

VALIDATION OF A FEAR OF DEATH SCALE
USING A STATE-TRAIT ANXIETY CONSTRUCT

A THESIS

Presented to
the Faculty of the Department of Psychology
University of Houston

In Partial Fulfillment
of the Requirements for the Degree
Bachelor of Science

By

Howard Ng

May, 1976

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ABSTRACT

The present study investigated the contextual effect on state anxiety caused by an immediately prior administration of a fear of death scale. It was hypothesized that the death related stimulus material would result in an increase in anxiety. Therefore, state anxiety would be greater for the subjects completing the fear of death scale than for those completing an innocuous and general personality inventory. It was also hypothesized that the fear of death scale score and the state anxiety score would be significantly correlated in the fear of death scale condition.

The 238 subjects were undergraduate volunteers. They were divided into two groups at random. The experimental group completed a fear of death scale, then a state-trait anxiety inventory. The control group completed a social desirability scale, then a state-trait anxiety inventory.

It was found that the experimental group scored significantly higher on the state-trait anxiety inventory.

It was also found that the scores for both the state and trait components of the state-trait anxiety inventory and the fear of death scale were significantly correlated for the experimental group.

CHAPTER I

INTRODUCTION

A. SURVEY OF THE LITERATURE:

Research in death anxiety in the past two decades has been voluminous. Studies have been conducted to measure norms and validate measures on populations from normal children to the elderly psychiatric patients. Yet, only three types of studies are being conducted. Lester (1967) concluded that all studies in death anxiety were based on questionnaire, projective techniques, or indirect proof.

There are, at present, two questionnaires which are in popular use. Templer (1969) developed the Death Anxiety Scale (DAS) based on 31 consensually validated questions. Experimental validity was determined in a three part program. Psychiatric patients who voluntarily expressed death concern were matched with psychiatric patients that had not expressed death concern. There was a significant difference between the groups for the DAS. Secondly, college populations were administered the 31 items of the DAS embedded in the last 200 items of the MMPI, making use of the Welch Anxiety Scale, Welch Anxiety Index, and Manifest Anxiety Scale and yielding correlation coefficients of .39, .18, and .36 respectively.

Third, the Boyar Fear of Death Scale (FODS) was given in conjunction with the 31 items of the DAS to yield a correlation coefficient

of .74. As can be seen, the first result is expected. Using a face valid, self-report measure on populations voluntarily expressing death concern vs. non-death concern should yield a higher score.

Again, in that the DAS specifies expression of death concerns with anxiety responses the second result is expected. Last, the FODS and DAS would be expected to correlated highly due to their mutual subject content.

Another questionnaire in popular use is the Fear of Death Scale (Collett and Lester, 1967). A 36 item face-valid scale was constructed to differentiate between fear of death and fear of dying, both of one-self and of others. The experimental results showed low intercorrelations between scales confirming the original hypothesis of separable components in the fear of death and dying.

Projective techniques, although used to construct scales, have not been widely employed to validate the construct of death anxiety.

A more popular method has been the use of indirect proof, specifically to measure the temporal anxiety response to death related stimuli.

Alexander et. al. (1957), in an early study, obtained a galvanic skin response (GSR) for death related words. Because the literature of the time indicated low fear of death and low concerns were found in normal subjects, the author, hypothesized an unconscious death fear or anxiety. In an effort to confirm this hypothesis, Templer (1971) used

10 sets of 3 words (neutral, death related, traumatic) and obtained a GSR score for the death related words. The GSR scores were correlated to DAS scores yielding a correlation coefficient of .38. Although, Templer claims only a modest correlation, his work does tend to weaken the concept of unconscious death anxiety. However, in that his subject pool was composed of 49 heterogenous psychiatric patients, his conclusions are difficult to generalize to a normal population.

Another avenue of indirect proof was the use of tachistoscopic measures to infer debilitating or facilitating anxiety. Golding, et.al. (1966), found a significant difference ($p < .01$) between the ability of subjects to recognize death related and neutral words, with the death related words being more difficult to recognize. Further, he found no relationship between the ability to recognize death related words and a fear of death scale. This would tend to support the concept of unconscious death anxiety utilizing the indirect method of perceptual defense. One of the chief criticisms of this study was the failure to match the neutral words to the death related words on the basis of word frequency.

In a unique approach to the tachistoscopic method, Lester and Lester (1970) used 15 death words and 15 neutral words, matched for word frequency, typed through 10 carbon paper sets, ranging from complete legibility to complete illegibility. Both the death set of words and neutral set of words were arranged in random order. The experimental result was that in all but one case, the death related set was fully identified first. The weakness in this study seems to be the lack of

a common organizing principle for the neutral words, i.e., they were not related.

Another method used currently is the employment of questionnaires to measure the temporal rise in anxiety. Paris and Goodstein (1966) attempted to establish a higher verbalized anxiety response for sensitizers to literature pertaining to sex or death, using a self-report rating scale with the following five categories for Likert-type responses: sexually aroused, disgusted, emotionally upset, anxious, bored, anger. The hypothesis was not confirmed. Hoblit (1972) used 3 pre-sensitized groups, (cancer patients, medical patients, healthy controls, heroin addicts) in experiments designed to measure general anxiety differences. There were no significant differences.

Lucas (1972) attempted to show a rise in anxiety as measured by the State-Trait Anxiety Inventory due to a death related stimulus, i.e., a death anxiety scale. Using 20 patients undergoing hemodialysis and their wives, he failed to show any significant change. This might be explained by the small sample size.

B. STATE-TRAIT ANXIETY:

Spielberger (1966) offers a definition of anxiety which differentiates between a transitory state and a stable trait.

"State anxiety (A-state) is conceptualized as a transitory emotional state or condition of the human organism that is characterized by subjective, consciously perceived feelings of tension and apprehension, and heightened autonomic nervous system activity. A-states may fluctuate over time.

Trait anxiety (A-trait) refers to relatively stable, individual differences in anxiety proneness, that is, to differences between people in the tendency to respond to situations perceived as threatening with elevations in A-state intensity."

It was under this definition that the present study was conducted.

C. THE PRESENT STUDY:

The present study investigated the contextual effect of exposure to death stimuli on a state anxiety measure. In addition, the relationship between that state anxiety measure and a fear of death scale was investigated.

D. MEASUREMENT OF STATE-TRAIT ANXIETY:

State anxiety (A-state) and Trait anxiety (A-trait) were measured with the State-Trait Anxiety Inventory (STAI) (Spielberger et. al. 1969) immediately following a fear of the death scale. The A-state section (Appendix A) of the STAI is a 20 item questionnaire designed to measure subjective feelings of transitory anxiety. The A-trait section is also a 20 item scale, designed to measure anxiety proneness. The STAI has been validated under many conditions, one of which involved A-state changes by college subjects under stressful conditions (Lazarus and Oton, 1966). Significant changes in A-state levels occurred between the relaxed, normal exam, and stressful movie conditions.

For this reason, and due to the ease of administration, the STAI was used in the present study.

E. MEASUREMENT OF FEAR OF DEATH:

Fear of death was measured by the Collett-Lester Fear of Death Scale (FOD) (1969) (Appendix B). The FOD is a 4 part scale designed to differentiate between the fear of death and the fear of dying, both of oneself and of others.

The FOD was used in the present study as both a measure and as the death related stimulus in the experimental group. The control stimulus was the Social Desirability Scale (Crowne and Marlow, 1960).

F. SPECIFICATION OF HYPOTHESES:

Hypothesis I:

Templer (1971) and Alexander et.al. (1957) both found a galvanic skin response for death related words which Templer related to heightened anxiety. Thus, it was expected that the experimental group would show a greater A-state response on the STAI.

Hypothesis II:

Templer (1971) showed a correlation of .38 between a death anxiety scale score and a death GSR measure. Persons who express a higher fear of death would be expected to show a higher A-state level when confronted with the feared stimulus. Thus, it was expected that the scores on the FOD and the A-state section of the STAI would be correlated and that this relationship would be independent of reported levels of chronic anxiety, (i.e., A-trait).

CHAPTER II

METHOD

A. SUBJECTS:

The subjects (Ss) were college students at the University of Houston. All Ss were volunteers from an introductory psychology course. All Ss received extra credit toward their grade in their introductory psychology course, for their participation.

B. CONDITIONS:

All Ss were randomly assigned to one of two conditions.

DEATH CONTEXT: It was hypothesized that a death related stimulus would cause an increase in A-state. Thus, using the FOD as a death related stimulus, Ss in this condition completed the FOD, which was immediately followed by the STAI.

GENERAL EVALUATIVE CONTEXT: It was expected that a smaller increase in A-state would result as a function of general anxiety from Ss completing a general evaluative questionnaire. Thus, Ss in this condition completed the MC, which was immediately followed by the STAI.

C. PROCEDURE:

The scales were group administered to a large introductory psychology course at the University of Houston. All students were asked to volunteer, but were given the opportunity to leave. There were 238 remaining volunteers.

Ss were randomly assigned to each condition, based on which set of scales the Ss received. The Ss in the death context condition numbered 112, while the Ss in the general evaluative context condition numbered 126.

Ss were told that the two scales they had received were separate scales, but had been stapled together for ease of administration. Ss were instructed to complete the scales in order. Ss were further instructed to avoid returning to the first scale after completion and to avoid looking at the second until completion of the first.

Ss were told that the purpose of the experiment was to validate and establish norms for the scales.

CHAPTER III

RESULTS

The data was analyzed for the means and standard deviations for the STAI scores for both groups and the FOD scores for the experimental group.

	EXPERIMENTAL $\bar{X}$ s	N = 112	CONTROL $\bar{X}$ s	N = 126
FOD	$\bar{X}$ = 87.1		Not Administered	
	SD = 10.4			
STAI:	$\bar{X}$ = 40.93		$\bar{X}$ = 38.78	
A-State	SD = 10.06		SD = 10.07	
	$\bar{X}$ = 42.60		$\bar{X}$ = 42.36	
A-Trait	SD = 10.28		SD = 10.59	

The Student t-ratio was used to test the significance of the difference between the means. The t-ratio was computed to be 1.64 for the one-tailed test ($p < .06$) by the following formula:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\left(\frac{\sum x_1^2}{n_1} + \frac{\sum x_2^2}{n_2} - 2\right)\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

$$N_1 = 112 \quad \sum x_1 = 100.40 \quad \bar{x}_1 = 40.93$$

$$N_2 = 126 \quad \sum x_2 = 100.60 \quad \bar{x}_2 = 38.78$$

The Pearson r correlation coefficient was used to compare the FOD and A-state experimental scores to yield a result of $r = .38$ ($p < .0001$). Likewise, the FOD and A-trait were compared to yield a correlation of $r = .36$ ($p < .0001$). STAI A-state and A-trait scores showed a correlation coefficient of $r = .52$ ($p < .0001$). Partial correlations of the FOD and A-state, with A-trait being controlled, yielded a result of $r = .24$ ($p < .01$).

Likewise, the FOD and A-trait were compared resulting in a correlation coefficient of $r = .21$ ($p < .03$).

CHAPTER IV

DISCUSSION

A. SUMMARY OF RESULTS:

The results of the present may be summarized as follows:

a) there was a marginally significantly greater anxiety response to the death stimulus than to the control stimulus, b) there was a significant correlation between the FOD and both components of the STAI independent of each other.

B. EVALUATION OF HYPOTHESES:

Hypothesis I:

Hypothesis I was confirmed, but only at a marginal level. It would appear that death anxiety does exist; that thoughts of death tend to cause elevations of A-state.

Hypothesis II:

Hypothesis II was confirmed. It would appear that Ss with a high fear of death tended to exhibit high levels of state anxiety. The results also indicated that Ss with a high fear of death tended to exhibit high levels of trait anxiety. Further, both relationships were significantly independent of each other.

C. IMPLICATIONS:

The use of the STAI in the investigation of death anxiety would seem inappropriate. Although Lucas (1972), in his attempt to establish the contextual rise in A-state due to a death anxiety scale, was limited due to his sample size; the present study was only able to marginally establish that effect with a considerably larger sample.

In view of the significant correlations between the FOD and both components of the STAI and the significant partial correlation of the FOD with A-state and A-trait, it would appear that fear of death and anxiety proneness, although not temporally related, do tend to appear in the same individual. Further, death stimulus does tend to elicit a positive A-state response in anxiety prone individuals.

In summation, the FOD does seem to be an appropriate measure of, not only fear of death, but also death anxiety.

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APPENDIX A

Collett-Lester Fear of Death Scale

APPENDIX A

Collett-Lester Fear of Death Scale

Here is a series of general statements. You are to indicate how much you agree or disagree with them. Record your opinion on the answer sheet according to the following scale:

1. Strong disagreement
2. Moderate disagreement
3. Moderate agreement
4. Strong agreement

Read each item and decide quickly how you feel about it; then record the extent of your agreement or disagreement. Put down your first impressions. Please answer every item.

1. I would avoid death at all costs.
2. I would experience a great loss if someone close to me died.
3. I would not feel anxious in the presence of someone I knew was dying.
4. The total isolation of death frightens me.
5. I am disturbed by the physical degeneration involved in a slow death.
6. I would not mind dying young.
7. I accept the death of others as the end of their life on earth.
8. I would not mind visiting a senile friend.

9. I would easily adjust after the death of someone close to me.
10. If I had a choice as to whether or not a friend should be informed he/she is dying, I would tell him/her.
11. I would avoid a friend who was dying.
12. Dying might be an interesting experience.
13. I would like to be able to communicate with the spirit of a friend who has died.
14. I view death as a release from earthly suffering.
15. The pain involved in dying frightens me.
16. I would want to know if a friend were dying.
17. I am disturbed by the shortness of life.
18. I would not mind having to identify the corpse of someone I knew.
19. I would never get over the death of someone close to me.
20. The feeling that I might be missing out on so much after I die bothers me.
21. I do not think of dead people as having an existence of some kind.
22. I would feel uneasy if someone talked to me about the approaching death of a common friend.
23. Not knowing what it feels like to be dead does not bother me.
24. If I had a fatal disease, I would like to be told.
25. I would visit a friend on his/her deathbed.
26. The idea of never thinking or experiencing again after I die does not bother me.
27. If someone close to me died, I would miss him/her very much.
28. I am not disturbed by death being the end of life as I know it.
29. I would feel anxious if someone who was dying talked to me about it.

30. The intellectual degeneration of old age disturbs me.
31. If a friend were dying, I would not want to be told.
32. I could not accept the finality of the death of a friend.
33. It would upset me to have to see someone who was dead.
34. If I knew a friend were dying, I would not know what to say to him/her.
35. I would not like to see the physical degeneration of a friend who was dying.
36. I am disturbed by the thought that my abilities will be limited while I lie dying.

APPENDIX B

Scoring Criteria for

Collett-Lester Fear of Death Scale

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Scoring Criteria for
Collett-Lester Fear of Death Scale

SCORING:

This scale is designed to assess four separate fears of death:

1. Fear of death of oneself.
2. Fear of death of others.
3. Fear of dying of oneself.
4. Fear of dying of others.

Each subscale contains items keyed positively and items keyed negatively. Thus, although the scale is scored as any conventional Likert-type scale, care is needed in distinguishing the items of each scale and in distinguishing the positively keyed and the negatively keyed items. The distribution of items is as follows:

	<u>POSITIVE</u>	<u>NEGATIVE</u>
Death of Self	1, 4, 17, 20	6, 14, 23, 26, 28
Death of Others	2, 13, 19, 27, 32, 33	7, 9, 18, 21
Dying of Self	5, 15, 30 36	12, 24
Dying of Others	11, 22, 29, 31, 34, 35	3, 8, 10, 16, 25

APPENDIX C

Spielberger State - Trait Anxiety Inventory

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Spielberger State - Trait Anxiety Inventory

Self Evaluation Questionnaire STAI Form X-1

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate space on the answer sheet to indicate how you feel right now, that is, at this moment. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feeling best.

Very Much So - 4
Moderately So - 3
Somewhat - 3
Not At All - 1

1. I feel calm.
2. I feel secure.
3. I am tense.
4. I am regretful.
5. I feel at ease.
6. I feel upset.
7. I am presently worrying over possible misfortunes.
8. I feel rested.
9. I feel anxious.
10. I feel comfortable.
11. I feel self-confident.

12. I feel nervous.
13. I am jittery.
14. I feel "high strung."
15. I am relaxed.
16. I feel content.
17. I am worried.
18. I feel over-excited and rattled.
19. I feel joyful.
20. I feel pleasant.

SELF EVALUATION QUESTIONNAIRE
STAI Form X-2

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate space on your answer sheet to indicate how you generally feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

Almost Always - 4

Often - 3

Sometimes - 2

Almost Never - 1

21. I feel pleasant.
22. I tire quickly.
23. I feel like crying.
24. I wish I could be as happy as others seem to be.
25. I am losing out on things because I can't make up my mind soon enough.
26. I feel rested.
27. I am "calm, cool, and collected."
28. I feel that difficulties are piling up so that I cannot overcome them.
29. I worry too much over something that really doesn't matter.
30. I am happy.
31. I am inclined to take things hard.
32. I lack self-confidence.
33. I feel secure.
34. I try to avoid facing a crisis or difficulty.
35. I feel blue.
36. I am content.

37. Some unimportant thought runs through my mind and bothers me.
38. I take disappointments so keenly that I can't put them out of my mind.
39. I am a steady person.
40. I become tense and upset when I think about my present concerns.

APPENDIX D

Scoring for Spielberger

State - Trait Anxiety Inventory

APPENDIX D

Scoring for Spielberger

State - Trait Anxiety Inventory

SCORING THE STAI

The range of possible scores for Form X of the STAI varies from a minimum score of 20 to a maximum score of 80 on both the A-State and A-Trait subscales. Subjects respond to each STAI item by rating themselves on a four-point scale (See the STAI test form in Appendix A of this Manual). The four categories for the A-State scale are: (1) Not at all; (2) Somewhat; (3) Moderately so; and (4) Very much so. The categories for the A-Trait scale are: (1) Almost never; (2) Sometimes; (3) Often; and (4) Almost always.

Some of the STAI items (e.g., "I am tense") are worded in such a manner that a rating of (4) indicates a high level of anxiety, while other items (e.g., "I feel pleasant") are worded so that a high rating indicates low anxiety. The scoring weights for items on which high ratings indicate high anxiety are the same as the number blackened out for those items on the test form. For items on which a high rating indicates low anxiety, the scoring weights are reversed. The weighted scores of responses marked 1, 2, 3, and 4 for the reversed items are 4, 3, 2, and 1, respectively.

To reduce the potential influence of an acquiescence set on STAI responses, it would be desirable to have balanced A-State and A-Trait scales, with equal numbers of items for which high ratings indicate high and low anxiety. The STAI A-State scale is balanced for acquiescence set, with ten directly scored and ten reversed items. It was not possible, however, to develop a balanced A-Trait scale from the original item pool; the STAI A-Trait scale has seven reversed items and thirteen that are scored directly. The reversed items on the STAI sub-scales are:

A-State scale: 1, 2, 5, 8, 10, 11, 15, 16, 19 and 20.

A-Trait scale: 1, 6, 7, 10, 13, 16, and 19.