1978

Graduate Student Styles for Coping with Stressful Situations and Their Effect on Academic Achievement

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Eastern Illinois University

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GRADUATE STUDENT STYLES FOR COPING WITH STRESSFUL SITUATIONS

AND THEIR EFFECT ON ACADEMIC ACHIEVEMENT

(TITLE)

BY

Suzanne Ryan Lilien

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF

MASTER OF ARTS

IN THE GRADUATE SCHOOL, EASTERN ILLINOIS UNIVERSITY

CHARLESTON, ILLINOIS

1978

YEAR

I HEREBY RECOMMEND THIS THESIS BE ACCEPTED AS FULFILLING

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GRADUATE STUDENT STYLES FOR COPING WITH STRESSFUL SITUATIONS

AND THEIR EFFECT ON ACADEMIC ACHIEVEMENT

BY

SUZANNE RYAN LILIEN

B. A. in Bus. Adm., Eastern Illinois University, 1967

ABSTRACT OF A THESIS

Submitted in partial fulfillment of the requirements
for the degree of Master of Arts in Psychology at the Graduate School
of Eastern Illinois University

CHARLESTON, ILLINOIS
1978

The study was to examine the types of stressful situations that graduate students encounter, to delineate styles for coping with these situations, and to determine if these coping styles affect academic achievement.

Three populations were used: Group I consisted of 22 graduates of the Clinical Psychology program at Eastern Illinois University (EIU), Group II consisted of 11 dropouts of the Clinical Psychology program, and Group III consisted of 23 currently-enrolled graduate students in the Psychology Department. It was anticipated that there would be a significant relationship between graduate students' coping styles and their academic achievement, and that Type I (competent) and Type II (less competent) graduate students would have different coping styles for stressful situations.

All subjects completed a questionnaire which included a cover letter outlining instructions, an information sheet, 26 descriptions of stressful situations, and rating scales for each situation. Analysis was based on the subject's age, number of years out of school, self-rated competency scores, undergraduate cumulative grade-point average (CGPA) scores, and ratings (responsibility, certainty, anxiety) of three types of stressful situations (academic problems, interpersonal problems, fate-failure) obtained from the questionnaire.

For Group III, a Pearson Correlation was used to investigate the relationship between subjects' CGPA scores and the variables of age, number of years out of school, self-rated competency, and ratings of coping styles for stressful situations to

determine a relationship between the measures and CGPA scores.

For Groups I and II, six $\underline{t}$-tests were run to determine differences between groups on the measures of age, number of years out of school, self-rated competency scores, and CGPA scores in order to establish a basis for differences in coping styles among graduate students.

Results indicate that graduate students' coping styles are not significantly related to academic achievement, and there was not a significant difference between graduates and dropouts to determine a difference among graduate students for comparison of coping styles.

TABLE OF CONTENTS

LIST OF TABLES

ACKNOWLEDGMENTS

To meet the requirements for obtaining an M. A. degree, a graduate student must be competent in coursework, pass difficult examinations, and complete research studies. As a graduate student progresses through graduate school, he often experiences situations which are highly demanding and stressful. How he responds and copes with these situations may determine whether or not he is successful in attaining the M. A. degree.

The purpose of this study is to examine the types of stressful situations that graduate students encounter, to delineate styles of coping with these situations, and to determine if these coping styles affect the outcome of a student's graduate-school career, i.e., completing the M. A. degree or dropping out of school.

Academic Performance as a Predictor of Achievement

The attrition rate among graduate students in the United States is very high. Less than 50% of those who begin graduate school with the intention of earning a doctorate actually persist long enough to do so (Creager, 1965). Although some admissions variables predict first-year graduate grades, most do not relate well to persistence in graduate school or to other long-term criteria (Willingham, 1974). One study found that the undergraduate grade-point average was consistently negatively related to a global faculty rating of graduate-student success six years after entering graduate school (Hackman, Wiggins, & Bass, 1970). In fact, Dawes (1975) argues that it is impossible

to predict later success in graduate school from the standard admissions criteria: Graduate Record Examination (GRE) scores, undergraduate cumulative grade-point average (CGPA), and scholastic recommendations. However, Willingham (1974) contends that a student's CGPA has obvious relevance as a predictor because it represents the same sort of behavior one is trying to forecast. He also reports that recommendations can be highly relevant, particularly in the sense that an informed person can judge a student's suitability for a particular graduate program.

Academic Performance and Personality Traits as Predictors of Achievement

Studies of performance on standardized achievement and personality tests as predictors of success in higher education have been conducted with conflicting results. In comparing the undergraduate and graduate CGPA scores, Miller's Analogy Test (MAT) scores, and GRE scores with the Minnesota Multiphasic Personality Inventory (MMPI) scores of 247 incoming doctoral students, Harvey (1976) found: 1) undergraduate CGPA scores correlated more highly in the successful students who received the degree than the unsuccessful students who dropped out 2) MMPI sub-scales showed greater intercorrelations for the successful group than for the unsuccessful group 3) MAT scores showed a greater relationship with graduate CGPA scores of the unsuccessful group than the successful group 4) the unsuccessful group had higher mean verbal GRE scores than the successful group. Harvey concluded that the successful group of students who graduated tended to have more similar test scores than the unsuccessful

group of dropouts, and this might be used to help predict successful graduate-school candidates from those who are not successful.

Morgan (1976) administered the Edwards Personal Preference Schedule (EPPS) to 217 undergraduate psychology students and compared these scores to the students' CGPA and American College Test (ACT) scores. He concluded that the EPPS achievement scale was significantly correlated with CGPA criterion for the total samples, but that the relationship between personality characteristics and academic achievement depended upon general level of intellectual ability. Therefore, a student's intellectual ability has some potential as an important control variable in the analysis of the relationship between personality traits and college achievement.

Fox (1975) used the undergraduate CGPA scores and California Psychological Inventory (CPI) scores of college freshmen to determine which personality traits as measured by CPI scores are predictive of academic achievement. He found that CPI scores on the scales of responsibility, intellectual efficiency, self-control, and capacity for status were significantly related to academic achievment, as measured by CGPA scores. The relationship between the CPI scales of sociability, flexibility, achievement via independence, and tolerance and the CGPA scores is not significant.

Stutler (1973) compared the ACT scores and State-Trait-Anxiety Inventory (STAI) scores of 1080 female undergraduate

students. Based on ACT scores and STAI responses respectively, subjects were divided into high, average, and low academic-ability groups and upper, middle, and lower anxiety groups. Stutler concluded that there is a difference only in the academic achievement of high and low anxiety students who have below-average academic ability.

In summary, the above studies indicate that standardized achievement test and personality test scores are significant in determining academic achievement. It was found that GRE scores correlate highly with graduates and MMPI sub-scales have greater intercorrelation with graduates than dropouts, while MAT scores have a greater relationship with the CGPA of dropouts than graduates. Also, the EPPS achievement scale and CPI scales of responsibility, intellectual efficiency, self-control, and capacity for status are significantly related to CGPA scores, while STAI anxiety scores are related to ACT scores in students who have below-average academic ability.

Personality Traits as Predictors of Achievement

The analysis of the relationship between personality characteristics alone and academic achievement has produced some clear-cut results. Crabbe (1972), in two different studies of undergraduate students, examined the relationship between academic maladjustment and general personal maladjustment. Various self-report measures of two variables, inadequacy as a student and general personal inadequacy, were highly intercorrelated.

One study examined the theoretical model derived from Drive

Theory and Trait-State-Anxiety Theory which posits that trait
anxiety influences state anxiety which influences achievement
(King, Heinrich, Stephenson, & Spielberger, 1976). Subjects were
83 students enrolled in two graduate education courses with
measures of A-Trait and A-State anxiety (assessed by the STAI)
and achievement (assessed by course exams) obtained in pretest,
midterm, and final exam periods. Results were: 1) A-Trait
is relatively stable over time and A-State is less stable 2)
subjects high in A-Trait anxiety are more likely than subjects
low in this attribute to respond with high levels of A-State
anxiety to situations that pose direct or implied threats to
self-esteem 3) A-State affects performance on learning tasks
with high levels of A-State facilitating performance on simple
tasks and contributing to performance decrements on complex tasks
4) A-State was more strongly associated with learning decrement
than A-Trait as indicated by A-State influencing performance,
and thus, achievement 5) A-Trait has a causal influence on
both A-State and achievement.

In a follow-up study by Heinrich (1976), using the same
measures as above and GRE scores as measures of intellectual
ability, it was concluded that A-Trait does influence A-State
anxiety, and the relationship between A-State and achievement
was ambiguous, with A-State influencing achievement in as many
cases as achievement influenced A-State. When intellectual
ability was considered, there was a tendency for A-Trait to
influence A-State and achievement, but only for high-ability
students.

Ritigstein (1975) investigated the relationship between defense mechanisms and levels of both A-Trait and aroused A-State anxiety as evoked by subjects' viewing a stressful film depicting psychological and physical harm. Defense mechanisms were assessed by using the Defense Mechanism Inventory (DMI), and anxiety levels were determined by the STAI. Conclusions were: 1) individuals high in A-Trait respond with higher levels of A-State only to situations involving threats to self-esteem, but they do not perceive physical dangers as any more threatening than individuals low in A-Trait 2) defense mechanisms and the A-State aroused by the film proved to be unrelated 3) the relation between the defense mechanisms and A-Trait proved to be greater than the relation between the defense mechanisms and the aroused A-State 4) levels of A-Trait bear a more important relation to problems of general adjustment than do levels of situations specific to A-State anxiety. An overall conclusion is that subjects were consistent in describing their chronic level of anxiety (A-Trait) over a period of time and irrespective of conditions. On the other hand, A-State was relatively transitory, which supports the findings of the previous study.

Twedt (1973) administered the Personality Research Form (PRF) and MMPI to two groups of subjects, freshmen persisters and dropouts. Persisters were characterized as nonimpulsive, conforming, mildly introverted students who were able to work independently and endure toward distant goals. Dropouts were characterized as impulsive, interpersonally sensitive people who

feel mildly estranged and alienated in their surroundings and attempt to deal with these difficulties through various defensive strategies. Lymun (1976) administered the Omnibus Personality Inventory (OPI) to 277 freshmen students and also found that, based on OPI scales, dropouts are more impulsive than persisters.

Smith (1976) studied the personality differences between persisters and withdrawers by administering the OPI to 339 college freshmen. Results indicated two groups: Persisters were characterized as being practical, autonomous, and goal-oriented, while dropouts were less practically oriented, more concerned with abstract ideas and interests, and better able to deal with uncertainty and ambiguity.

In summary, considering the theory that trait anxiety influences state anxiety which influences achievement, it can be concluded that: 1) trait anxiety has a causal influence on both state anxiety and achievement and is stable over time 2) state anxiety is transitory and is directly related to situation-specific performance 3) the relationship between defense mechanisms and trait anxiety is greater than that of defense mechanisms and state anxiety. It was concluded in two studies that the trait of impulsiveness is related to achievement, with persisters being characterized as nonimpulsive and dropouts characterized as impulsive.

Coping Styles as Predictors of Achievement

Rather than concentrating solely on the personality traits of potential graduate students to predict their success, an alternate approach involves focusing on the coping styles for

situations encountered while in graduate school which might contribute to success or failure. Although the recent controversy over the relative efficacy of personality traits versus situations is by no means settled, enough evidence has been accumulated (Mischel, 1973; Moos, 1973) to suggest the fruitfulness of studying situational variables. Rao (1974) found that achievers are assisted in their graduate endeavors by the presence of anxiety in various situations that is channelled towards goal attainment, while underachievers are adversely affected by the presence of anxiety they internalize which hinders progress.

In a study upon which this thesis is based, Kjerulff and Wiggins (1976) concluded that there are two types of graduate students, and that their responses to stress differ significantly. The more competent type of student (Type I) is characterized primarily by transsituational anxiety. This type of student does not blame either himself or others when confronted with difficult situations. The less competent type of student (Type II) tended to be intrapunitive, as Rao (1974) found in underachievers, for academic-failure situations and extrapunitive when encountering interpersonal problems. In addition, this type of student is extremely anxious when confronted with academic problems. He is not anxious in purportedly stressful situations for which there is no clear source of blame.

The first step in the study by Kjerulff and Wiggins (1976) was to define what was meant by a stressful situation. Since the major variables of interest were factors related to good or

poor performance and attrition from graduate school, they focused
primarily on situations that graduate students had experienced
which had made them consider dropping out of graduate school.
This is similar to the "critical incident technique" developed
by Flanagan (1954) in which the investigator searches for situa-
tions in which performance is crucially related to success or
failure in a particular occupation. Individual performance is
measured in these situations and related to personality traits.

Goldfried and D'Zurilla (1969) refined this technique for
use in predicting performance in freshmen college students. How-
ever, instead of focusing on highly crucial situations, they
used everyday problematic situations. They defined problematic
situations as specific, but meaningful situations with which
most individuals must cope in order to be considered competent.

This method for obtaining situations was used by Kjerulff
and Wiggins (1976), and the questionnaire they devised was used
in the present study. Subjects were asked how they would realis-
tically respond if they were to encounter each of 26 stressful
situations likely to occur in graduate school. Subjects re-
sponded to 11 situational reactions on a 7-point Likert-type
scale for each situation presented.

By using the above measuring instrument in the present study,
it was anticipated that these responses would indicate a signifi-
cant relationship between coping styles and academic success or
failure. Based on this premise, a predictive measure could be
devised and administered to incoming graduate students to ident-

ify students with poor coping styles, who would benefit from learning personal adjustment techniques as an integral part of their coursework.

Based on previously discussed research findings that personality traits are predictive of academic achievement and the assumption that coping styles are significantly related to personality traits, the following hypotheses were formulated:

I. There is a significant relationship between graduate students' coping styles for stressful situations and their academic achievement.

II. Competent graduate students (Type I) and less competent graduate students (Type II) have different coping styles for stressful situations.

Method

Subjects

In the spring of 1978, questionnaires were sent to the total population of graduates of the Clinical Psychology program at Eastern Illinois University (EIU) from 1973-1977. Twenty-two of these students returned the questionnaire and were included in Group I (graduates). Questionnaires were sent to the total population of students who were previously enrolled in the Clinical Psychology program from 1972-1977, but who left for one reason or another. Eleven of these students returned the questionnaire and were included in Group II (dropouts). Questionnaires were given to a total population of volunteers who are currently enrolled in graduate psychology courses at EIU. Twenty-three students returned the questionnaire and were included in Group III (graduate students).

Apparatus

Situations. The questionnaire devised by Kjerulff and Wiggins (1976) at the University of Illinois (U. of I.) in 1974 was employed. It consisted of 26 situations representing academic failure, interpersonal problems, and fate-failure (Appendix A). Seven situations (1, 2, 7, 8, 9, 11, and 17) represented types of academic failure and often contained an element of self-doubt such as "you begin to wonder if you are really cut out for graduate school." Six situations (4, 10, 12, 13, 22, and 24) represented types of interpersonal problems, and most of these involved faculty members who were in some way being hostile towards

the student or making inordinate work demands. Five situations
(6, 19, 21, 25, and 26) represented problems that were not clearly
anyone's fault, as an unexpected pregnancy, discovering that one
does not really like being a graduate student, or getting insig-
nificant results on one's master's thesis study. Situations 1, 2,
3, and 8 were modified for EIU subjects to better identify with,
by referring to EIU curriculum instead of that at the U. of I.

Ratings. For each situation, the subject was asked to rate,
on 11 7-point scales, how he would feel if he were in the situa-
tion (Appendix B). These reactions were termed coping styles and
were divided into three ratings, with higher scores on each scale
representing lower amounts of reactions. Scales 2, 3, and 4 asked
the subject to rate the degree to which he would feel angry at others,
angry with himself, and responsible for the situation. These were
designed to measure internal versus external attribution of re-
sponsibility and were termed Rating I (responsibility). Scales
8, 9, and 10 asked the subject to rate the number of times he had
experienced each situation previously, the liklihood with which
he would experience it at some time during his graduate career,
how realistic each situation was, and how clear each situational
description was. These scales were used primarily for the purpose
of assessing the adequacy of the situations themselves and were
termed Rating II (certainty). Scales 1, 5, 6, and 7 asked the
subject to rate the degree to which he would feel anxious, re-
jected, depressed, and discouraged respectively, if he were in
each of the situations. These scales were designed to assess the

degree to which the situations would be emotionally upsetting and were termed Rating III (anxiety).

Information Sheets. The questionnaire also contained questions to provide information about the subject's age, sex, marital status, number of children, number of years out of school, and program affiliation; and six questions designed to assess the student's professional self-confidence (Appendix C). The first of these asked the subject what he planned to do after graduation, or what the subject out of school was doing. He was given six alternatives designed to range from a professional end to a less professional end, including "post-doctoral studies" to "am not sure yet." The remaining questions allowed responses on 7-point scales. They were "To what degree would you like to become well-respected in your area of psychology?" (1 = not at all); "How likely is it that you will be doing original research of major importance in your area of psychology within the next five years?" (1 = extremely likely); "How competent are you as a graduate student in comparison to the other graduate students in your program?" (1 = extremely less competent); "How likely is it that you will drop out of graduate school before you receive an M. A.?" (1 = extremely unlikely); "How do you like being a graduate student?" (1 = I love it).

All questionnaires contained a cover letter outlining instructions (Appendix D). Groups I and II were mailed questionnaires with stamped, self-addressed envelopes for returning materials. Group III was personally supplied with questionnaires with directions for returning materials.

<u>Procedure</u>

After reviewing the study done by Kjerulff and Wiggins (1976),
further information was obtained in interviews with Dr. Kjerulff
at the Psychology Department at the U. of I., who gave permission
to use the questionnaire format which she and Dr. Wiggins de-
signed. Based on this research format, only those 18 situations
noted in the <u>Apparatus</u> section were included in Ratings I, II, and
III, and only those situations, of the 26 in the questionnaire,
were analyzed in this study.

A master list of graduates of the Clinical Psychology program
at EIU from 1973-1977 was obtained from the Psychology Department,
and Group I consisted of those subjects on the list who returned
the questionnaire. A list from the Psychology Department and a
list from the Graduate School office of dropouts enrolled in the
Clinical Psychology program at EIU from 1972-1977 was obtained,
and Group II consisted of those subjects on the list who re-
turned the questionnaire. Students enrolled in graduate psycho-
logy courses in the Psychology Department at EIU volunteered to
complete the questionnaire, and Group III consisted of those sub-
jects who returned the questionnaire.

Groups I and II were mailed the questionnaire including a
cover letter outlining instructions for completion and return of
materials in a stamped, self-addressed envelope. Subjects were
allowed a 10-day period to complete and return materials. Group
III was personally supplied with the questionnaire including a
cover letter outlining instructions for completion and return of

materials to the Psychology Department. Subjects were allowed a 3-day period to complete and return materials.

Using the information sheet, each subject's responses to Questions 1, 5, 8, 9, and 10 (age, number of years out of school, and professional self-confidence) were scored and recorded with each student's undergraduate CGPA scores, which were obtained from student files in the Psychology Department. In order to rate subjects within groups as Type I, those with competent coping styles, and Type II, those with less competent coping styles, responses to Questions 8, 9, and 10 were summed and ranked for each group. Kjerulff and Wiggins (1976) concluded in their study that these measures were significant in rating subjects as Type I or Type II within groups. The ranked scores within each group were then divided at the median, with those subjects scoring at or above, rated as Type I, and those scoring below as Type II.

Using the rating sheets, each subject's responses for Ratings I, II, and III (responsibility, certainty, and anxiety) for each of the 18 situations were scored. An average score for each rating of each of the three types of situations (academic problems, interpersonal problems, and fate-failure) was obtained, resulting in nine average scores for each subject, Types I and II, within each group.

Two statistical methods were used to analyze the above data:

1. For Group III, a Pearson Correlation was used to compare the five measures on the information sheet and the nine average

scores obtained from the rating sheets with each subject's CGPA

to determine a relationship between the measures and CGPA scores.

2. For Groups I and II, six t-tests were run to determine

differences between groups on the following measures: age,

number of years out of school, desire for professional respect,

plans to do research, self-rated competency as a graduate student,

and CGPA.

<u>Results</u>

<u>Hypothesis I</u>

Pearson Correlation results are summarized in Table 1.
For each subject in Group III, the scores of each variable were
compared with the subject's CGPA score. What resulted was one
within-group CGPA score being compared with one within-group
score for each variable. As indicated in Table 1, there was a
significant negative relationship between Desire for pro-
fessional respect and CGPA scores ($\underline{r}$ = -.3644, $\underline{p}$ = $<$ .05).
The other measures of age, number of years out of school, and
professional self-confidence were not significantly related to
CGPA scores ($\underline{p}$ = $<$ .05). None of the ratings of coping styles
for the three types of stressful situations were significantly
correlated with CGPA scores ($\underline{p}$ = $<$ .05) to indicate a significant
relationship between coping styles and academic achievement.

<u>Hypothesis II</u>

The $\underline{t}$-test scores are summarized in Table 2. For each sub-
ject in Groups I and II, the scores for each variable were com-
piled, and an average was derived from the scores. What result-
ed was one score for each variable for each subject in both
groups. Six $\underline{t}$-tests were used to analyze the differences be-
tween the two groups on each of the six variables, and a total
score was obtained. As indicated in Table 2, there were no
significant differences between Groups I and II ($\underline{p}$ = $<$ .05)
on which to base within-group differences in Group III.

TABLE 1

Cumulative grade-point averages correlated with

independent and dependent variables: Group III[a]

Variable	r
Academic problems/responsibility	.0105
Interpersonal problems/responsibility	.1088
Fate-failure/responsibility	-.0031
Academic problems/certainty	.0171
Interpersonal problems/certainty	-.2601
Fate-failure/certainty	.0193
Academic problems/anxiety	-.1919
Interpersonal problems/anxiety	-.3287
Fate-failure/anxiety	-.2834
Age	-.0071
Number of years out of school	99.0000[b]
Desire for professional respect	-.3644*
Plans to do research	.1960
Self-rated competency	-.2424

[a]$\underline{n}$ = 23

[b]$\underline{note}$: a correlation could not be computed.

*$\underline{p}$ = $<$ .05

TABLE 2

Means and standard deviations of dependent

variables: Groups I[a] and II[b]

| | Group I | | Group II | | |
	M	SD	M	SD	p
Age	28. 86	5.16	26.73	3.66	NS
Number of years out of school	2.50	1.54	1.82	1.83	NS
Desire for professional respect	6.32	1.04	5.91	1.81	NS
Plans to do research	4.50	2.22	5.82	1.72	NS
Self-rated competency	5.27	1.20	5.55	.93	NS
Cumulative grade-point average	3.01	.46	3.28	.47	NS

[a]$\underline{n}$ = 22

[b]$\underline{n}$ = 11

Discussion

This study was designed to investigate the use of significantly different coping styles for stressful situations among graduate students and their effect on academic achievement. The first segment of the study involved investigating a correlation between subject variables and CGPA scores, in order to determine which measures are significantly related to academic achievement. The second segment involved investigating differences between graduates and dropouts, based on subject variables, in order to determine a basis for dividing graduate students into Types I and II.

The results do not support the hypothesis that graduate students' coping styles affect their academic achievement. In analyzing Group III, a significant negative correlation was found between the measure of Desire for professional respect and CGPA scores. Interpreted, this indicates that as a student's CGPA increases, his desire for respect in his field decreases, or vice versa. However, there was no significant correlation between the subject's ratings of coping styles for stressful situations and their CGPA scores, suggesting that coping styles are not significantly related to academic achievement.

Considering that subjects' responses of Rating III (anxiety) for stressful situations were not significantly related to CGPA scores, this research does not support the Trait-State-Anxiety Theory (King et al., 1976) that trait anxiety influences state anxiety which influences achievement. None of the three

ratings of anxiety as a coping style for dealing with academic problems, interpersonal problems, or fate-failure situations were related to academic achievement to suggest they would influence success or failure in graduate school. The same results were obtained for Ratings I and II.

In analyzing Groups I and II, no significant differences were found between graduates and dropouts to establish sub-groups of Type I (competent) and Type II (less competent) graduate students in Group III. In order to confirm differences in graduate students, it was necessary to establish differences between graduates and dropouts. Since the results were negative, on the basis of Kjerulff and Wiggins' (1976) measures of prefessional self-confidence, a basis for delineating graduate students' coping styles was not identified for comparison.

This is contradictory to the study by Kjerulff and Wiggins (1976), which showed two distinct types of graduate students, based on variables of Desire for respect, Plans to do research, and Self-rated competency. They used a three-mode factor analysis method for computing data on a graduate-student population, compared to the t-test analysis used in this study, which may account for partial discrepancy between results.

A variable omitted from this study, but perhaps important in determining coping styles as predictors of academic achievement, is the trait of impulsiveness. Both Twedt (1973) and Lymun (1976) found that persisters are characterized as nonimpulsive, while dropouts are characterized as impulsive.

Another variable proven effective by Smith (1967) as a predictor of graduate academic achievement was peer ratings, instead of self-ratings, as used in this study. Smith found that peer ratings of intellective and non-intellective traits superior to both GRE scores and self-report ratings of intellective and non-intellective traits. In particular, the peer factor called "strength of character" as measured by the trait "quitting" contributed more to predictive accuracy than any other single predictor. In comparing peer ratings to self-report ratings, a study by Wiggins, Blackburn, and Hackman (1969) also showed that peer ratings demonstrated considerable more promise as a method for measuring graduate-school success. They concluded that the best of the peer predictors were the direct-behavior estimates of graduate success, as well as need-achievement and conscientiousness. The above studies appear to take into account the aspect of persistence as well as ability and personality traits.

Considering the contradictory results of this study, compared to others involving personality traits and coping styles as effective predictors of academic achievement, the following study is worth noting. Buckner (1976) investigated the effects of teaching personal adjustment techniques and study habits to undergraduate students. Subjects were 55 students divided into two groups, with the experimental group given the CPI as pre-post-test measures of personal adjustment. The Survey of Study Habits and Attitude (SSHA) was administered to each group as pre and

posttest measures of study habits, and the experimental group
was given 10-weeks training in personal adjustment techniques.
Results indicated no significant differences between groups in
the following: scores on all 18 of the CPI sub-scales, scores
on all seven sub-scales of the SSHA, and change in the pre to
posttest quality-point average. These results indicate that
personal factors alone do not influence achievement.

In summary, this study explored the effect of coping styles
in reaction to stressful situations on academic achievement.
Based on the results of the measures used, it was concluded that
graduate students' coping styles are not significantly related
to academic achievement, and there was not a significant dif-
ference between graduates and dropouts to determine a differ-
ence among graduate students for comparison of coping styles.

The study was limited by small sample size and the fact
that the subject-rated variables were not significant in
delineating coping styles within the graduate-student population.
Considerations for further research using the present assessment
device are: increasing sample size and expanding criterion
measures (personality traits and standardized achievement tests)
on which to rate types of subjects within groups.

References

Buckner, P. B. The effects of teaching personal adjustment techniques and study habits to college students as an integral part of course work. Dissertation Abstracts International, 1976 (Jan), 36 (7-A), 4339.

Crabbe, J. L. & Scott, W. A. Academic and personal adjustment. Journal of Counseling Psychology, 1972, 19, 58-64.

Creager, J. A. Predicting doctoral attainment with GRE and other variables. (Technical report #25). Washington, D. C.: Office of Scientific Personnel, National Academy of Sciences - National Research Council, 1965.

Dawes, R. M. Graduate admission variables and future success. Science, 1975, 187, 721-723.

Flanagan, J. C. The critical incident technique. Psychological Bulletin, 1954, 51, 327-358.

Fox, J. Non-intellective factors in the prediction of academic success of urban college freshmen. Dissertation Abstracts International, 1975 (Oct), 36 (4-A), 2019-2020.

Goldfried, M. R. & D'Zurilla, T. J. A behavioral-analytic model for assessing competence. In C. D. Spielberger (Ed.), Current Topics in Clinical and Community Psychology, Vol. 1, New York: Academic Press, 1969.

Hackman, J. R., Wiggins, N., & Bass, A. R. Prediction of long-term success in doctoral work in psychology. Educational and Psychological Measurement, 1970, 30, 365-374.

Harvey, A. A survey of the prediction of graduate studies success. Dissertation Abstracts International, 1976 (Apr), 36 (10-A), 6553.

Heinrich, D. An investigation of the interactive causal influence of trait and state anxiety on academic achievement. Dissertation Abstracts International, 1976 (Jun), 36 (12-A), 7948.

King, F. J., Heinrich, D. L., Stephenson, R. S., & Spielberger, C. D. An investigation of the causal influence of trait and state anxiety on academic achievement. Journal of Educational Psychology, 1976, 68, 3, 330-334.

Kjerulff, K. & Wiggins, N. Graduate student styles for coping with stressful situations. Journal of Educational Psychology, 1976, 68, 3, 247-254.

Lymun, M. H. Personality characteristics and background infor-
mation which differentiate freshmen college students as per-
sisters or dropouts. Dissertation Abstracts International,
1976 (May), 36 (11-B), 5532.

Mischel, W. Toward a cognitive social learning reconceptualiza-
tion of personality. Psychological Review, 1973, 80, 252-283.

Moos, R. Conceptualizations of human environments. American
Psychologist, 1973, 28, 652-665.

Morgan, R. Utilization of levels of intellectual ability as a
control variable in studies of nonintellectual factors in
academic achievement. Educational and Psychological Measure-
ment, 1976 (Sum), 36, (2), 465-472.

Rao, S. Academic achievement and anxiety. Psychological Studies,
1974, 19, (1), 38-42.

Ritigstein, J. The relationship of defense mechanisms to trait
anxiety and state anxiety in female college students.
Dissertation Abstracts International, 1975 (May), 35 (11-B),
5649-5650.

Smith, D. G. Personality differences between persisters and
withdrawers in a small women's college. Research in Higher
Education, 1976, 5, (1), 15-25.

Smith, G. M. Usefulness of peer rating of personality in educa-
tional research. Educational and Psychological Measurement,
1967, 17, 967-984.

Stutler, D. L. The interrelationship between academic achievement
of college freshmen women and measures of anxiety and ability.
Dissertation Abstracts International, 1973 (Nov), 34 (5-A), 2400.

Twedt, G. M. Personality and academic variables in college
attrition: a discriminant function analysis. Dissertation
Abstracts International, 1973 (Nov), 34 (5-B), 2321.

Wiggins, N., Blackburn, M., & Hackman, J. R. The prediction of
first-year graduate success in psychology: peer ratings.
Journal of Educational Research, 1969, 63, 81-85.

Willingham, W. W. Predicting success in graduate education.
Science, 1974, 183, 273-278.

APPENDIXES

APPENDIX A

Situations

SITUATIONS

1. You are scheduled to take your GRE exams for graduate school during your last semester of undergraduate school. It is a very busy semester for you, and you have little time to prepare for them. When you take them, you are uncertain of many of the answers, but do the best you can. During the first week of graduate school, you go to your advisor's office, and he says, "Your GRE scores do not meet this department's standards."

2. You are in graduate school and plan to enroll in a doctoral program afterwards. You have trouble thinking up an idea for a master's thesis, and by the end of your first year, you still have not come up with an idea you like. Your advisor urges you to begin work on the thesis as soon as possible. At the beginning of your fourth semester, you come up with an idea you like and get to work on it. Towards the end of the semester, you have nearly finished your thesis. Your advisor calls you into his office and tells you that he and other faculty members in your program have decided that you should leave graduate school with a terminal master's at the end of the semester.

3. It is the beginning of your second year of graduate school. You have just returned to EIU after spending the summer with your boyfriend/girlfriend who lives in another state. You have a teaching assistantship which you have not prepared for and are being pressured by your advisor to start your thesis this semester, which you also have not prepared for. You miss your boyfriend/girlfriend and are considering the possibility of dropping out of graduate school and moving back with him/her.

4. During your first year of graduate school you are given a research assistantship with a well-known psychologist in this department. He is very demanding and requires you to analyze a great deal of data in very short time periods. Because you spend so much time and energy in this position, you have very little time for anything else but coursework. During final exam week, he gives you a particularly difficult and time-consuming data analysis task and asks that it be done the day of your last final exam. You have several difficult exams to take and term papers due. You don't finish the data analysis task on time, but turn it in to him three days later. A week after that, another graduate student tells you that the faculty member is very angry with you for turning it in late and plans to write a bad evaluation of you.

5. During your second year of graduate school, you begin to realize that your relationship with your wife/girlfriend, husband/boyfriend has been deteriorating over the past year. Because of all the work you have to do, you do not have much time to spend with him/her. Because your work has higher priority, you resent the time demands he/she makes on ou. One day, he/she says to you, "Either you spend more time with me, or we're breaking up."

6. At the end of your first year, you finish up your master's thesis and turn it in. It has been hard for you to get it done because you have been only mildly interested in the topic you were researching. A few days after you complete your thesis, it occurs to you that you're not really looking forward to coming back to graduate school the following fall. There is no area of research you have found interesting, and school has been basically a drag for you the past year.

7. During your second year, you take a seminar course from the head of your program. The grade for the course is dependent upon one essay exam at the end of the semester. After the exam, you feel that you did fairly well and are expecting a "B". A few days later, your exam paper is returned. It has a "D" on it.

8. It is nearing the end of what should be your last year of graduate school. You have been having trouble coming up with a thesis topic and realize that you will need another semester to decide on a topic, run the study, and write it up.. You discuss this with the department head, and he says that because of financial problems, the department will not be able to offer you an assistantship for another semester. You have no other source of income.

9. You are taking a seminar in an area in which you feel very inadequate. The course requires that everyone give a talk about some related topic. You manage to choose the earliest and most basic topic available. You prepare very thoroughly. However, when you are giving the talk, you become very flustered, can't answer even easy questions, and lose part of your notes. You are very embarassed and wonder if you really belong in graduate school.

10. You are working on your master's thesis proposal. Everytime you bring it to your advisor, he criticizes it a great deal. You feel that his criticisms are inappropriate and thoughtless. On one occasion, he asks you to change specific sentences on one draft, and the next time you see him, he asks you to change them back to their original state. His criticisms seem to be simply an attempt to assert his authority.

11. During your first semester here, you take a seminar course taught by your advisor. Towards the middle of the semester, he calls you into his office and criticizes your "in class" discussion habits. Rather than helping you to speak in class, you feel misunderstood and reluctant to participate in class.

12. You enroll in a research-oriented course that you have been wanting to take for some time. The class divides into groups, each of which is to work on a particular research project. You and the people in your group design a study which the professor feels is very good and potentially publishable. Then someone joins your group whom you dislike. Your study requires that you spend up to fifteen hours a week with the people in your group. The tension of having to work with this person is disrupting all of your work in the group.

13. Your first year here, you are given the position of teaching assist-
    antship in Introductory Psychology. Throughout the year, you spend
    a great deal of time preparing your material for this course and
    making it interesting for the students. The students give you
    very high evaluations as a teacher. At the end of the year, the
    faculty members in your program evaluate you on your progress
    as a graduate student. You are told that you should have spent
    less time on Introductory Psychology and more time on research
    and your own coursework.

14. It is the middle of your third semester of graduate school.
    You have recently met someone with whom you are becoming deeply
    involved. You would like to spend most of your time with this
    person, as you have been doing, but your personal and professional
    lives aren't meshing too well. Your midterm grade in statistics
    was barely passing, you're behind in most of your coursework,
    and the master's thesis proposal your advisor expects in a month
    hasn't even been started.

15. It is the end of your first year of graduate school and you are
    trying to come up with an idea for a master's proposal. You are
    begining to feel very discouraged because you have not found any
    area of research you are interested in and still feel very re-
    moved from all the faculty members in your division, including
    your advisor.

16. You are having a great deal of problems on your master's thesis.
    Your subjects are not showing up, one of your assistants is not
    doing a good job running subjects, and the data is not coming
    out well. Everytime you see your advisor he simply says,
    "Everything is going fine with you, of course."

17. It is the beginning of what should be your last year of graduate
    school and you have not yet come up with a thesis idea. You con-
    sider various alternatives and finally come up with something
    you would like to do. However, whenever you talk with faculty
    members about your idea, they are either very lukewarm or have
    loads of suggestions. You begin to feel hopeless about the idea
    and the prospect of finishing graduate school.

18. During your first semester here you take a statistics course re-
    quired for your program. The course turns out to be way over
    your head. You fail several of the tests and end up with a "C"
    in the course. Everyone tells you that a "C" in graduate school
    is like failing, and you begin to wonder if you are really cut
    out for graduate school.

19. You are doing very well in graduate school and enjoy it. You are
    looking forward to getting an interesting academic position when
    you graduate. Your husband/boyfriend, wife/girlfriend is also in
    an academic field. With the tightening job market you realize that
    the chances of you both getting good jobs near each other are very
    small. You want to have the option of choosing the best position
    you are offered, but also want to stay with this person.

20. During your second year of graduate school, you work very hard on your master's thesis and also a follow-up study. You design the studies, run the experiments, collect the data and analyze it. None of the results turn out as predicted. Other people in your program are getting very significant results on their research projects. You feel that your master's thesis is a failure and nothing you work on seems to turn out as predicted.

21. During your second semester of graduate school you write a master's thesis proposal, and it is okayed by your advisor. You begin work on it the first semester of your second year. You ask some undergraduates you know to act as confederates for you in your study. They agree, but as the semester wears on, you keep having to ask them to work many more hours than you expected. You had not counted on a 20-percent "no show" rate from the Psychology 100 subject pool. At this point, you realize that the experiment is not really very interesting to you anymore, since you had designed it a year earlier.

22. During the course of your first year of graduate school you gradually begin to realize that your relationship with your program chairman is becoming more and more hostile. You dislike the way he relates to you and the other graduate students in your program. You know, from other graduate students' comments, that being honest with him would probably not help the situation. Towards the end of your first year, you begin to feel that the prospect of staying in the program headed by the present chairman looks very unsatisfying and distasteful.

23. It is nearing the end of what should be your last year of graduate school, and you are hurrying to finish up your thesis because your husband/wife is also finishing up, and you want to be able to look for jobs at the same time. But things are not going well with your thesis. You meet with your thesis committee to get your thesis proposal approved. Your committee tells you to develop a more detailed set of predictions. After the meeting you are alarmed because you feel that you cannot really make more detailed predictions and support them, not enough is known about the phenomenon in question.

24. It is the beginning of the first semester of your second year of graduate school. You have submitted a master's thesis proposal to your advisor and have asked him to give you feedback on specific aspects of the proposal. You would like to get the feedback as soon as possible so that you can begin collecting data. You go to see him several times, and he says he has not read it and does not have time to see you. After three weeks, you get it back with two sentences on it. "Needs more work. Come see me in a month." He is the only professor in the department knowledgable about your area of research.

25. Females: During your second year of graduate school, you discover
              that you are pregnant.
    Males: During your second year of graduate school, your wife/
              girlfriend discovers that she is pregnant.

26. During your second year of graduate school your husband/boyfriend,
    wife/girlfriend is offered a good position in another part of the
    country. He/she accepts the offer. You would like to stay and
    finish your degree but would also like to be with him/her.

APPENDIX B

Rating Scales

RATING SCALES

Suppose you were to encounter this situation.

1) How much anxiety would be provoked by the situation?
extreme anxiety 1 : 2 : 3 : 4 : 5 : 6 : 7 no anxiety at all

2) How much anger towards others would be provoked by the situation?
extreme anger 1 : 2 : 3 : 4 : 5 : 6 : 7 no anger at all

3) To what degree would you feel responsible for this situation?
totally responsible 1 : 2 : 3 : 4 : 5 : 6 : 7 not responsible at all

4) To what degree would you be angry with yourself?
extremely angry 1 : 2 : 3 : 4 : 5 : 6 : 7 not angry at all

5) To what degree would this situation provoke a feeling of rejection?
extremely rejecting 1 : 2 : 3 : 4 : 5 : 6 : 7 not rejecting at all

6) To what degree would this situation make you feel discouraged?
extremely discouraged 1 : 2 : 3 : 4 : 5 : 6 : 7 not discouraged at all

7) To what degree would this situation make you feel depressed?
extremely depressed 1 : 2 : 3 : 4 : 5 : 6 : 7 not depressed at all

8) Have you ever experienced this situation or one similar to it?
   1 Never
   2 Once
   3 Twice
   4 Three or four times
   5 Five or six times
   6 Seven or eight times
   7 Many times

9) How likely is it that you will encounter this situation or one
   similar to it while you are in graduate school?
extremely likely 1 : 2 : 3 : 4 : 5 : 6 : 7 extremely unlikely

10) How realistic (true to life) is the described situation?
extremely realistic 1 : 2 : 3 : 4 : 5 : 6 : 7 extremely unrealistic

11) How clear is this situational description?
very clear 1 : 2 : 3 : 4 : 5 : 6 : 7 very unclear

APPENDIX C

Information Sheets

INFORMATION SHEET

1. Age: _____

2. Sex: _____

3. Marital Status: (circle one)   Single   Married   Divorced   Widowed

4. Number of children: _____

5. What year did you graduate? _____   Quit graduate school? _____

6. Which program were you in? _____

7. What are you doing since graduating/quitting school?
   _____ A. Doctoral studies
   _____ B. Research and/or teaching in an academic institution
   _____ C. Research or other activities for another type of institution
   _____ D. Practice as a clinician
   _____ E. Non-professionally related activities
   _____ F. Other

8. To what degree would you like to become well-respected in your
   area of psychology? (circle one)
   Not at all 1 : 2 : 3 : 4 : 5 : 6 : 7 Very much

9. How likely is it that you are/will be doing original research
   in your area of psychology within the next 5 years?
   _____ 1. Extremely likely
   _____ 2. Likely
   _____ 3. Slightly likely
   _____ 4. Neither likely nor unlikely
   _____ 5. Slightly unlikely
   _____ 6. Unlikely
   _____ 7. Extremely unlikely

10. How competent were you as a graduate student in comparison to
    the other students in your program?
    _____ 1. Extremely less competent
    _____ 2. Less competent
    _____ 3. Slightly less competent
    _____ 4. As competent
    _____ 5. Slightly more competent
    _____ 6. More competent
    _____ 7. Extremely more competent

11. As a graduate student, how likely was it that you would have
    dropped out of graduate school before receiving an M. A.?
    _____ 1. Extremely unlikely
    _____ 2. Unlikely
    _____ 3. Slightly unlikely
    _____ 4. Neither likely nor unlikely
    _____ 5. Slightly likely
    _____ 6. Likely
    _____ 7. Extremely likely

12. How much did you like being a graduate student? (circle one)
    I loved it 1 : 2 : 3 : 4 : 5 : 6 : 7 I hated it

INFORMATION SHEET

1. Age: _____

2. Sex: _____

3. Marital Status: (circle one) Single Married Divorced Widowed

4. Number of children: _____

5. What year graduate student are you? _____

6. Which program do you belong to? _____

7. What do you plan to do after you graduate?
_____ A. Doctoral studies
_____ B. Research and/or teaching in a college or university
_____ C. Research or other professional activities for another
          type of institution
_____ D. Practice as a clinician
_____ E. Non-professionally related activities
_____ F. Am not sure yet

8. To what degree would you like to become well-respected in your
   area of psychology? (circle one)
   Not at all _1_ : _2_ : _3_ : _4_ : _5_ : _6_ : _7_ Very much

9. How likely is it that you will be doing original research of
   major importance to your area of psychology within the next 5 years?
_____ 1. Extremely likely
_____ 2. Likely
_____ 3. Slightly likely
_____ 4. Neither likely nor unlikely
_____ 5. Slightly unlikely
_____ 6. Unlikely
_____ 7. Extremely unlikely

10. How competent are you as a graduate student in comparison to
    the other students in your program?
_____ 1. Extremely less competent
_____ 2. Less competent
_____ 3. Slightly less competent
_____ 4. As competent
_____ 5. Slightly more competent
_____ 6. More competent
_____ 7. Extremely more competent

11. How likely is it that you will drop out of graduate school
    before you receive an M. A.?
_____ 1. Extremely unlikely
_____ 2. Unlikely
_____ 3. Slightly unlikely
_____ 4. Neither likely nor unlikely
_____ 5. Slightly likely
_____ 6. Likely
_____ 7. Extremely likely

12. How much do you like being a graduate student? (circle one)

APPENDIX D

Cover Letters

No. _____

Dear _____:

For research purposes, the Psychology Department is conducting a study to determine if graduate students' styles of coping with stressful situations influence their graduate school careers and graduation. We will appreciate your co-operation in this study by completing the following instructions. Please return the attached material in the enclosed, stamped envelope by Monday, March 20, 1978. This questionnaire is identified by number only to insure return of materials. All information is confidential.

INSTRUCTIONS:

1. Information Sheet: Please fill in completely.

2. Situation and Scale Sheets: After reading each situation, please record your reactions by circling one number, 1-7, on the scale sheet provided for each situation. It is important that you complete each scale, 1-11, for each of the 26 situations.

Thank you for your interest and co-operation in this study. Check the box below if you wish to have information about results after June 1978.

☐   Sincerely yours,

Randall H. Best, Ph. D.

No. _____

Dear _____:

For research purposes, the Psychology Department is conducting a study to determine if graduate students' styles of coping with stressful situations influence their graduate school careers and graduation. We will appreciate your co-operation in this study by completing the following instructions. Please return the attached material to Dr. Best's mailbox by Friday, March 3, 1978. This questionnaire is identified by number only to insure return of materials. All information is confidential.

INSTRUCTIONS:

1. Information Sheet: Please fill in completely.

2. Situation and Scale Sheets: After reading each situation, please record your reactions by circling one number, 1-7, on the scale sheet provided for each situation. It is important that you complete each scale, 1-11, for each of the 26 situations.

Thank you for your interest and co-operation in this study. Check the box below if you wish to have information about results after June 1978.

☐   Sincerely yours,

                                         Randall H. Best, Ph. D.