AN ABSTRACT OF THE THESIS OF

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Title: THE RELATIONSHIP OF SELF ESTEEM, LOCUS OF

CONTROL AND DEATH ANXIETY IN COLLEGE STUDENTS

Abstract approved: _Cooper B. Holmes_

This study was conducted in an effort to determine if a
relationship existed between the variables of self-esteem,
locus of control, and death anxiety. Two statistical
methods, "repeated measures" chi-square and unweighted
means analysis of variance, were employed to examine the
possible relationship. The subjects consisted of 220
university students enrolled in Introductory Psychology.
The students ages ranged between 17 and 24, and were all
voluntary participants. The subjects were administered
the Texas Social Behavior Inventory, Form A; Templer
Death Anxiety Scale, and the Reid-Ware Three Factor Locus
of Control Scale. The self-esteem and death anxiety
scores for the subjects were placed in either low,
moderate, or high levels of these two variables. The
results of the study indicated a statistically significant
relationship existed between the variables of self-
esteem, locus of control, and death anxiety. Low self-esteem

subjects had significantly higher death anxiety and locus of control scores than high self-esteem subjects. Subjects with high death anxiety scores had significantly higher locus of control scores than did low death anxiety subjects. In summary, a subject having low self-esteem and high death anxiety tended to have high locus of control scores. High locus of control scores indicates external orientation in locus of control.

THE RELATIONSHIP OF SELF-ESTEEM,

LOCUS OF CONTROL, AND DEATH

ANXIETY IN COLLEGE STUDENTS

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A Thesis

Presented to

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by

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CHAPTER 1

INTRODUCTION

The development of a multidimensional scale to
measure locus of control, and development of a scale
to objectively measure self-esteem are discussed in this
chapter along with their utilization in studies of death
anxiety. Also included are the statement of the problem
and hypothesis, purpose of the study and its significance,
definition of terms used in this research, and limitations
of the study.

THEORETICAL FORMULATION

Death anxiety has been of interest to professionals
for the last decade. However, the interest was focused
on the concept of death anxiety in general, how to measure
it, development of valid instruments, and the level of
death anxiety in a given individual. Recently the interest
has focused on examining the factors that contribute
to the level of death anxiety such as locus of control,
self-esteem, repression-sensitization, demographic
variables, religion, and a belief in afterlife. The
factors have been studied singly or in combination in
an effort to determine their relationship to, interrelationship

with, or interaction effect in the construct of death anxiety. In this research, attention was focused on the variables of self-esteem and locus of control, and their relationship to death anxiety.

A majority of the studies in the past dealing with locus of control have used Rotter's Internal-External Locus of Control Scale (I-E scale) (1966). Many researchers believed it to be a unidimensional measure. The scale consists of 29 items, six of which are filler items. The locus of control items deal with luck, fate, and the powerfulness of others, the powerfulness of social or political forces, and institutions. In 1973, Reid and Ware conducted research on the Rotter scale and were able to identify two independent factors which supported evidence for the multidimensionality of the I-E scale. One of the factors was Fatalism (F), whose items focus on an individual's belief in luck, fate, or fortune. The other factor was Social System Control (SSC). Its items deal with one's belief in the control of powerful others, social, and political forces or institutions. After modifying the I-E scale by adding eight new items, rewording nine of the old items and deleting one of the original 23 items, Reid and Ware ran another experiment. This experiment yielded the

same two factors, SSC and F, that were identified in the first experiment.

None of the 29 items of Rotter's scale are worded in self-control terms, i.e., self-control of one's desires, impulses, and emotional behavior. To establish whether self-control was a part of the two factors, SSC and F, or a third independent factor, Reid and Ware (1974) devised a new scale. Twelve items each deal with Fatalism and SSC dimension, eight new items were added to tap self-control, and 13 items were added as filler items. Eleven of the items on the F and SSC dimensions are similar or reworded items of the original Rotter scale. The results of an experiment using this new scale established Self-Control (SC) as a third, independent dimension. This new scale became the Reid-Ware Three Factor Locus of Control Scale.

Social competence and locus of control, using the Reid-Ware scale and the Texas Social Behavior Inventory; Form A, was studied by Sadowski and Davis (1979). The results indicated that a significant relationship existed between locus of control dimensions and social competence. For males, the Fatalism dimension was most highly related to social competence. For females, the Social System Control factor was most highly related to social competence.

Fish and Karabenick (1971) using Rotter's (1966) scale reported a significant correlation between self-esteem and internal orientation. Subjects with higher self-esteem scores tended to be more internally oriented. Similar results were obtained by Rychman and Sherman (1973).

The Reid-Ware and Templer DAS were used by Sadowski, Davis, and Loftus-Vergari (1979) in a study of death anxiety and locus of control. It was found that death anxiety was significantly correlated with the SSC and SC factors. The SSC factor was related to death anxiety in females; in males, the F factor was related to death anxiety.

Rotter's (1966) I-E scale has also been used to relate death anxiety and locus of control. For example, Dickstein (1972) and Berman and Hays (1973) found no relationship between death anxiety and external locus of control. Sullivan (1977) found that internal locus of control subjects had lower death anxiety than external locus of control subjects. The depressive-fear component of death anxiety was discovered to be positively correlated with external locus of control by Patton and Freitag (1977). Both Tolor and Reznikoff (1967) and Kuperman and Golden (1978) found higher death anxiety in externally

oriented subjects than in either less externally or less internally oriented subjects.

An individual's self-esteem or self-concept is an internal construct that expresses itself in behavior. Self-esteem is an encompassing concept with an intra-personal and social nature. The intrapersonal nature includes an individual's perceptions and attitudes concerning his or her physical, emotional, and intellectual attributes. The social nature of self-esteem consists of how an individual perceives his or her achievements, goals, experiences, acceptance or rejection by others, and competence in social situations or interactions. A sense of competence has been described by White (1964) as "...an individual's confidence in his ability or fitness to deal effectively with different aspects of his environment" (p. 27). Diggory and Rothman (1961) alluded to the importance of the interaction of the social and intrapersonal nature of self-esteem in producing a sense of personal value.

The behavioral manifestations of self-esteem can be visually observed, or the construct can be examined by the use of tests. Researchers have studied self-esteem and its components directly through the use of scales (Alcorn, 1977; Rychman & Sherman, 1973; Moses,

1973), check lists (Lester & Collett, 1970), structured
interview (Farley, 1971), and through projective means
(Lester, 1970).

In 1969, Helmreich, Stapp, and Ervin began the
process of developing a scale to objectively measure
self-esteem. Initially they used a test consisting
of a large pool of items concerning social interaction
and personal worth. This set of items was administered
to over 1,000 subjects. On the basis of factor and
item analysis, items were deleted until a 32 item
inventory format was established. Each item presents
five responses ranging from "not at all characteristic
of me" to "very characteristic of me," which have
a score value of 0 to 4 points. The score of 4 is
indicative of high self-esteem and 0 is indicative
of low self-esteem. The resulting scale was the Texas
Social Behavior Inventory (TSBI). The 32 item TSBI
was split into two, 16 item parallel forms in order
to create a shorter version that would allow quick
administration and a test-retest advantage. The split
did not weaken the reliability or validity of the
scale.

As mentioned, the TSBI; Form A and the Reid-Ware
(1974) scale were used by Sadowski and Davis (1979)

in a study which yielded a significant correlation between locus of control and self-esteem. Overall, male subjects had higher scores of perceived social competence. In a 1979 study utilizing the TSBI;A, Davis, Martin, Voorhees, and Wilee found that males had significantly higher self-esteem than females.

Tests, other than the TSBI, have been used to measure self-esteem. Using such instruments, Moses (1973) and Nogas et al. (1974) found a significant negative correlation between death anxiety and self-esteem. A study by Farley (1971) indicated that higher death anxiety subjects had a lower sense of competence. Alcorn (1977) found that subjects with higher self-esteem scores had lower death anxiety scores than lower self-esteem subjects. However, contrary to all the preceeding data, Diggory and Rothman (1961) obtained results indicating that individuals with high self-esteem had a greater fear of death.

In summary, the research cited indicated a relationship between self-esteem and death anxiety. More specifically, self-esteem appears to be correlated with low death anxiety, and low self-esteem appears to be correlated with high death anxiety. The research cited also indicates a significant relationship between

locus of control and self-esteem. Higher self-esteem
is related to internal orientation.

<div align="center">THE PROBLEM</div>

Statement of the Problem

Is there a statistically significant relationship
between self-esteem, locus of control, and death anxiety?

Statement of the Hypothesis

There is no statistically significant relationship
between self-esteem, locus of control, and death anxiety.

Purpose of the Study

The present study was conducted in an effort to
determine if a relationship exists between self-esteem,
locus of control, and death anxiety.

Significance of the Study

A study using all three variables, locus of control,
self-esteem, and death anxiety, has not been previously
conducted. Also, psychotherapists might find the infor-
mation derived from this study useful in evaluating the
motivational factors behind a client's behavior. Death
education classes may find the results from this study
to be of interest to them. Any additional information

that may broaden the psychologist's understanding of
the personality and its components would be useful.

DEFINITION OF TERMS

Death Anxiety

Death anxiety is the apprehension or anxiety
surrounding the topic of death.

Self-Esteem

Self-esteem is an internal construct that has
both an intrapersonal and social nature. The intra-
personal element consists of an individual's perceptions
and attitudes concerning his or her physical, emotional,
and intellectual attributes. The social component consists
of how an individual perceives his or her achievements,
goals, experiences, acceptance or rejection by others,
and competence in social situations or interactions.
For this paper the terms self-concept and self-esteem
were considered to be synonymous, and were used inter-
changeably.

Locus of Control

Locus of control is the belief that control of
one's behavior or events occurring to one in life is
attributed to either luck, other persons, social, and

political forces or institutions, or to oneself.

LIMITATIONS OF THE STUDY

The research was undertaken with a sample of college students enrolled in Introductory Psychology classes at Emporia State University. The age of the subjects and the number of years in college were not controlled, although it was assumed that the majority of the subjects were freshmen students of 18 or 19 years of age. It was assumed that the subjects had at least an average intellectual capacity since the sample was drawn from a college population. An attempt to reduce variance due to race was made in that only data gathered from Caucasian students were used.

CHAPTER 2

REVIEW OF RELATED LITERATURE

The purpose of this chapter is to review the
literature dealing with the relationship of the variables
of self-esteem and locus of control to death anxiety
among college students.

SELF-ESTEEM AND DEATH ANXIETY

Fear of death and its consequences, and self-
esteem were dealt with in a study by Diggory and
Rothman (1961). In their study, they alluded to
the interaction of the intrapersonal and social nature
of self-esteem in producing a sense of personal value.
It was stated that one's self-esteem is related to
the probability that an individual by his own efforts
can achieve those particular goals which he has set
for himself and are important to him. The larger the
number of those important goals that he has a high
probability of achieving, the higher is his self-esteem.
Diminishment of self-esteem is through the loss of
ability or skill to achieve those goals. Death prevents
reaching goals and interrupts striving. It was hypothe-
sized that a person with high self-esteem should fear

on death anxiety in college students. The sample con-
sisted of 321 students. The Purpose in Life Scale
(PIL) (Crumbaugh and Maholick, 1964), Fear of Death
Scale (Lester, 1967), Death Anxiety Scale (Templer,
1970), Internal-External Locus of Control Scale (I-E)
(Rotter, 1966), and Religious Orientation Survey
(Allport & Ross, 1967) were administered to the sub-
jects. Subjects with internal locus of control had
lower death anxiety scores than did externally oriented
subjects. Those subjects with external locus of control
and low purpose in life scores had the greatest death
anxiety, while individuals with internal locus of con-
trol and high purpose in life scores had the lowest
level of death anxiety. A significant correlation was
found between locus of control and purpose in life.
No relationship was found between locus of control and
religious orientation. Another finding was that the
female subjects had greater death anxiety than males.

An investigation of the relationship between death
anxiety, general anxiety, and locus of control was con-
ducted by Patton and Freitage (1977). The instruments
used were the I-E Locus of Control Scale (Rotter, 1966),
questions from the Pt scale of the Minnesota Multiphasic
Personality Inventory (Hathaway & McKinley, 1940), and

questions from a test measuring attitudes toward death

composed by Pandley (1975). The subjects tested were

116 females and 117 male undergraduate students. The

researchers found that the depressive fear aspect of

death anxiety was positively correlated with internal-

external locus of control. However, it was a small

significant correlation. The level of general anxiety

was positively correlated with locus of control. Depressive

fear was found to be positively correlated with external

locus of control. Depressive fear is the fear and

depression an individual feels toward death.

A reexamination of the relationship between locus

of control and death anxiety was conducted by Sadowski,

Davis, and Loftus-Vergari (1979). This study differs

distinctly from previous studies of locus of control

and death anxiety in that the researchers used the

Reid-Ware Three Factor Locus of Control Scale (1974)

instead of the Rotter I-E Scale. The sample consisted

of 211 female and 164 male undergraduate psychology

and sociology students. All of the subjects were admin-

istered the Death Anxiety Scale (Templer, 1970) and the

Reid-Ware Three Factor Locus of Control Scale (1974).

The data indicated that women had a greater level of

death anxiety than males. On both the Social System

Control and Self-Control subscales of the Reid-Ware,
females were more external than males. The Social
System factor was most related with death anxiety for
females. For the male subjects the Fatalism factor
was related most with death anxiety. In both the male
and female subjects, the Self-Control factor correlated
with death anxiety. This factor accounted for more
death anxiety variance than either the Social System
or Fatalism factors. Sadowski, et al. (1979) stated that

> ...this suggests that death anxiety reflects
> more of a concern over an inability to determine
> one's own behavior rather than beliefs about
> whether or not events in the environment occur
> as a consequence of one's behavior (p. 209).

SELF-ESTEEM AND LOCUS OF CONTROL

One scale that focuses on the social nature aspect
of self-esteem is the Feelings of Inadequacy Scale
(FIS) developed by Janis and Field (1959). Fish and
Karabenick (1971) attempted to determine this scale's
relationship to Rotter's Internal-External Locus of
Control Scale (I-E) (1966). A sample of 285 male under-
graduate students was administered the I-E Scale and
the Feelings of Inadequacy Scale. An individual with
low scores on the I-E is considered to be internally
oriented. Results indicated a significant negative

correlation between the FIS and the I-E Scale. Males

with higher self-esteem scores tended to have more of an

internal orientation. Fish and Karabenick believed their

findings support the theory that high self-esteem individ-

uals have a greater potential for self-reinforcement, since

they are internally oriented in regard to locus of control.

Fish and Karabenick (1971) used an all male sample

in their study of self-esteem and locus of control. To

determine what the correlation was for women, Rychman

and Sherman (1973) administered the Janis and Field's

Feelings of Inadequacy Scale (1959) and the I-E Scale

(Rotter, 1966) to 204 female and 178 male undergraduate

students. For both males and females the results indi-

cated a small but significant negative correlation

between locus of control and self-esteem. Thus, both

males and females possessing higher self-esteem tended

to have a more internal orientation. For the female

sample, the locus of control mean and the self-esteem

mean were higher than those particular means for the

male sample, although this difference was not significant.

Ryckman and Sherman (1973) concluded that "...self-esteem

as a correlate of locus of control does not appear to be

affected by sex differences" (p. 1106).

The relationship between perceived social competence

and locus of control was undertaken by Sadowski and Davis (1979). The Reid-Ware Three Factor Locus of Control Scale (1974) and the Texas Social Behavior Inventory; Form A (Helmreich, Stapp, & Ervin, 1974) was administered to 164 male and 211 female under-graduate students. The findings indicated that on the Self-Control and Social System Control factors (SSC) women were more external than men. The male sample had higher scores of perceived social compe-tence. For the female sample there was a significant relationship between locus of control dimensions and perceived social competence. The SSC dimension was most significantly correlated with perceived social competence for females. The Self-Control factor was not significantly related to social competence for the females. For the male sample there was a significant multiple correlation between the locus of control dimen-sions and perceived social competence. Of the three dimensions, Fatalism, was most significantly related to perceived social competence for males.

These results lend support to the sex role hypo-thesis derived by the Warehime and Woodson (1971) study stating that "...men appear to construe locus of control in cognitive-instrumental terms while women seem to

construe it in social-affective terms" (p. 443). This theory attempts to explain the differences in locus of control correlates for men and women.

SUMMARY

From the review of literature it can be seen that a variety of instruments have been used to investigate the variables of death anxiety and the various aspects of self-esteem, as well as the concept as a whole. The majority of the studies on locus of control used the Rotter Internal-External Locus of Control Scale (1966).

death more than low self-esteem individuals, because death is the destruction of self or a limiting case of loss.

Diggory and Rothman administered a test concerning death and its consequences, which they developed, to 563 individuals of various occupations and educational levels. The data indicated that the consequences of death, i.e., not being able to care for dependents and the termination of purposive activities such as plans, projects, and experiences, were ranked as the most significant concerns or fears by the subjects. Diggory and Rothman (1961) believed their hypothesis, "...that a person fears death because it eliminates his opportunity to pursue goals important to his self-esteem..." (p. 209), to have been supported.

An attempt to replicate Diggory and Rothman's (1961) findings using death anxiety and self-esteem scales was made by Alcorn (1977). A sample of 1,334 subjects, composed of business persons, students, and individuals belonging to civic and community organizations, were administered the Templer Death Anxiety Scale (1970) and the Morris Rosenberg Self-Esteem Scale (1962). Alcorn's findings indicated that subjects with high self-esteem scores had significantly lower mean death anxiety scores. There was a significant negative correlation,

of low strength, between the death anxiety scores and the self-esteem scores. Alcorn's findings are in contrast to those of Diggory and Rothman (1961).

A study of death anxiety and the sense of competence was conducted by Farley (1971). She believed that individuals with higher death anxiety would possess a lower sense of competence than those with a lower level of death anxiety. Forty-nine undergraduate males were administered selected Thematic Apperception Test cards (Morgan & Murray, 1935), the IPAT Anxiety Scale Questionnaire (Cattell & Scheier, 1967), Death Metaphor List (Knapp, 1960), K scale of the MMPI (Hathaway & McKinley, 1940), and a written questionnaire concerning death (Farley, 1970). A structured interview was conducted with each subject to evaluate his sense of competence. The findings indicated that subjects with higher death anxiety have a lower sense of social competence than either moderate or low death anxiety subjects. There was also a significant positive correlation between death anxiety and general anxiety scores.

The results of the research by Farley (1971) and Diggory and Rothman (1961) provided theorectical guidelines for a study by Nogas, Schweitzer, and Grumet (1974) on the relationship of death anxiety, sense

of competence, and need for achievement. The Mehrabian

Achievement Scale for Females (1969), California Psycho-

logical Inventory (Gough, 1956), the IPAT Anxiety Scale

Questionnaire (Cattell and Scheier, 1967), a death

anxiety scale composed by Farley (1970), and Fear of

Death Scale (Collett & Lester, 1969) were administered

to 80 female undergraduate students. The results indi-

cated a significant negative correlation between

sense of competence and death anxiety, and a high positive

correlation between need for achievement and sense of

competence. There was no correlation between the need

for achievement and death anxiety. It was also found

that death anxiety and general anxiety are correlated

but not equivalent.

Spilka and Pellegrini (1967) hypothesized that

those with a high need to achieve will also have a

high fear of death because death would interrupt their

strivings for achievement or success. Lester (1970)

tested this hypothesis through the use of projective

and direct methods with 199 female introductory to

psychology students. The instruments used were the

Fear of Death Scale (Boyar, 1964), Death Anxiety Scale

(Templer, 1970), and four thematic pictures and drawings,

for which the subjects wrote a story for each. The

themes of the stories were scored for the need for achievement. Lester's findings did not establish an association between the need to achieve and fear of death.

A study of the relationship of self-esteem, maladjustment, and affect concerning death and dying was conducted by Moses (1973). Hypotheses with psychoanalytic and existential-like approaches were tested. The psychoanalytic viewpoint is that the fear of death is to be considered as symptomological since it is symbolic for other concerns in an individual's life. The hypotheses arising from this are that there should be a positive correlation between fear of death in general (FOD/G) and maladjustment, and a negative correlation between FOD/G and self-esteem. Hypotheses having an existential-like quality state that there should be a positive correlation between fear of dying (FODy) and psychopathology, a negative correlation between FODy and self-esteem, and a positive correlation between grief around the end of experience (GOD) and self-esteem. All of these hypotheses plus Diggory and Rothman's hypothesis, that higher self-esteem individuals have a higher level of death anxiety, were tested.

The "neuroticism" scale of the Maudsley Personality

Inventory (Eysenck, 1959), a modified version of the

Worchel Self-Activity Inventory (Worchel, 1956), Fear

of Death Scale (Boyar, 1964), and the Ford Social

Desirability Scale (Ford, 1964) were administered to

213 undergraduate students by Moses. From the results,

he obtained strong support for the following: a) a

positive correlation between FOD/G and maladjustment,

and FODy and psychopathology; and b) a negative corre-

lation between FOD/G and self-esteem, and FODy and

self-esteem. However, no support was found for Diggory

and Rothman's hypothesis, neither was any support found

for a relationship between GOD and self-esteem.

The investigation of the relationship of fear of

death and the level of self-esteem in college students

was undertaken by Davis, Martin, Wilee, and Voorhees

(1978). Their sample consisted of 165 males (129 white

and 36 black) and 218 females (56 black and 162 white)

undergraduate students. The subjects were administered

the Death Anxiety Scale (Templer, 1970) and the Texas

Social Behavior Inventory; Form A (Helmreich, Stapp,

and Ervin, 1974). Their study yielded these results

regarding self-esteem: a) males had a significantly

higher level of self-esteem than females; b) black

subjects had a significantly higher level of self-esteem

than white subjects; and c) black males had significantly
higher scores on self-esteem than all other groups.
Regarding death anxiety, female subjects had significantly
higher death anxiety than male subjects. Davis, et al.
(1978) also indicated that: a) low self-esteem white
females had significantly higher death anxiety scores
than low self-esteem black females; b) low self-esteem
subjects had significantly higher death anxiety scores
than high self-esteem subjects; c) high self-esteem
white and black males had significantly lower death
anxiety scores than either high or low self-esteem black
or white females; and d) black males with high self-
esteem had a significantly lower level of death anxiety
than low self-esteem white males.

LOCUS OF CONTROL AND DEATH ANXIETY

An exploration of the interrelationship of the
variables of insight, repression-sensitization, internal-
external locus of control, and death anxiety was under-
taken by Tolor and Reznikoff (1967). A sample of 79
male undergraduate students were administered the Rotter's
Internal-External Locus of Control Scale (1966), Repression-
Sensitization Scale (Bryne, 1961), Death Anxiety Scale
(Livingston & Zimet, 1965), and the Tolor and Reznikoff

Test of Insight (1960). The data revealed a significant
positive relationship between internal locus of control
and insight. Internal locus of control was also positively
associated with repression. There was a significant
positive relationship between external locus of control
and overt death anxiety, and external locus of control
to sensitization. In addition, a significant positive
relationship was found between overt death anxiety and
sensitizing tendencies.

One purpose of the research undertaken by Dickstein
(1972) was to investigate the relationship of his Death
Concern Scale (DCS) with the State-Trait Anxiety Inventory
(STAI) (Spielberger, Gorsuch, & Lushene, 1970), Internal-
External Locus of Control Scale (Rotter, 1966), Repression-
Sensitization Scale (R-S) (Bryne, 1961), and the Edwards
Personal Preference Schedule (EPPS) (1959). According
to Dickstein (1972) "...death concern is conceptualized
as conscious contemplation of the reality of death
and negative evaluation of that reality" (p. 564).
The DCS was administered to female introductory psychology
students. Sixty-six subjects were placed in either a
high, moderate, or low death concern category based on
their DCS score. These subjects were also administered
the STAI, R-S, I-E, and EPPS. Dickstein's findings

indicated that death concern was positively related to sensitization, state anxiety, and trait anxiety. There was no significant difference between the scores on the I-E for low and high death concern subjects. No relationship was found between externality and death concern.

A study in which one of its purposes was to examine the personality correlates of death attitudes, was conducted by Kuperman and Golden (1978). One hundred and forty-two undergraduate males were administered the Death Concern Scale (DCS), (Dickstein, 1972), Death Anxiety Scale (DAS) (Templer, 1970), Manifest Anxiety Scale (MAS) (Taylor, 1953), Social Desirability Scale (Crowne & Marlowe, 1960), Novelty Experiencing Scale (Pearson, 1970), and the Internal-External Locus of Control Scale (I-E) (Rotter, 1966). Significant positive correlations were found between the DAS, DCS, I-E, and the MAS. For subjects possessing high death concern or anxiety there was also a tendency for them to place more importance on external rather than internal factors. The strongest positive correlation was between the DAS and MAS, which suggests that death anxiety or concern is significantly related to the overall level of general anxiety in individuals. Kuperman and Golden (1978) concluded that both the DAS and DCS "...identify

individuals who tend to be anxious in general and who look to external stimuli as controlling factors in their lives" (p. 663).

The relationship of death attitudes to the personality variables of feelings of powerlessness, guilt about hostility, and dependency was investigated by Selvey (1973). Subjects for the study consisted of 65 female and 61 male undergraduates in an educational psychology course. The following tests were administered to the subjects: The Mosher Guilt Scale (Mosher, 1966), Fear of Death Scale (Boyar, 1964), I-E Locus of Control Scale (Rotter, 1966), Preoccupation with Death Scale (Dickstein & Blatt, 1966), Fordyce Dependency Scale (Hirsch, 1965), and Thematic Measures of Attitudes Toward Death (Lowry, 1965). The subjects' stories, from the Thematic test, were divided into categories based on themes of loss, being mourned, violence and mutilation, frustration and failure, helplessness-mastery, and unscorable. Results from the tests indicated that there was no sig-nificant relationship, for either males or females, between guilt about hostility and violence-mutilation death attitudes, powerlessness and helplessness-mastery death attitude, nor dependency and loss death attitudes. Males with higher dependency scores expressed higher

fear of death. Women had a higher fear of death than
males. The males and females did not differ in power-
lessness feelings. The predicted relationship between
death concern (loss, violence, and helplessness) and
the personality variables of guilt about hostility,
feelings of powerlessness, and dependency was not supported
by the findings.

The relationship between death anxiety, a belief
in afterlife, and locus of control were tested in a study
by Berman and Hays (1973). A sample composed of 300
college-age subjects was administered the I-E Locus of
Control Scale (Rotter, 1966), the Death Anxiety Scale
(Templer, 1970), Fear of Death Scale (Lester, 1967),
and the Belief in Afterlife Scale; Form A (Osarchuk &
Tatz, 1973). Berman and Hays concluded from their results
that there was no relationship between locus of control
and belief in afterlife. It was also found that females
had significantly higher death anxiety scores and Belief
in Afterlife scores than males. Berman and Hays' data
revealing that externality is not related to death anxiety
is contrary to Tolor and Reznikoff's (1967) findings.

The variables of purpose in life, religious
orientation, and locus of control were studied by
Sullivan (1977) to determine what effect they have

CHAPTER 3

METHODS AND PROCEDURES

The following chapter describes the experimental
procedures utilized in the present study. Information
regarding the population and sampling procedures, materials
and instrumentation, the design of the study, and data
analysis are also dealt with.

POPULATION AND SAMPLING

The population for this experiment consisted of
all students enrolled in Introductory Psychology classes
at Emporia State University during the spring semester
of 1980. The sample consisted of 10 classes available
during the two days the data were gathered. There were
220 subjects in the sample, all of whom were included
in the analysis of variance method (only 199 were used
in the chi-square analysis). This reduction was necessary
since chi-square involves frequency data and 21 subjects
fell in more than one category on locus of control.
The ages of the subjects ranged from 17 to 24. They
were assumed to posses an average or above average level
of intelligence.

For the present study, low and high death anxiety and self-esteem were operationally defined as scores falling in the area of one standard deviation below or above the group mean, respectively, for both the Texas Social Behavior Inventory; Form A and Death Anxiety Scale. The remaining area between these two points was considered the area of moderate death anxiety or moderate self-esteem.

For the analysis of variance, 22 females and 17 males had a high level of self-esteem, while 20 females and 14 males were operationally defined as having a low level of self-esteem. Of the subjects, 32 females and 24 males were operationally defined as having a high level of death anxiety while 36 females and 21 males had a low level of death anxiety. The data from those individuals operationally defined as having a moderate level of death anxiety and self-esteem were not used in the analysis of variance.

All three levels of death anxiety and self-esteem were used in the chi-square analysis. Differentiation among the sexes regarding these levels was not made. Of the 199 subjects, 39 had a high level of self-esteem, 124 had a moderate level, and 36 had a low level of self-esteem. On the variable, death anxiety, 39 had

a high level, 125 had a moderate level, and 35 were operationally defined as having a low level of death anxiety. On the third variable, locus of control, 68 subjects fell in the Social System category, 12 in the Fatalism, and 119 in the Self-Control category.

DATA COLLECTION

The Texas Social Behavior Inventory, Form A; Death Anxiety Scale; and Three Factor Locus of Control Scale, were administered in a booklet form to Introductory Psychology students at Emporia State University. A cover sheet requested the following information: Age, sex, marital status, race, and year in college. With the exception of sex, this information was ancillary data and was not used in the main statistical analysis of the data. The subjects's names were not required. Instructions appeared at the beginning of each test. In the test booklet, the tests were given in the following order: The Texas Social Behavior Inventory, Death Anxiety Scale, and Three Factor Locus of Control Scale. Participation was on a voluntary basis, and the students were informed that the data would be used in a masters thesis.

When it was estimated that the subjects were half

way through the test booklet, the examiner announced

to the class that there was one more question for them

to answer which was not typed in the booklet and would

be given orally. They were to place their answer under

"year in college" on the cover sheet. They were then

asked the following question(s): "Have you experienced

the loss of a friend, acquaintance, or relative through

death? If the answer is yes, how long ago did this

happen?" The information gathered from this question

was considered supplementary data and was not used in

the main statistical analysis of the data.

The tests were scored manually by the examiner.

The time and days in which the data were gathered was

not considered significant.

MATERIALS AND INSTRUMENTATION

Three test instruments were used: Texas Social

Behavior Inventory; Form A (TSBI;A) (Helmreich, Stapp,

& Ervin, 1974); Death Anxiety Scale (DAS) (Templer,

1970); and the Reid-Ware Three Factor Locus of Control

(Reid & Ware, 1974).

The Texas Social Behavior Inventory; Form A consists

of sixteen Likert-type statements dealing with an indi-

vidual's self-perception of comfort, confidence, and

competence in social situations. There are five alternatives to choose from, ranging from "not at all characteristic of me" to "very much characteristic of me." Scores from 0-4, were given to each answer and then totaled for each subject. The higher the score, the higher the perceived level of social competence.

The Templer Death Anxiety Scale consists of fifteen true-false statements concerning death indirectly and directly. Their score was the total number of statements answered indicating they were concerned with death.

For both the TSBI;A and DAS, scores falling in the area one standard deviation above or below the group mean on that variable were considered to be high or low self-esteem or death anxiety, respectively. The remaining area between these two points was considered the area of moderate death anxiety or moderate self-esteem.

The Reid-Ware Three Factor Locus of Control Scale contains 45 statements in a forced-choice format. This scale measures three dimensions of locus of control which include Social System Control, Fatalism, and Self-Control. Of the 45 items, 12 items measure Fatalism, 12 measure Social System Control, eight measure Self-Control, and the remaining 13 are filler items. The Fatalism items focus on luck, fate, and the unpredictibility of the

environment. Social System Control items focus on the powerfulness of others and social systems. Items of Self-Control focus on how an individual perceives his or her own desires, impulses, and emotions as determining his or her behavior. Each of the three scales are scored in the direction of externality. Thus an individual having many external scores would be externally oriented.

All three of these testing instruments are appropriate for use in experiments with college subjects. The Texas Social Behavior Inventory has been used in the following studies with college students: Spence, Helmreich, and Stapp (1975); Wilee and Davis (1976); Davis et. al. (1978); and Sadowski and Davis (1979). College subjects were used as participants in studies employing the Reid-Ware Three Factor Locus of Control Scale by Reid and Ware (1974); Schlegel and Crawford (1976); Sadowski and Davis (1979); and Sadowski, Davis, and Loftus-Vergari (1979). The Death Anxiety Scale has been widely used in research involving college students as sample subjects. Some of the research studies utilizing the DAS with college subjects are as follows: Templer (1970); Templer and Dotson (1970); Templer and Ruff (1971); McDonald (1976); Davis et. al. (1978); Sadowski, Davis, and Loftus-Vergari (1979).

STUDY DESIGN AND DATA ANALYSIS

The data were analyzed using two statistical proce-
dures. The first analysis utilized the "repeated measures"
chi-square test which is a modified test of association
devised to accommodate a within-subjects design. The
results of the tests administered (DAS, TSBI;A, and
Three Factor Locus of Control Scale) were compared
with each other to determine if a relationship existed
between them.

The second statistical procedure used was the
unweighted means analysis of variance. This procedure
is a modified analysis of variance used when the researcher
does not have the same number of scores per cell in the
analysis. The test results for low and high death
anxiety and self-esteem and locus of control were all
compared with each other to discover if a significant
relationship existed between them.

A t-test was utilized in determining differences
in self-esteem between female and male subjects. The
t-test may be used when the experimenter has only two
levels of the independent variable.

CHAPTER 4

ANALYSIS OF DATA

This study was designed to discover a possible

relationship between the three variables studied: self-

esteem, locus of control, and death anxiety. This

chapter describes how the data were analyzed using the

chi-square and analysis of variance techniques. The

results from the analyses will be presented separately.

The data from the tests administered were used to

examine the null hypothesis which stated that there is

no statistical evidence from the analyses indicating

a significant relationship between self-esteem, locus

of control, and death anxiety.

STATISTICAL ANALYSIS

Chi-Square Analyses

The statistical analysis for the series of "repeated

measures" chi-squares indicated that there was no significant

association between the variables tested. Three, two-way

chi-squares (a X bx^2) were utilized. There were 4

degrees of freedom in each of the chi-squares run.

The chi-square value of the test between self-esteem

and death anxiety was 3.36; between locus of control

and death anxiety, 2.07; and 3.20 between locus

of control and self-esteem. The value of chi-square
necessary for significance is 9.488 at the .05 level
of probability. All of the results from the chi-squares
fell well below this level.

The results from this particular analysis indicate
that there is no relationship between the variables of
self-esteem, death anxiety, and locus of control.
Therefore, the null hypothesis is not rejected.

Results of t test of Self-Esteem Scores

Differences in self-esteem between male and female
subjects were tested using the t test procedure. Table
1 lists the means and standard deviations for male and
female subjects used in the procedure.

Table 1

Means and Standard Deviations
For Male and Female Subjects;
Self-Esteem and Death Anxiety

	Self-Esteem		Death Anxiety	
	Female	Male	Female	Male
Mean	41.46	40.01	7.55	6.88
S.D.	7.57	7.67	2.88	1.12
n	130	90	130	90

The one-tailed t test run on overall death anxiety
scores indicates that females had significantly higher
death anxiety scores than males (t, 218 = 2.09, p .025).
A t value of 2.00 was necessary at the .05 level of
probability to establish significance. The use of a
one-tailed test on this data is justified on the basis
of previous research (Selvey, 1973; Berman & Hays,
1973; Davis, et. al., 1979; and Sadowski, et. al.,
1979).

A two-tailed t test was used with the variables
of self-esteem and sex of subject. The results did
not yield significance, in that self-esteem does not
appear related to gender (t,218 = 1.39, p .20).
However, it is interesting to note that the mean self-
esteem score for females was higher than that of the
males.

Analysis of Variance

The unweighted means analysis of variance tech-
nique was utilized to conduct a more detailed analyses
of the data. One between subjects design and two
between-between-within subjects designs were employed
in the analyses.

A two-factor analysis incorporating Sex of Subject
(male vs. female) and Self-Esteem (low vs. high) was

performed on the Death Anxiety Scale scores. The results of this analysis indicated that both the Sex of Subject, $F(1,69) = 4.12$, $p < .05$, and Self-Esteem, $F(1,69) = 4.46$, $p < .05$, factors were significant. Inspection of the data revealed that the low self-esteem subjects had higher ($\overline{X} = 7.88$) DAS scores than did self-esteem subjects ($\overline{X} = 6.56$). Likewise, it was found that female subjects had higher ($\overline{X} = 7.70$) DAS scores than did male subjects ($\overline{X} = 6.58$). Table 2 lists the mean Death Anxiety Scale scores and standard deviations for Sex of Subject and Self-Esteem.

Table 2

Mean DAS Scores and Standard Deviations
By Sex and Levels of Self-Esteem

Sex	Self-Esteem	n	Mean	S.D.
Male	Low	14	7.21	2.69
Male	High	17	5.94	1.60
Female	Low	20	8.35	3.22
Female	High	22	7.04	2.44

An analysis incorporating two between-subject factors, Sex of Subject (male vs. female) and Death Anxiety (low vs. high), and one within-subject factor, Locus of Control (SC, SSC, F), was performed on the locus of control scores. The results of this analysis indicated that the Death Anxiety, $F(1,109) = 22.65$, $p < .01$, Locus of Control, $F(2,218) = 35.07$, $p < .01$, and Sex of Subject by Locus of Control interaction, $F(2,218) = 3.75$, $p < .05$, factors were significant. Inspection of the data indicated that the high death anxiety subjects had higher ($\overline{X} = 5.95$) locus of control scores than did the low death anxiety subjects ($\overline{X} = 4.46$). Simple main effects analyses were used to probe the significant interaction and indicated that females ($\overline{X} = 5.04$) showed significantly, $F(1,218) = 3.36$, $p < .05$, higher SC scores than did the males ($\overline{X} = 4.33$). Although nonsignificant, $F(1,218) = 2.83$, $p < .10$, there was a tendency for males ($\overline{X} = 4.76$) to display higher F scores than females ($\overline{X} = 4.10$). Males and females did not differ, $F(1,218) = 2.17$, $p < .10$, in terms of SSC scores. The mean Locus of Control scores and standard deviations for level of Death Anxiety and Sex of Subject are presented in Table 3.

Mean Locus of Control Scores and Standard Deviation by Sex and Level of Death Anxiety

	MALE		FEMALE	
	LOW DAS	HIGH DAS	LOW DAS	HIGH DAS
SSC	n = 21 m = 5.38 s.d.= 2.56	n = 24 m = 6.79 s.d.= 2.34	n = 36 m = 5.75 s.d.= 2.57	n = 32 m = 7.78 s.d.= 1.93
F	n = 21 m = 3.90 s.d.= 2.07	n = 24 m = 5.50 s.d.= 2.47	n = 36 m = 3.17 s.d.= 2.56	n = 32 m = 5.16 s.d.= 2.77
SC	n = 21 m = 3.67 s.d.= 1.80	n = 24 m = 4.92 s.d.= 1.98	n = 36 m = 4.72 s.d.= 2.48	n = 32 m = 5.41 s.d.= 2.03

An analysis incorporating two between-subject factors, Sex of Subject (male vs. female) and Self-Esteem (low vs. high), and one within-subject factor, Locus of Control (SSC, F, Sc) was also performed on the locus of control scores. The results of this analysis indicated that Self-Esteem, $F(1,68) = 5.34$, $p < .05$, and Locus of Control, $F(2,136) = 25.25$, $p < .01$, factors were significant. Inspection of the data indicated that the low self-esteem subjects had higher ($\overline{X} = 5.81$) locus of control scores than did high self-esteem subjects ($\overline{X} = 5.05$). In Table 4 the mean Locus of Control scores and standard deviations for Sex of Subjects and Self-Esteem are listed.

Based on these analyses the null hypothesis is rejected. There is a significant relationship between self-esteem, locus of control and death anxiety.

Table 4

Mean Locus of Control Scores and Standard Deviation by Sex and Level of Self-Esteem

	MALE		FEMALE	
	LOW S-E	HIGH S-E	LOW S-E	HIGH S-E
SSC	n = 14 m = 7.0 s.d.= 2.25	n = 17 m = 5.94 s.d.= 2.63	n = 20 m = 7.25 s.d.= 2.24	n = 22 m = 6.18 s.d.= 1.89
F	n = 14 m = 4.93 s.d.= 2.37	n = 17 m = 3.94 s.d.= 3.07	n = 20 m = 4.55 s.d.= 3.03	n = 22 m = 3.91 s.d.= 2.63
SC	n = 14 m = 5.14 s.d.= 1.10	n = 17 m = 4.06 s.d.= 2.28	n = 20 m = 5.30 s.d.= 1.69	n = 22 m = 4.64 s.d.= 2.04

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The results of the present study are discussed
in this chapter. The experimental results are examined
along with suggestions for further research on the
variables of self-esteem, locus of control, and death
anxiety. Also presented in this chapter are the
following sections: Summary, Conclusions, and Recommen-
dations.

SUMMARY

In this study self-esteem, locus of control, and
death anxiety were examined to determine if a relation-
ship existed among these three variables. There were
220 subjects involved in the sample analyzed by analysis
of variance, and 199 of these were used in the chi-square
analysis. The subjects answered three questionnaires.
Subjects were used on the basis of availability, and
their participation in the study was voluntary. High
and low death anxiety and self-esteem were operationally
defined as being one standard deviation above and below
the group mean, respectively, for that variable. Analysis
of variance and "repeated measures" chi-squares were

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used to analyze the data. The t test was employed specifically to examine sex differences on the overall self-esteem and death anxiety scores of 220 subjects. Statistical significance was not established using the chi-square analysis.

The unweighted means analysis of variance technique yielded a statistically significant relationship between self-esteem, locus of control, and death anxiety. Low self-esteem subjects had significantly higher death anxiety and locus of control scores than did high self-esteem subjects. Subjects with high death anxiety scores had significantly higher locus of control scores than did low death anxiety subjects. Female subjects had significantly higher death anxiety scores than did male subjects. On the locus of control variable, females had significantly higher Self-Control scores than did males. Although no statistical significance was established, males tended to have higher Fatalism scores than did female subjects. On the Social System Control factor, the scores for males and females did not differ significantly. Statistically, the t test results indicated that the females had significantly higher death anxiety scores than male subjects. Although statistical significance was not established for self-esteem on

the t test, the female subjects had a higher mean
self-esteem score than did the males.

CONCLUSIONS

The results of the chi-square analyses and
unweighted means analysis of variance differed in
that the chi-square method did not reveal a statis-
tically significant relationship between the variables
studied. This difference may be due to the fact that
analysis of variance technique examines the data in
a more detailed fashion than does the chi-square method.
Three other possibilities for this difference exist.
First, in the chi-square analyses the sexes were grouped
together. As was seen in the analyses of variance
where the data for the sexes were examined separately,
the subjects' sex was significant on some variables.
Secondly, the moderate level of death anxiety and
self-esteem was utilized in the chi-square analyses
along with the low and high levels. Over one-half
of the total number of subjects involved in the study
fell in the moderate range of self-esteem and death
anxiety. Perhaps the overabundance of moderate subjects
diluted any significant relationship to a point that
would make it difficult to detect statistically. Only

low and high levels of death anxiety and self-esteem
was used in the analyses of variance. Finally, chi
square uses frequency data and is only concerned with
the numerical occurrence of a certain variable in a
situation. Analyses of variance uses interval data
wherein both the ordering of scores and differences
between scores are considered.

In the present study it was found that the females
expressed higher death anxiety than their male counter-
parts. This same sex difference has been found in
research by Berman and Hays (1973), Selvey (1973),
Sullivan (1977), Davis, Martin, Wilee, and Voorhees
(1978), Sadowski, Davis, and Loftus-Vergari (1970).
Regarding gender and self-esteem, the present study
reveals that the females tended to have higher self-
esteem than the males, although this difference was
not statistically significant. Ryckman and Sherman
(1973) found that their female sample had a higher
self-esteem mean than the male sample, although it
was not statistically significant. In contrast, Davis,
Martin, Wilee, and Voorhees (1978) and Sadowski and
Davis (1979) found that males had higher self-esteem
than females.

Low self-esteem subjects had significantly higher

death anxiety than high self-esteem individuals. This result from the present study has also been found in research by Moses (1973), Alcorn (1977), and Davis, Martin, Wilee, and Voorhees (1978). This finding is in sharp contrast to Diggory and Rothman's (1961) study which supported their hypothesis that high self-esteem individuals also have a high level of death anxiety. One might wish to question the validity of Diggory and Rothman's (1961) study since there exists considerable disagreement with their finding.

It was found, in the present study, that individuals possessing high death anxiety also had higher locus of control scores than did low death anxiety subjects. However, Dickstein in his 1972 study stated that there was no significant difference between the locus of control scores for individuals with low or high death anxiety. Regarding the relationship to death anxiety, the present study also found that females had significantly higher Self-Control (SC) scores than the males. There was no difference between males and females on Social System (SSC) scores. This contrasts with the study by Sadowski, Davis, and Loftus-Vergari (1979) in which females had higher SSC scores, and the SC scores did not differ significantly for males and females.

Although significant for the Sadowski et al. study but insignificant for the present study, males had higher Fatalism (F) scores than females. The present study indicates that low self-esteem subjects had significantly higher locus of control scores than high self-esteem individuals.

The present study indicated that individuals possessing low self-esteem and high death anxiety had higher locus of control scores. From this it might be inferred that these individuals are more externally oriented. Individuals with a poor self-image might be more prone to look to things or others outside themselves as being responsible or the controlling force for their life. Death is an event in an individual's life which is out of his control. Since it is an uncontrolled event, perhaps the low self-esteem person who is more externally oriented perceives it as more threatening than a person with high self-esteem.

RECOMMENDATIONS

Significant results were obtained on the variables examined in the present study. To conduct further research however, other factors may be considered. If one wished to repeat this experiment, a different

age group or individuals with more academic experience, such as graduate students, might be used. Other variables such as race or religion may be considered. The test booklet may be altered to include additional tests of self-esteem, locus of control, and death anxiety. The order in which the tests have been organized in the booklet may also be rearranged. Lastly, an individual may wish to administer the questionnaires to the classes in separate settings, i.e., one class of subjects in three separate settings. Each of these suggestions may alter the results of the experiment.

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