concept. Methods for the study of cause and effect between death anxiety and well-being were also discussed.