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THE RELATIONSHIP BETWEEN EGO IDENTITY STATUS AND
STRESSORS, STATE-TRAIT ANXIETY AND DEPRESSION
AMONG BACCALAUREATE NURSING STUDENTS
AND
THE EFFECTIVENESS OF A STRESS MANAGEMENT PROGRAM
IN REDUCING STATE ANXIETY AND DEPRESSION
OF BACCALAUREATE NURSING STUDENTS

by

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The purposes of this two phase study were (1) to determine if there was a significant difference in stressors, state-trait anxiety and depression among nursing students of different identity statuses and (2) to design and evaluate the effectiveness of a stress management program in reducing state anxiety and depression experienced by nursing students.

The subjects participating in this study were 42 sophomore and 34 senior baccalaureate nursing students in a private sectarian liberal arts college. During Phase I, the Ego Identity Status Interview, the State-Trait Anxiety Inventory, the IPAT Depression Scale, and the Critical Incident Schedule were administered. The statistical analyses employed were ANOVA with a repeated measures design, and factorial ANOVA for unequal frequencies in sub-classes. Post-hoc comparisons were made using Scheffe's test of differences between means. The level of signifi-

cance chosen was .05. In Phase II, subjects were randomly assigned to the experimental and control groups. The experimental group received the entire stress management program, whereas the control group only received the education phase of the program. Following the completion of the program, the State-Trait Anxiety Inventory and the IPAT Depression Scale were administered. The statistical analysis employed was ANOVA, with a significance level of .05.

There was no significant difference in stressors among students of different identity statuses. In the area of sex role, moratorium students experienced significantly more state-trait anxiety than achieved and foreclosed subjects. In the areas of religion and occupation, moratorium students felt significantly more depression than achieved subjects; and in the areas of sex role and sexual intercourse, moratorium students reported significantly more depression than achieved and foreclosed students. Students who received the stress management program experienced significantly less anxiety and depression than did subjects who did not receive the program. Additional findings are noted, which relate to level of student and importance of each content area in terms of defining the student's identity.

Possible implications of the results of the study for nursing education and further research are also discussed.

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VITA

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TABLE OF CONTENTS

	<u>Page</u>
ACKNOWLEDGMENTS	ii
VITA	iii
LIST OF TABLES	vii
CONTENTS OF APPENDICES	xiv
 Chapter	
I. INTRODUCTION	1
Background of the Study	1
Statement of the Problem	2
Purpose and Significance of the Study	3
Definition of Terms	4
Limitations of the Study	7
Summary	8
II. REVIEW OF THE LITERATURE	9
Stress Models	9
Stressors, Anxiety and Depression in Nursing Students	18
Relationship between Ego Identity Status and Stress	21
Theoretical Framework on Ego Identity Status	21
Relevant Research	23
Cognitive Ability	24
Fear of Success	32
Adjustment to College	33
Intrapsychic Growth	33
Social Support and Stress	34
Emotional Stability and Stress	34
Stress Management Program	38
Cognitive-Restructuring	39
Relaxation Training	41
Biofeedback	42
Systematic Desensitization	43
Stress Management Programs for Student Nurses	44

TABLE OF CONTENTS (cont'd)

	<u>Page</u>
The Need for Stress Management Programs Designed for Student Nurses.	45
Summary.	47
III. METHOD	
Phase I.	49
Hypotheses.	49
Selection of Subjects	50
Instrumentation	52
Ego Identity Status Interview.	52
State-Trait Anxiety Inventory.	53
Institute for Personality and Ability Testing Depression Scale.	54
Critical Incident Schedule	56
Procedure	56
Pilot Study.	57
Training of Interviewer and Judges	57
Administration and Scoring of Instruments	59
Design and Statistical Analysis	61
Summary	63
Phase II	64
Hypotheses.	64
Selection of Subjects	64
Instrumentation	65
Procedure	65
Design and Statistical Analysis	76
Summary	76
IV. RESULTS.	78
Hypotheses	78
Additional Findings.	158
Summary.	185
V. CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS.	190
Conclusions of the Study	190
Implications	198
Recommendations for Further Research	200
Summary.	201
VI. SUMMARY.	203

TABLE OF CONTENTS (cont'd)

	<u>Page</u>
REFERENCES	210
APPENDIX A	222
APPENDIX B	226
APPENDIX C	231
APPENDIX D	246
APPENDIX E	251
APPENDIX F	254
APPENDIX G	257

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1. Models of Stress.	10
2. Summary of Empirical Results Regarding Ego Identity Status in College Women.	25
3. Psychodynamic Aspects of Ego Identity Statuses in College Women.	28
4. Stress Management Program	67
5. Mean and Standard Deviation of the Stressor Scores of Sophomores and Seniors for Ego Identity: Religious Beliefs	80
6. Analysis of Variance with Repeated Measures Design of the Stressor Scores of Sophomores for Ego Identity: Religious Beliefs	82
7. Analysis of Variance with Repeated Measures Design of the Stressor Scores of Seniors for Ego Identity: Religious Beliefs	83
8. Mean and Standard Deviation of the Stressor Scores for Ego Identity: Occupational Plans.	84
9. Analysis of Variance with Repeated Measures Design of the Stressor Scores for Ego Identity: Occupational Plans	86
10. Mean and Standard Deviation of the Stressor Scores of Sophomores and Seniors for Ego Identity: Sex Role Attitudes.	87
11. Analysis of Variance with Repeated Measures Design of the Stressor Scores of Sophomores for Ego Identity: Sex Role Attitudes.	89

LIST OF TABLES (cont'd)

<u>Table</u>	<u>Page</u>
12. Analysis of Variance with Repeated Measures Design of the Stressor Scores of Seniors for Ego Identity: Sex Role Attitudes.	90
13. Mean and Standard Deviation of the Stressor Scores for Ego Identity: Personal Standards for Participation in Sexual Intercourse	91
14. Analysis of Variance with Repeated Measures Design of the Stressor Scores for Ego Identity: Personal Standards for Participation in Sexual Intercourse	93
15. Mean and Standard Deviation of the Stressor Scores of Sophomores and Seniors for Ego Identity: Political Attitudes	94
16. Analysis of Variance with Repeated Measures Design of the Stressor Scores of Sophomores for Ego Identity: Political Attitudes	96
17. Analysis of Variance with Repeated Measures Design of the Stressor Scores of Seniors for Ego Identity: Political Attitudes	97
18. Mean and Standard Deviation of the Trait Anxiety Scores of Sophomores and Seniors for Ego Identity: Religious Beliefs	99
19. Analysis of Variance of the Trait Anxiety Scores for Ego Identity: Religious Beliefs	101
20. Mean and Standard Deviation of the Trait Anxiety Scores for Ego Identity: Occupational Plans	102
21. Analysis of Variance of the Trait Anxiety Scores for Ego Identity: Occupational Plans.	103

LIST OF TABLES (cont'd)

<u>Table</u>	<u>Page</u>
22. Mean and Standard Deviation of the Trait Anxiety Scores of Sophomores and Seniors for Ego Identity: Sex Role Attitudes	104
23. Analysis of Variance of the Trait Anxiety Scores for Ego Identity: Sex Role Attitudes	106
24. Scheffe's Test of Differences Between Mean Trait Anxiety Scores for Ego Identity: Sex Role Attitudes	107
25. Mean and Standard Deviation of the Trait Anxiety Scores for Ego Identity: Personal Standards for Participation in Sexual Intercourse	108
26. Analysis of Variance of the Trait Anxiety Scores for Ego Identity: Personal Standards for Participation in Sexual Intercourse	109
27. Mean and Standard Deviation of the Trait Anxiety Scores of Sophomores and Seniors for Ego Identity: Political Attitudes	110
28. Analysis of Variance of the Trait Anxiety Scores for Ego Identity: Political Attitudes	112
29. Mean and Standard Deviation of the State Anxiety Scores of Sophomores and Seniors for Ego Identity: Religious Beliefs	114
30. Analysis of Variance of the State Anxiety Scores for Ego Identity: Religious Beliefs	115
31. Mean and Standard Deviation of the State Anxiety Scores for Ego Identity: Occupational Plans	117
32. Analysis of Variance of the State Anxiety Scores for Ego Identity: Occupational Plans	118

LIST OF TABLES (cont'd)

<u>Table</u>	<u>Page</u>
33. Mean and Standard Deviation of the State Anxiety Scores of Sophomores and Seniors for Ego Identity: Sex Role Attitudes	119
34. Analysis of Variance of the State Anxiety Scores for Ego Identity: Sex Role Attitudes	121
35. Scheffe's Test of Differences Between Mean State Anxiety Scores for Ego Identity: Sex Role Attitudes	122
36. Mean and Standard Deviation of the State Anxiety Scores for Ego Identity: Personal Standards for Participation in Sexual Intercourse	123
37. Analysis of Variance of the State Anxiety Scores for Ego Identity: Personal Standards for Participation in Sexual Intercourse	124
38. Mean and Standard Deviation of the State Anxiety Scores of Sophomores and Seniors for Ego Identity: Political Attitudes	125
39. Analysis of Variance of the State Anxiety Scores for Ego Identity: Political Attitudes	127
40. Mean and Standard Deviation of the Depression Scores of Sophomores and Seniors for Ego Identity: Religious Beliefs	129
41. Analysis of Variance of the Depression Scores for Ego Identity: Religious Beliefs	130
42. Scheffe's Test of Differences Between Mean Depression Scores for Ego Identity: Religious Beliefs.	131
43. Mean and Standard Deviation of the Depression Scores for Ego Identity: Occupational Plans.	133

LIST OF TABLES (cont'd)

<u>Table</u>	<u>Page</u>
44.	Analysis of Variance of the Depression Scores for Ego Identity: Occupational Plans. 134
45.	Scheffe's Test of Differences Between Mean Depression Scores for Ego Identity: Occupational Plans 135
46.	Mean and Standard Deviation of the Depression Scores of Sophomores and Seniors for Ego Identity: Sex Role Attitudes. 136
47.	Analysis of Variance of the Depression Scores for Ego Identity: Sex Role Attitudes 138
48.	Scheffe's Test of Differences Between Mean Depression Scores for Ego Identity: Sex Role Attitudes 139
49.	Mean and Standard Deviation of the Depression Scores for Ego Identity: Personal Standards for Participation in Sexual Intercourse 140
50.	Analysis of Variance of the Depression Scores for Ego Identity: Personal Standards for Participation in Sexual Intercourse 141
51.	Scheffe's Test of Differences Between Mean Depression Scores for Ego Identity: Personal Standards for Participation in Sexual Intercourse. 142
52.	Mean and Standard Deviation of the Depression Scores of Sophomores and Seniors for Ego Identity: Political Attitudes 144
53.	Analysis of Variance of the Depression Scores for Ego Identity: Political Attitudes. 145

LIST OF TABLES (cont'd)

<u>Table</u>	<u>Page</u>
54. Mean and Standard Deviation of the State Anxiety Scores of Each Treatment Group at Pretesting and Posttesting. . . .	147
55. Analysis of Variance for the State Anxiety Scores at Pretesting.	149
56. Analysis of Variance for the State Anxiety Scores at Posttesting	150
57. Correlated T-Tests for the Mean State Anxiety Scores of Each Treatment Group at Pretesting and Posttesting. . . .	151
58. Mean and Standard Deviation of the Depression Scores of Each Treatment Group at Pretesting and Posttesting	153
59. Analysis of Variance for the Depression Scores at Pretesting	155
60. Analysis of Variance for the Depression Scores at Posttesting.	156
61. Correlated T-Tests for the Depression Scores of Each Treatment Group at Pretesting and Posttesting.	157
62. Percentage by Rank of Each Ego Identity Content Area for Sophomore and Senior Students	159
63. Kruskal-Wallis One-Way Analysis of Variance for Ranking of Religious Beliefs by Subjects in Each Ego Identity Status	161
64. Kruskal-Wallis One-Way Analysis of Variance for Ranking of Religious Beliefs by Sophomores and Seniors in Each Ego Identity Status	163
65. Kruskal-Wallis One-Way Analysis of Variance for Ranking of Occupational Plans by Subjects in Each Ego Identity Status	164

LIST OF TABLES (cont'd)

<u>Table</u>	<u>Page</u>
66. Kruskal-Wallis One-Way Analysis of Variance for Ranking of Sex Role Attitudes by Subjects in Each Ego Identity Status	165
67. Kruskal-Wallis One-Way Analysis of Variance for Ranking of Sex Role Attitudes by Sophomores and Seniors in Each Ego Identity Status	167
68. Kruskal-Wallis One-Way Analysis of Variance for Ranking of Personal Standards for Participation in Sexual Intercourse by Subjects in Each Ego Identity Status	168
69. Kruskal-Wallis One-Way Analysis of Variance for Ranking of Political Attitudes by Subjects in Each Ego Identity Status	169
70. Kruskal-Wallis One-Way Analysis of Variance for Ranking of Political Attitudes by Sophomores and Seniors in Each Ego Identity Status	171
71. Frequency of Subjects in Ego Identity Statuses: Sex Role Attitudes	173
72. Correlated T-Tests for Mean Stressor Scores	178
73. Scheffe's Test of Differences Between Mean Depression Scores of Groups, Based on Curricular Level and Ego Identity Status: Religious Beliefs	182
74. Scheffe's Test of Differences Between Mean Depression Scores of Groups, Based on Curricular Level and Ego Identity Status: Sex Role Attitudes.	183

CONTENTS OF APPENDICES

	<u>Page</u>
APPENDIX A Consent Form	222
APPENDIX B Demographic Data	226
I. Demographic Questionnaire	227
II. Demographic Data.	229
APPENDIX C Ego Identity Status Measurement.	231
I. Ego Identity Status Interview	232
II. Manual for Ego Identity Status Types.	235
APPENDIX D State-Trait Anxiety Inventory.	246
I. State Anxiety Scale (Form X-1).	247
II. Trait Anxiety Scale (Form X-2).	249
APPENDIX E Institute for Personality and Ability Testing Depression Scale	251
APPENDIX F Measurement of Identified Stressors.	254
I. Critical Incident Schedule.	255
II. Types of Identified Stressors	256
APPENDIX G Stress Management Program Objectives and Learning Activities	257

CHAPTER I

INTRODUCTION

In the past decade stress and stress management have emerged as topics which warrant serious analysis and study. Researchers within the collegiate environment have been in the forefront of the investigation. They have instituted programs for teaching students to cope with examinations, public speaking and interpersonal relationships (e.g., Deffenbacher & Hahnloser, 1979; Glass, Gottman & Schmurak, 1976; Hussian & Lawrence, 1978; Meichenbaum, 1972; Pavlou, Hartings & Davis, 1978). But little concern has been shown for developing stress management programs designed for student nurses, even though stress is serious and has negative repercussions for students in terms of emotional well-being and the care given to patients.

Background of the Study

College students are usually in late adolescence, which puts them in the stage of ego identity conflict (Erikson, 1963). They have attributed stress to academic, social and personal stressors. In addition to these stressors, nursing students have identified a fourth area of stress, clinical practice (Fox, Diamond, Walsh, Knapf &

Hodgin, 1963). As a result of all of these stressors, student nurses experience high levels of anxiety and depression (Gunter, 1969; Krug, Scheier & Cattell, 1976). Learning and clinical performance are therefore hampered (Dye, 1974; Meyers & Martin, 1974).

One would anticipate that nursing students would be in varying stages of ego identity development. If this were so, then they might appraise situations and their coping abilities differently. This in turn could lead to a significant difference in the stressors which they identify and in the levels of anxiety and depression which they exhibit. Even though it does not seem feasible to totally eliminate anxiety and depression due to the nature of the nursing profession, one could hope to reduce the level of these negative psychological responses through a stress management program.

Statement of the Problem

The specific research questions which were of concern in the study are as follows:

1. Is there a significant difference in stressors, state-trait anxiety and depression among sophomore and senior baccalaureate nursing students of different ego identity statuses?
2. Would a stress management program be effective in reducing state anxiety and depression

experienced by sophomore and senior baccalaureate nursing students?

Purpose and Significance of the Study

The majority of identity status research on undergraduate college females has not focused on the relationship between stress and ego identity status. Of those that have, none investigated relationships between ego identity status, stressors, state anxiety, or depression. The purpose of Phase I of the study was to do so.

Stress involved in nursing education and practice has been of interest to few investigators. Jones (1978) and Nehren and Killen (1967) have recommended that programs be instituted to assist nursing students in coping with personal problems related to identity crisis, as well as the stress inherent in nursing education. In spite of this fact, nursing educators have made minimal efforts to assist students in coping with stress. The purpose of Phase II of the study was to develop and assess a stress management program designed for student nurses.

The findings of this study should be of particular interest to nursing educators since anxiety and depression experienced by student nurses has detrimental effects both on learning and on interpersonal relationships with clients and colleagues. Nursing educators need to better understand the problems faced in ego identity crisis so that student-faculty relationships can be improved and the student's

personal development fostered. Faculty could provide additional emotional support to those students experiencing developmental crisis and counsel them concerning identity issues. Nursing educators also need to implement interventions aimed at assisting students to cope with the stress inherent in nursing education.

Definition of Terms

For the purpose of clarity, the dependent and independent variables are operationally defined.

Stressors

Stressors are identified by nursing students in the Critical Incident Schedule (Fox et al., 1963). They are classified as academic, social, personal or clinical stressors. Academic stressors are events related to the classroom and include evaluation of academic progress; interpersonal relationships with academic instructors; and pressures involved in examinations, schedules, papers and homework assignments. Social stressors are events related to extraprofessional relationships and extra-academic activities. They involve family, interpersonal relationships with boyfriends, extracurricular activities, and interpersonal relationships with other students and friends. Personal stressors are events involving personal values and the emotional and physical state of students. They include self-image, professional image, adjustment to school,

financial problems, future plans, health, and loss or damage of personal property. Clinical stressors are events related to the delivery of health care and include initial clinical experiences, caring for clients, interpersonal relationships with the clinical staff, interpersonal relationships with clinical instructors, formal and informal clinical evaluation, and the quality of care clients generally receive.

State-Trait Anxiety

State anxiety is the score on Form X-1 and trait anxiety is the score on Form X-2 of the State-Trait Anxiety Inventory (Spielberger, Gorsuch & Lushene, 1970).

Depression

Depression is the score on the Institute for Personality and Ability Testing Depression Scale (Krug & Laughlin, 1976).

Curricular Level

The curricular level of the student refers to whether the student is in her sophomore or senior year within the nursing curriculum.

Ego Identity Status

The ego identity statuses; achievement, foreclosure, moratorium and diffusion, are derived from responses in the Ego Identity Status Interview (Marcia, 1964, 1966; Matteson, 1974; Schenkel & Marcia, 1972). The statuses are based on

the criteria of crisis and commitment in five identity content areas: occupational plans, religious beliefs, political attitudes, sex role attitudes and personal standards for participation in sexual intercourse. Crisis is defined as a decision making period involving the questioning of choices and beliefs in an attempt to select from alternatives, and commitment is defined as the amount of personal investment in chosen alternatives (Marcia, 1964, 1966; Matteson, 1974; Schenkel & Marcia, 1972).

Achievement Status

Students in the ego identity status of achievement have experienced a crisis and are committed to an occupation and ideology.

Foreclosure Status

Students in the ego identity status of foreclosure have not experienced a crisis but they do have firm commitments which are usually parentally determined.

Moratorium Status

Students in the ego identity status of moratorium are currently experiencing a crisis and therefore have vague commitments.

Diffusion Status

Students in the ego identity status of diffusion are characterized by the absence of a sense of struggle and by the lack of attempts to make commitments.

Stress Management Program

The stress management program consists of three phases: (a) education, (b) training and (c) application. In the education phase, stress is conceptualized in terms of the Schachter and Singer (1962) arousal-attribution model. The training and application phases incorporate cognitive-restructuring, relaxation training, biofeedback and systematic desensitization.

Limitations of the Study

The following major limitations of the study arise from problems common to this type of research, but every attempt was made to guard against them:

1. The results of this study cannot be generalized to all nursing students, since the subjects in the study were female, sophomore and senior baccalaureate nursing students at a small private sectarian liberal arts college.
2. Subjects, aware of the fact that they were participating in an experiment, might have reacted with unusual effort.
3. Every attempt was made to minimize error variance by selecting reliable measures and controlling test conditions.
4. Two extraneous variables, differential selection of subjects and selection-maturation interaction, could not be controlled due to the

fact that manipulation of the independent variables was not feasible. This could have posed a threat to the internal validity of Phase I of the study.

Summary

The purposes of this two phase study were (1) to determine if there was a significant difference in stressors, state-trait anxiety and depression among sophomore and senior baccalaureate nursing students of different ego identity statuses and (2) to design and evaluate the effectiveness of a stress management program in reducing state anxiety and depression experienced by sophomore and senior baccalaureate nursing students. This study was designed to investigate an area of importance to nursing in which very little research had been conducted.

In subsequent chapters there will be a review of relevant research focusing on stress models, stressors, anxiety and depression in nursing students, the relationship between ego identity status and stress, and stress management programs. The methods used in the study will be presented, and shall include a discussion of the hypotheses, subjects, instrumentation, procedure, and design and statistical analysis. Findings of the study will be reported; and the conclusions of the study, implications, and recommendations for further research shall be delineated.

CHAPTER II

REVIEW OF THE LITERATURE

In order to establish a framework within which the variables of concern in this study could be discussed, it was necessary to examine various models which have been developed to explain the concept of stress. With this goal in mind, the review of the literature will first focus on stress models. Stressors, anxiety and depression in nursing students, the relationship between ego identity status and stress, and stress management programs are the areas of research reviewed in this chapter.

Stress Models

What is stress? Several researchers have developed models of stress. Table 1 summarizes five commonly used models which are representative of different points of view. According to the arousal-attribution model (Schachter & Singer, 1962), stress consists of physiological arousal which occurs in response to stimuli in the internal and external environment. When an individual experiences stress, he/she attempts to identify the source of the arousal. Identification of the attributional source or stressor is dependent upon plausibility, salience, and

Table 1
Models of Stress

Model	Stress	Stressor	Coping
Arousal-Attribution (Schachter and Singer, 1962)	Biological arousal such as muscular tension, peripheral vasoconstriction, increased sweat gland activity, and shallow breathing.	Perceived explanation for arousal based on objective environmental conditions and causal search. The person searches the environment for a causal explanation of arousal if arousal ambiguously created. Selection of attributional source influenced by plausibility, salience, and motivation. Correct attribution or misattribution influences psychological and behavioral responses.	Mastery of problem depends in part upon how it is defined by the person.

Table 1 (cont'd)

Model	Stress	Stressor	Coping
Social-Psychological (Mechanic, 1962)	Discomforting psychological response due to challenging situations, and reactions to failure to meet challenges effectively.	Situation producing discomforting psychological responses. Whether or not a situation produces such responses depends upon ability and capacity of person, skills and limitations resulting from group practices, means provided by social environment, and norms defining use of means.	Use of adaptive devices consisting of thoughts and behavior relevant to situation demands.

Table 1 (cont'd)

Model	Stress	Stressor	Coping
Psychological (Janis, 1954)	<p>Psychological response to disaster. Three phases of danger: threat (perceives impending danger), danger-impact (confronted with physical danger), danger-of-victimization (perceive losses). Five types of reactions associated with danger phase: apprehensive avoidance (denial), stunned immobility, apathy and depression, dependency, aggressive irritability. Two factors determine which response occurs: perceived characteristic of stimuli and situational-predispositional determinants.</p>	Natural disaster or personal crisis.	This model does not deal with coping.

Table 1 (cont'd)

Model	Stress	Stressor	Coping
<p>Psycho-somatic (Alexander, 1950; Dunbar, 1947; Grinker & Spiegel, 1945)</p>	<p>Subjective feelings of anxiety and discomfort leading to alterations in physiological processes which are produced by conflicts.</p>	<p>Unusual condition or demand of life that is dramatic and noxious.</p>	<p>Handle conflicts directly or in assertive fashion.</p>
<p>Biochemical (Selye, 1956)</p>	<p>A state manifested by a specific physiological and biochemical syndrome (General Adaptation Syndrome).</p>	<p>Traumatic and noxious stimuli physically assaulting tissue system.</p>	<p>The triggering of a General Adaptation Syndrome consisting of three steps: (a) alarm reaction (general mobilization of biologic system), (b) stage of resistance (internal responses stimulating tissue defense), and (c) exhaustion.</p>

motivation. If the situation is appraised as undesirable, anxiety and/or depression will be experienced. In an attempt to reduce both the physiological arousal and negative psychological responses to the identified stressor, the individual may use a variety of coping strategies that are well established in his/her repertoire. Mastery of the problem will depend in part upon how it is defined by the person.

The social-psychological model (Mechanic, 1962) views stress as a discomforting psychological response caused by failure to meet a challenging situation effectively. Such a failure is due to a person's lack of ability and capacity, or the inability of the social environment to provide a means for dealing with the situation. Effective coping is seen as the use of adaptive devices consisting of thoughts and behaviors relevant to situation demands.

In Janis' (1954) psychological model, stress is a psychological response to a disaster situation. Depending upon the perceived characteristic of the stimuli and situational-predispositional determinants, the person experiences either denial, immobility, apathy and depression, dependency, or aggressive irritability in response to natural disasters or personal crisis. This model does not deal with the dimension of coping.

According to the psychosomatic model (Alexander, 1950; Dunbar, 1947; Grinker & Spiegel, 1945), stress is a

subjective feeling of anxiety and discomfort leading to alterations in physiological processes. The stressor is an unusual condition or demand of life. Effective coping is seen as the handling of conflicts in an assertive fashion.

Selye's (1956) biochemical model views stress as a specific physiological and biochemical syndrome. A noxious stimuli physically assaulting the tissue system triggers a general adaptation syndrome consisting of an alarm reaction, resistance and exhaustion.

In order to select a model appropriate for this study several dimensions had to be considered, namely the definition of stress, stressors and coping. Mikhail (1981) has pointed out the need to conceptualize stress from both a psychological and physiological perspective. The social-psychological and psychological models limit consideration to psychological processes, and the biochemical model deals with physiological responses. Only the psychosomatic and Schachter and Singer (1962) arousal-attribution models incorporate biological and psychological reactions. However, the psychosomatic model is based on the unjustified assumption that situations perceived as stressful will always result in detrimental physiological and psychological consequences.

It is essential to choose a model for this study that is not concerned exclusively with traumatic events whose occurrence is rare, since nursing students in previous

research have identified a variety of stressors in their everyday lives that are not necessarily dramatic and unusual. All the models except the social-psychological model and the Schachter and Singer (1962) arousal-attribution model are concerned with traumatic situations.

The dimension of coping is also important in this study, since nursing students will be taught new coping strategies in the stress management program. The psychological model does not deal with this concept, and the biochemical model focuses only on physiological adaptation to stress. The psychosomatic model suggests the need to teach people to be more assertive when confronted with a conflict, whereas the social-psychological model focuses on the desirability of acquiring adaptive devices. The Schachter and Singer (1962) arousal-attribution model sees coping as a function of problem definition. It is felt that anxiety and/or depression will be experienced if the situation is appraised as undesirable. This view supports the teaching of coping skills aimed at modifying cognitions that elicit and maintain anxiety and depression.

A number of studies support the contention of the Schachter and Singer (1962) arousal-attribution model that psychological responses to stress are contingent upon appraisal of the situation. Depression and anxiety have been found to be related to undesirable events but not to positive life changes (Mueller, Edwards & Yarvis, 1977;

vinokur & Selzer, 1975). Several studies have pointed out the importance of cognitive mediation in the development of depression and anxiety. Hammer and Cochran (1981) found that depressed college students were more likely to report greater upset and more uncertainty in their lives as a result of stress than were nondepressed groups. Hammer, Krantz, and Cochran (1981) noted that perceived low control over the causes of stressful life events acted as a cognitive mediator in depressive reactions. McAdoo (1969) investigated the effects of negative feedback and student confidence on state anxiety. He observed that the subject's confidence acted as a cognitive mediator in determining level of state anxiety after exposure to the stressor. Thus it appears that cognitions, thoughts about the meaning and implications of stressful events, are important in determining psychological responses to identified stressors.

In summary, of the various stress models presented, the arousal-attribution model appears to be the most comprehensive. It was chosen as the framework within which the variables of concern in this study could be discussed. This decision was based on several factors. In accordance with Mikhail's (1981) recommendation, this model conceptualizes stress from both a psychological and physiological perspective. Application of the model is not limited to traumatic events, and it provides sound theoretical rationale for

teaching coping strategies to reduce anxiety and depression resulting from identified stressors.

Stressors, Anxiety and Depression in Nursing Students

According to the Schachter and Singer (1962) arousal-attribution model, stressors are seen as perceived explanations of stress or biological arousal. In a classic study, Fox et al. (1963) utilized the Critical Incident Technique developed by Flanagan (1954) in order to identify stressors as perceived by 3,000 student nurses. Student nurses and female students in other university programs identified similar academic, social and personal stressors. The nursing students experienced a great deal of academic pressure due to the vast amount of required work. Student nurses also identified a fourth area of stress, clinical practice.

Several other researchers patterned the design of their investigation after the Fox study. Elfert (1976) studied nursing students at the University of British Columbia in Canada. She found that students in the first year of their program identified stressors related to school adjustment, family, friends, evaluation and grades. Later in the nursing program, students perceived the greatest source of stress to be that of clinical practice. Davitz's (1972) research was conducted in Nigeria. Nigerian students were found to view the clinical experience as most stressful. They identified the greatest cause of stress as

critical evaluation of professional performance, patient hostility toward them, interpersonal relationships, and concern about handling new clinical situations. Garrett, Manuel, and Vincent (1976) studied student nurses at the University of South Carolina. They found that the largest frequency of identified stressors concerned academic pressures, social problems with boyfriends and family, clinical problems with the physical care of patients, and interpersonal difficulties with clinical instructors.

The arousal-attribution model contends that anxiety and depression will be experienced if a situation is perceived as undesirable and is thus identified as a stressor. A number of researchers have documented the high incidence of anxiety and depression among nursing students. As early as 1936, Hahn observed that the student nurse was under constant strain, and that 90% of nurses would not go through a nursing education program again. Rosenberg and Fuller (1955) found that student discontent resulted in depression, anxiety and a high attrition rate. Fourteen years later, Gunter (1969) again noted that anxiety, nervousness, depression and restlessness were present to some extent in the majority of nursing students studied.

In 1979, Birch found that student nurses were still experiencing unacceptable levels of anxiety. Of a sample of 207 student nurses, 43% scored at the 7th sten or higher on the Institute for Personality and Ability Testing Anxiety

Scale, and 36% scored at the 8th sten or higher. According to Krug, Scheier, and Cattell (1976), the 7th sten is borderline high and requires careful follow-up, and the 8th, 9th and 10th stens suggest psychological morbidity which will have an adverse affect on work and social/emotional adjustment.

There are several factors to consider in regard to a nursing student's possible psychological response to a stressor. The student nurse is more apt to experience depression, such symptoms as somatic complaints, feelings of guilt and worthlessness, and excessive self-criticism (Krug & Laughlin, 1976; Roth & Rehm, 1980), if she perceives a lack of control over the identified stressor, has low self-esteem, or experiences decreased social support due to interpersonal difficulties (Lewinsohn, 1974; Rizley, 1978; Roth, Rehm, & Rozensky, 1980; Stewart & Salt, 1981; Stuart, 1967; Wolpe, 1971). Elevated levels of state anxiety, heightened autonomic nervous system activity and transitory feelings of apprehension and tension, will occur more frequently in students who exhibit high trait anxiety, which is a stable individual difference in anxiety proneness, because persons with high trait anxiety tend to react to more situations as threatening (Spielberger, 1970). In fact, research has demonstrated that the evaluation of personal adequacy is particularly threatening to individuals

with high trait anxiety (Spence & Spence, 1966; Spielberger, 1966; Spielberger & Smith, 1966).

In summary, according to the Schachter and Singer (1962) arousal-attribution model stressors are perceived explanations for biological arousal, and psychological responses to arousal are contingent upon appraisal of the situation. Nursing students have attributed stress or biological arousal to academic, social, personal and clinical stressors. They experience high levels of anxiety and depression in response to these identified stressors.

Relationship between Ego Identity Status and Stress

In addition to academic, social, personal and clinical stressors, student nurses might be experiencing ego identity crisis which is characteristic of late adolescence. For purposes of clarity, this section of the review of literature will first present the theoretical framework on ego identity status and then research findings relevant to female college students will be discussed.

Theoretical Framework on Ego Identity Status

Erikson (1963) included the concept of identity in his theory of psychosocial development. He felt that searching for identity is the most important developmental crisis. The majority of studies that have attempted to operationalize the concept of ego identity have used three types of procedures: (1) self-report questionnaires, (2)

self-descriptive Q-sorts, and (3) semistructured interviews. Marcia developed the Ego Identity Status Interview because of an inherent weakness in the other procedures; they did not deal with psychosocial criteria for determining the degree of ego identity (Marcia, 1964, 1966).

Based on Erikson's (1963) conceptualization of identity crisis, Marcia utilized the two criteria of crisis and commitment to assess ego identity status in the three content areas of occupational plans, religious beliefs and political attitudes. Marcia defined crisis as a decision making period involving the questioning of choices and beliefs in an attempt to select from alternatives, and he defined commitment as the amount of personal investment in chosen alternatives. These criteria determine whether persons are classified as identity achieved, foreclosed, moratorium or diffused. Supposedly, identity achieved students have experienced a crisis and are committed to an occupation and ideology, foreclosed students have not experienced a crisis but they do have firm commitments which are usually parentally determined, moratorium students are currently experiencing a crisis and therefore have vague commitments, and diffused students are characterized by the absence of a sense of struggle and by the lack of attempts to make commitments.

Schenkel and Marcia (1972) added to the Ego Identity Status Interview a fourth content area, personal standards

for participation in sexual intercourse, and Matteson (1974) added a fifth content area, sex role attitudes. Schenkel and Marcia (1972) found that ego identity formation among women was more related to issues of sexuality and religion than to those of occupation and politics. Sexuality and religion were the only identity content areas that discriminated among ego identity statuses as to level of trait anxiety.

Matteson (1977) has suggested that late adolescents experience a series of crises resulting in stability in some content areas and uncertainty in others. He therefore recommends that each identity content area assessed by Marcia's technique be separately analyzed instead of treating identity as one global construct. Raphael (1979) lends support to this point of view. He found that female adolescents were not in the same ego identity status for areas of occupation, religion and politics. There is an apparent asymmetry of ego identity formation across different content areas.

Relevant Research

Marcia's ego identity statuses have stimulated research investigating differences between the identity statuses with respect to cognitive, personality and developmental variables. Unfortunately, this research has not included professional students such as student nurses, and the concept of identity has been treated as a global

construct. Nonetheless, it is worthwhile to review research results on female undergraduate students. Table 2 summarizes empirical findings regarding the ego identity statuses, and Table 3 summarizes the psychodynamic aspects of ego identity statuses in college women based on the research of Josselson (1973). For ease of presentation, these findings are organized under the following subheadings: cognitive ability, fear of success, adjustment to college, intrapsychic growth, social support and stress, and emotional stability and stress.

Cognitive Ability

Identity achieved and foreclosed students tend to choose more difficult college majors than do moratorium and diffused students (Cross & Allen, 1970) even though there is no significant difference in intelligence among those in the different identity statuses (Marcia & Friedman, 1970; Schenkel, 1975). However, identity achieved and foreclosed students are more field independent than moratorium and diffused students (Schenkel, 1975).

Moratorium students resemble identity achieved students in several important respects. Cauble (1975) found that they performed significantly better than foreclosed and diffused students on three separate measures of Piagetian formal operations. This finding lends support to Piaget's (1974) belief that construction of social, political, religious and philosophical theories require formal

Table 2

Summary of Empirical Results Regarding Ego
Identity Status Among Female
Undergraduate Students

<u>Achievement:</u>	Lowest trait anxiety, ^l least conforming, ^m most field independent, ^k most difficult college major ^g
<u>Foreclosure:</u>	Low trait anxiety, ^l lowest depression, ^f low self-esteem, ^l highest ego identity, ^c highest industrious orientation, ^j most authoritarian, ^g lowest in critical attitudes toward authority, ^h highest in yea-saying response set, ^h practical outlook, ^h lowest in impulse expression, ^h identify closely with mothers ^c
<u>Moratorium:</u>	High trait anxiety, ^l high self-esteem, ^l highest in fear of success, ⁱ most cognitively complex, ^f least authoritarian, ^g field dependent ^k
<u>Diffusion:</u>	High trait anxiety, ^g lowest self-esteem, ^l most conforming, ^b most field dependent, ^k choose least difficult college major, ^g least interpersonal attraction ^e

Table 2 (cont'd)

Achievement and Foreclosure:

Low in trait anxiety,^l conform less and experience less discomfort (anxiety, hostility, and depression) about nonconformance,^m field independent,^k perceive self as "straight" as opposed to "hip",^b choose more difficult college major^g

Achievement and Moratorium:

Performed significantly better on three separate measures of Piagetian formal operations (flexibility of rods test, oscillation of the pendulum test, equilibrium in the balance),^a highest in achievement motivation,ⁱ highest in fear of success,ⁱ greatest interpersonal attraction,^e majority function at Loevinger's postconformist level of ego development^d

Diffusion and Moratorium:

High in trait anxiety,^l high in self-cognition,^g field dependent^k

Table 2 (cont'd)

Diffusion and
Foreclosure:

Majority have not progressed beyond
Loevinger's conformist level of ego
development^d

^aCauble (1975)^gMarcia and Friedman (1970)^bCross and Allen (1970)^hMatteson (1977)^cDignan (1965)ⁱOrlofsky (1978)^dGinsburg and Orlofsky (1981)^jRothman (1978)^eGoldman, Rosenzweig and
Lutter (1980)^kSchenkel (1975)^fJosselson (1973)^lSchenkel and Marcia (1972)^mToder and Marcia (1973)

Table 3

Psychodynamic Aspects of Ego Identity
Statuses in College Women

Achievement

<u>Self-Esteem:</u>	Gain self-esteem through own intellectual capacities and talents.
<u>Peer Relationships:</u>	Seek support from peers, seek man who supports independence from parents, seek identity-confirming experiences.
<u>Family Relationships:</u>	Individuated from parents (realistic appraisal of parents, unconflicted relationship with one parent and charged ambivalent relationship to the other). Sibling rivalries usually with brother.
<u>Fantasy:</u>	Daydream of success but have scaled down aspirations.
<u>Intrapsychic Processes:</u>	Prefer reality considerations to introspection, bounce back from frustration.
<u>Theme:</u>	Struggle for independence, individual action, and control.

Table 3 (cont'd)

Foreclosure

<u>Self-Esteem:</u>	Being a "good girl" is source of self-esteem, feel worthwhile because highly valued by parents.
<u>Peer-Relationships:</u>	Failure of meaningful relationships with peers, fear of nonfamilial world, boy-friends are parent substitutes sought for protection and security.
<u>Family Relationships:</u>	Closeness with family (possessive mother, intensely affectionate relationship with father), conscious and unambivalent identification with parents.
<u>Fantasy:</u>	Self-seeking, self-assured, goal oriented (desirous of more).
<u>Intrapsychic Processes:</u>	Unable to tolerate ambivalence, repress sexual and aggressive impulses, un insightful, absence of internal conflict.
<u>Theme:</u>	Betrayal at hands of parents, unconscious preoccupation with aggression and punishment usually at the hands of men.

Table 3 (cont'd)

Moratorium

<u>Self-Esteem:</u>	Define self through others (others reassure them of their worth, desire to win approval of others, focus on the need for relationships, little purposeful investment in personal achievement).
<u>Peer Relationships:</u>	Search for new identifications in object relationships, relationships are transient, idealize one or more peers.
<u>Family Relationships:</u>	Autonomy struggle from parents (mother is overprotective, cling to identification with father).
<u>Fantasy:</u>	Dream of success, seek answers to what is really right.
<u>Intrapsychic Processes:</u>	Permeability of ego boundaries (feel vulnerable to inappropriate impulse expression, experience intense feelings, sensitive).
<u>Theme:</u>	Sense of guilt focusing on disappointing parents.

Table 3 (cont'd)

Diffusion

<u>Self-Esteem:</u>	Self-esteem largely built on fantasy of being special, underlying depression.
<u>Peer Relationships:</u>	Withdrawn from peers.
<u>Family Relationships:</u>	Severe early psychological trauma due to loss of parent or early emotional neglect, unable to form positive identifications with parents, parents did not set realistic expectations.
<u>Fantasy:</u>	Dream of potential possibilities.
<u>Intrapsychic Processes:</u>	Many are diagnosably borderline psychotic, sense of futility and instability, lack solid psychic structure, impulsive, avoid guilt, failure of time integration (feel alienated from past and future).
<u>Theme:</u>	Cherish possibilities even if confusing, preoccupied with feelings.

Note. The psychodynamic aspects of ego identity statuses presented in the table are based on the research findings of Josselson (1973).

operations. Identity achieved students have evolved a personal frame of reference and moratorium students are in the process of doing so. Foreclosed students have not constructed a value system but have instead accepted a parental frame of reference. Diffused students are not committed to any particular values and display a disinterest in constructing a personal value system.

Fear of Success

Moratorium and achieved students are also similar in that they are higher in achievement motivation and fear of success than are foreclosed or diffused students (Orlofsky, 1978). Cabellero, Giles, and Shaver (1975) and Heilbrun, Kleemeier, and Piccola (1974) found that fear of success was more prevalent among nontraditional ambitious women than among women professing more traditional sex role attitudes. Moratorium and achieved students would experience conflict as they strived toward less traditional goals. The moratorium student is more likely to experience greater stress, however, since achieved students have at least partially resolved the conflict. Foreclosed students maintain traditional sex role attitudes and therefore would experience less conflict than either moratorium or achieved students. Diffused students are less motivated for academic and vocational achievement and as a result do not experience much conflict between achievement goals and traditional feminine role behavior. Schenkel and Marcia (1972) found

that moratorium students do in fact have high levels of trait anxiety. This could account for the apparent adaptive status of foreclosure for women which is not the case for most men.

Adjustment to College

Students in the achievement and foreclosure statuses are better adjusted to college and experience less trait anxiety than do moratorium and diffused students (Schenkel & Marcia, 1972). In addition, Toder and Marcia (1973) found that achieved and foreclosed students conform less and experience less anxiety, hostility and depression when nonconforming. When evaluating themselves, identity achieved and foreclosed students use a frame of reference independent of their peers. Achieved women gain self-esteem through their own efforts and foreclosed women rely on their parents as a source of self-esteem (Josselson, 1973). Moratorium and diffused students lack, to some extent, either an internal frame of reference or a parental frame of reference and are therefore more susceptible to the stress of peer group pressure.

Intrapsychic Growth

In spite of the fact that the status of foreclosure appears to be adaptive for women, it does not necessarily result in personality growth. Ginsburg and Orlofsky (1981) found that achieved and moratorium students were functioning

at Loevinger's (1976) postconformist levels of ego development, while the majority of foreclosed and diffused students had not progressed beyond conformist levels of development. The authors concluded that identity commitments based on identification rather than on a decision making process do not reflect real intrapsychic growth.

The foreclosed student has a stability of identity that contributes to a superficial adjustment based on avoidance of conflict, dependence on authority, conventionality, and the social and emotional support gained from parents or parent-substitutes. Unlike the achieved and moratorium students, foreclosed individuals lack a differentiated personality and do not possess the ability to deal with complex situations and conflict. It is true that moratorium women experience conflicts, anxieties and self-doubts because of identity crisis. However, identity crisis is a growth process. Even though these students may experience subjective discomfort, they are able and willing to cope with increasingly complex problems.

Social Support and Stress

Social support appears to increase one's ability to cope with stress (Caplan, 1981; Sarason, 1981). Goplerud (1980) found an inverse relationship between the frequency of graduate students' social interactions with peers and faculty and the incidence of stressful life events, as well as the number of reported physical and psychological

disturbances. When under stress, women appear to turn to peers as a primary source of support (Burke & Weir, 1978).

The ability to utilize this type of support appears to vary among the ego identity statuses. Josselson (1973) found that achieved students had individuated from parents and sought support from peers to confirm independence from parents. Moratorium students formed transient relationships with peers in order to define themselves, and they felt guilty about their struggle for autonomy from parents. Foreclosed students failed in meaningful peer relationships and were unconsciously preoccupied with aggression. They were close to their families and formed a conscious and unambivalent identification with their parents. Diffused students were withdrawn from peers and experienced such severe early psychological trauma that they could not form positive identifications with their parents. They clung to the fantasy of potential possibilities and were preoccupied with feelings.

Goldman, Rosenzweig, and Lutter (1980) noted that female and male college students rated achieved and moratorium strangers as more likable, intelligent, knowledgeable of current events and adjusted in contrast to persons in the other statuses. Achieved and foreclosed strangers were judged as more moral. Diffused individuals were seen as less intelligent, knowledgeable, moral and adjusted. These authors concluded that since positive initial evaluations

are important in the development of potential intimate relationships, those with a better sense of identity are more likely to develop intimacy with others.

From this description of family and peer relationships, as well as interpersonal attraction, it appears that achieved students could best utilize interpersonal relationships for support. Both achieved and moratorium students are viewed by their peers as likable. However, achieved students form much more intimate and enduring peer relationships than do moratorium students. Foreclosed and diffused students were reported to be unsuccessful in maintaining any meaningful peer involvement. Achieved students are not caught up in the struggle for autonomy from parents as are moratorium students, and would therefore be more willing to discuss personal problems with parents. Diffused students dislike their parents and would not be likely to turn to them for support. Foreclosed students must rely on their parents as the primary source of support during stress. They might seek boyfriends as parent substitutes in order to maintain a sense of security. As long as foreclosed students receive support from parents and/or parent substitutes, they apparently are able to cope well with stress.

Emotional Stability and Stress

Brown and Shaw (1975) reported that female college

students high in self-confidence or emotional stability were less affected by a stressor than were those low in self-confidence or emotional stability. Achieved students have higher self-esteem than do students of other identity statuses (Schenkel & Marcia, 1972). In addition, Josselson (1973) found that achieved students bounce back from frustration. Foreclosed students repress sexual and aggressive impulses, but as long as the setting is unambivalent they do not experience discomfort. Moratorium students, on the other hand, have a permeable ego boundary and as a consequence feel vulnerable to impulses and experience intense feelings. Diffused students lack a solid psychic structure and experience a sense of futility and instability. Goldman, Rosenzweig, and Lutter (1980) noted that diffused students judged diffused strangers as less intelligent, knowledgeable, moral and adjusted than persons in the other statuses. They concluded that diffused students have a negative identity and a sense of low self-esteem.

This data indicates that of all the students, achieved students are probably best able to cope with stress in ambivalent situations. If the situation is unambivalent, foreclosed students could cope better with stress than could moratorium students. Diffused students would be least able to handle stress because of emotional instability. In support of these conclusions, Schenkel and Marcia (1972) found that achieved and foreclosed students had a lower

level of trait anxiety than did moratorium and diffused students.

In summary, student nurses might be experiencing ego identity crisis in addition to academic, social, personal and clinical stressors. However, no research to date has studied the relationship between stress and ego identity status among student nurses. Research findings with female undergraduates seem to indicate that achieved students are probably best able to cope with stress, and that moratorium and diffused students most likely experience more anxiety and depression than do achieved and foreclosed students.

Stress Management Programs

The Schachter and Singer (1962) arousal-attribution model provides theoretical rationale for cognitive-restructuring and relaxation approaches to stress management. This model gives a cognitive-mediational explanation of anxiety and depression, which substantiates the need to change maladaptive cognitive responses. In addition, stress is viewed as physiological arousal that could be reduced through relaxation techniques. These two methods of stress management will be described and then research evaluating the effectiveness of each approach will be noted. Biofeedback will be discussed in terms of being an aid to relaxation training, and systematic desensitization will be considered as an effective means for practicing relaxation

and cognitive-restructuring. It should be observed that these stress management programs were developed with non-nursing populations. The need for programs specifically developed for nursing students will be discussed after the above presentation, and research evaluating such programs will be considered.

Cognitive-Restructuring

Specific educational interventions have been used in an attempt to teach conscious strategies aimed at reducing stress reactions. Research has demonstrated the ineffectiveness of such programs (McFall & Twentyman, 1973; Meichenbaum & Cameron, 1972). The utilization of appropriate coping skills can be inhibited by cognitive appraisal of the situation, an internal dialogue assessing personal coping capabilities and feelings of lack of control (Bandura, 1977; Meichenbaum, 1971, 1972; Schwartz & Gottman, 1976). Cognitive-restructuring approaches are based on the importance of such cognitive mediators in the elicitation and maintenance of anxiety and/or depression. Two major cognitive-restructuring approaches are rational emotive therapy (Ellis, 1962) and stress inoculation training (Meichenbaum, 1975; Meichenbaum & Navaco, 1977; Meichenbaum & Turk, 1976).

Rational emotive therapy focuses on the identification and reduction of irrational self-statements. Ellis (1962) claims that there are core irrational ideas that

generate negative affect such as depression and anxiety. One such belief is that a person must be perfectly competent, adequate and achieving to consider himself or herself worthwhile. Research has shown that rational emotive therapy is effective in reducing test anxiety (Warren, Deffenbacher & Brading, 1976), speech anxiety (Karst & Trexler, 1970; Meichenbaum, Gilmore & Fedorovicius, 1971; Trexler & Karst, 1972), and interpersonal anxiety (DiLoreto, 1971).

Stress inoculation training focuses on the development of task-oriented self-instruction. It involves the presentation of the Schachter and Singer (1962) arousal-attribution theory, training and rehearsal of relaxation and self-instructional coping skills, and practice using the coping strategies. Self-instructional coping skills or self-statements (e.g., "One step at a time."; "I can handle the situation.") encourage realistic assessment of the situation, control of self-defeating thoughts, preparation for confronting potential stressors, coping with fear, and reinforcement of successful coping.

Jaremko, Hadfield, and Walker (1980) found that the educational phase of stress inoculation was essential in the treatment of anxiety. Rehearsing relaxation and self-instructional coping skills, as well as practice in the use of these strategies is also important. Hutchings, Denny, Basgall, and Houston (1980) noted that structured rehearsal

involving the recognition and reduction of tension during the treatment sessions resulted in more consistent decreases in trait anxiety than did relaxation training without rehearsal. Furthermore, practice in applying the acquired coping skill to daily living situations results in the greatest benefit from stress management training (Scherer & Pass, 1979).

Like rational emotive therapy, stress inoculation training has successfully reduced speech anxiety (Fremouw & Harmatz, 1975; Fremouw & Zitter, 1978; Glogower, Fremouw & McCroskey, 1978), test anxiety (Deffenbacher & Hahnloser, 1979; Holroyd, 1976; Hussian & Lawrence, 1978; Meichenbaum, 1972), and interpersonal anxiety (Glass, Gottman & Shmurak, 1976). Cognitive-restructuring approaches have also been successful in decreasing depression. Wilson and Krane (1980) noted that cognitive interventions aimed at positive self-evaluations produced increased self-esteem which resulted in effective treatment of depression. Shaffer, Shapiro, Sank, and Coghlan (1981) found that a combination of cognitive-restructuring, progressive relaxation and assertion training was effective in the treatment of anxiety and depression.

Relaxation Training

Relaxation training of one form or another has been used in stress management programs such as Meichenbaum's stress inoculation training program. The two most widely

known techniques are autogenic training (Luthe, 1969) and progressive relaxation (Jacobsen, 1938). Both techniques involve the deep relaxation of major muscle groups. Autogenic training also emphasizes control over such autonomic responses as sweat gland activity, breathing rate and peripheral vasodilation. Autogenic training is a method of autosuggestion or self-hypnosis. Training phrases (e.g., "The feeling of heaviness is growing over my facial muscles, my neck, my shoulders, and my arms. I am relaxing deeper and deeper still.") are repeated with deep concentration. Progressive relaxation involves learning to tense and release various muscle groups throughout the body so as to develop the ability to recognize the feelings of tension and relaxation, as well as to achieve deep relaxation.

Research has demonstrated that both progressive relaxation and autogenic training are effective in reducing physiological arousal and subjective distress (Elkins, Anchor & Sandler, 1978; Green, 1973; Paul, 1969a, 1969b). However, Green (1981) found that under very stressful situations, progressive relaxation was superior to self-induced relaxation training in reducing physiological arousal and subjective discomfort.

Biofeedback

Biofeedback can improve upon relaxation training effectiveness, since one or more physiological functions are monitored and transmitted directly to the individual through

audio or visual signals. The individual makes use of the continuous flow of sensory feedback signals to modify performance. For example, if while performing a relaxation exercise the subject notes that her peripheral body temperature or galvanic skin resistance increases, this would indicate that relaxation is being achieved since anxiety causes peripheral vasoconstriction and increased sweat gland activity.

Several researchers have noted the advantage in using biofeedback with relaxation. Green, Green, and Winters (1976) combined autogenic training with biofeedback, and found that the performance of subjects improved. Allen (1981) observed that a program consisting of stress theory, social engineering, cognitive reappraisal, relaxation theory, meditation, progressive relaxation, calming response, selective awareness techniques and biofeedback training was effective in reducing physiological arousal and subjective distress. In a number of studies, the use of biofeedback alone has also been found to be effective in reducing physiological arousal (Canter, Kondo & Knott, 1975; Green, Green & Walters, 1970; Townsend, House & Addario, 1976).

Systematic Desensitization

Systematic desensitization (Wolpe, 1958) provides a means to practice coping skills such as relaxation and cognitive-restructuring. Individuals can be asked to

visualize and describe verbally the scenes from a constructed stressor hierarchy. At the first sign of arousal, coping skills are used. The exercise is repeated until each situation can be imagined without producing stress. Research on desensitization supports the conclusion that this intervention has a significant impact on decreasing stress responses (DiLoreto, 1971; Lang & Lazovik, 1963; Paul, 1967, 1968). Systematic desensitization in combination with rational emotive therapy has proved effective in the reduction of speech and test anxieties (Goldfried, Decentecio & Weinberg, 1974; Goldfried, Linehan & Smith, 1978).

Stress Management Programs for Student Nurses

A few researchers have developed and evaluated stress management programs for nursing students. Rosenberg and Fuller (1955) conducted a seminar in human relations at Newton-Wellesley Hospital. This particular program focused on identifying stressors in a structured group experience. Due to the strengthening of peer group feelings, the student nurses expressed decreased feelings of loneliness. The importance of peer support in helping nursing students deal with stress has also been emphasized by de Tornyay (1977) and Jones (1978).

Donovan and Gershman (1979) were interested in determining if systematic desensitization would significantly reduce anxiety experienced by students. Thirty-six female nursing students were shown anxiety provoking slides

before and after systematic desensitization, placebo treatment, or no treatment. Students who received systematic desensitization experienced fewer physiological responses associated with anxiety.

Charlesworth, Murphy, and Beutler (1981) assessed the effectiveness of a 10 session, 5 week, group-administered stress management program for nursing students. The program incorporated systematic desensitization, as well as progressive relaxation, deep muscle relaxation, autogenic training, and visual imagery. Ten female baccalaureate nursing students participated in the program and seven female and one male student comprised the control group. The stress management program effectively reduced trait and state anxiety associated with test-taking.

The Need for Stress Management Programs Designed for Student Nurses

Problems related to the ego identity crisis of late adolescence may be complicated or exacerbated by the demands of nursing education. Student anxiety and depression results in learning difficulties and poor clinical performance. The learning of concepts and their retention and recall is interfered with (Meyers & Martin, 1974). Clinical performance is impaired as the nursing student attempts to apply knowledge and function as a member of the health team (Dye, 1974).

Jones (1978) and Nehren and Killen (1967) have recommended that programs be instituted to assist nursing students in coping with personal problems related to identity crisis, as well as the stress inherent in nursing education. It is interesting to note that after reviewing the literature on student stress in nursing education, McKay (1978) concluded that nursing faculty have made minimal efforts to assist students in dealing with stress. Sobel (1978) also observed that the considerable stress involved in nursing education and practice has not been of interest to many investigators.

It is worthwhile to critique those studies previously described that were concerned specifically with stress management programs for nursing students. Rosenberg and Fuller (1955) focused only on identifying stressors and not on coping with them. Donovan and Gershman (1979) and Charlesworth, Murphy, and Beutler (1981) evaluated specific coping techniques taught in a stress management program. However, they limited evaluation of their programs to specific types of anxiety. Donovan and Gershman evaluated the effectiveness of systematic desensitization in reducing anxiety elicited by slides shown in a controlled laboratory situation. Attempting to generalize these findings to the usual environment of the nursing student is questionable. Charlesworth, Murphy, and Beutler assessed their program in

terms of test anxiety. The small sample size weakens the validity of their results.

In summary, even though it is recognized that programs need to be instituted that will assist nursing students in coping with problems related to identity crisis and stress inherent in nursing education, only a few such programs have been developed and assessed. The majority of research evaluating different stress training approaches has been conducted in the laboratory with a variety of non-nursing subjects. This research demonstrated the effectiveness of cognitive-restructuring, relaxation, biofeedback and systematic desensitization approaches in decreasing anxiety.

Summary

Of the various stress models presented, the Schachter and Singer (1962) arousal-attribution model appears to be the most comprehensive, and was therefore chosen as the framework within which the variables of concern in this study could be discussed. Stress is viewed as physiological arousal and a stressor is a perceived explanation of stress. When a situation is appraised as undesirable, anxiety and/or depression will be experienced. Nursing students have attributed stress to academic, social, personal and clinical stressors. They experience high levels of anxiety and depression in response to these identified stressors. Nursing students might also be

experiencing ego identity crisis which is characteristic of late adolescence. However, no research to date has studied the relationship between stress and ego identity status among student nurses. Research findings with female undergraduates seem to indicate that achieved students are probably best able to cope with stress, and that moratorium and diffused students most likely experience more anxiety and depression than do achieved and foreclosed students.

Even though it is recognized that stress management programs need to be instituted that will assist nursing students in coping with identity crisis and stress inherent in nursing education, only a few such programs have been developed and assessed. The majority of research evaluating different stress training approaches has been conducted in the laboratory with a variety of non-nursing subjects. This research demonstrated the effectiveness of cognitive-restructuring, relaxation, biofeedback and systematic desensitization approaches.

CHAPTER III

METHOD

This chapter is divided into two sections. The first part will outline the research method for Phase I of the study dealing with ego identity status, stressors, state-trait anxiety and depression, which includes hypotheses 1-4. The second part will describe the research method for Phase II, the development and evaluation of a stress management program for nursing students, which includes hypotheses 5-6. Each section describes hypotheses, selection of subjects, instrumentation, procedure, design and statistical analysis, and summary.

Phase I

Hypotheses

The following null hypotheses were tested:

1. There is no significant difference in stressors, as assessed by the Critical Incident Schedule, among sophomore and senior baccalaureate nursing students of different ego identity statuses, as assessed by the Ego Identity Status Interview.

2. There is no significant difference in trait anxiety, as assessed by Form X-2 of the State-Trait Anxiety Inventory, among sophomore and senior baccalaureate nursing students of different ego identity statuses, as assessed by the Ego Identity Status Interview.
3. There is no significant difference in state anxiety, as assessed by Form X-1 of the State-Trait Anxiety Inventory, among sophomore and senior baccalaureate nursing students of different ego identity statuses, as assessed by the Ego Identity Status Interview.
4. There is no significant difference in depression, as assessed by the Institute for Personality and Ability Testing Depression Scale, among sophomore and senior baccalaureate nursing students of different ego identity statuses, as assessed by the Ego Identity Status Interview.

Selection of Subjects

Sophomore and senior baccalaureate nursing students in a small private sectarian liberal arts college were asked to participate in the study. All of the students were female between the ages of 19 and 40 years. The sophomore students were enrolled in an introductory nursing course and the senior students were in a psychiatric nursing course.

The development of interpersonal skills was emphasized in both of these courses. Sophomores developed beginning communication skills by interacting therapeutically with well individuals in the community, whereas seniors developed more advanced communication skills by counseling clients in an acute psychiatric care setting.

After the study was approved by the proper authorities at the college, potential subjects were contacted the first day of class. They were told the purpose of the study and its predicted benefits, the procedure to be used, that no identified risks were involved, confidentiality would be maintained, subjects could withdraw from participation at any time, and all reasonable inquiries made concerning the procedures would be responded to. Inquiries concerning the study were answered and those students agreeing to participate were asked to sign a consent form (see Appendix A). After the completion of the investigation, an abstract of the study was made available to those students who requested it.

Of 44 sophomores and 38 seniors, 42 sophomores and 34 seniors agreed to take part in the study. The reasons given for refusal to participate were anticipated pressure from course work and personal concerns. Demographic data, which was collected via a questionnaire (see Appendix B), is summarized in Appendix B. Sophomore and senior nursing students were found to be comparable in grade point average,

religion, racial background, marital and parental status, financial support, employment, and income of family of origin. As expected, senior students were on the average two years older than sophomore students and more tended to live in an apartment than in the dormitory or their parents' home.

Instrumentation

Four instruments were used to measure the variables of interest: (a) Ego Identity Status Interview, (b) State-Trait Anxiety Inventory, (c) Institute for Personality and Ability Testing Depression Scale, and (d) Critical Incident Schedule.

Ego Identity Status Interview

The Ego Identity Status Interview (Marcia, 1964, 1966; Matteson, 1974; Schenkel & Marcia, 1972) is a 45-60 minute semistructured interview (see Appendix C). The Manual for Ego Identity Status Types (see Appendix C) describes the criteria for determining ego identity status in each content area, namely occupational plans, religious beliefs, political attitudes, sex role attitudes and personal standards for participation in sexual intercourse. It is adapted from the manual used by Marcia (1964).

The ego identity status content areas of sex role attitudes and personal standards for participation in sexual intercourse have been added to the manual. The sketch on

sex role was developed by Matteson (1974), and the sketch on sexual intercourse was developed by Schenkel and Marcia (1972). Those areas of the manual dealing with the determination of overall ego identity status have been deleted, and the generic use of male nouns and pronouns was changed since the content refers to both sexes.

Interjudge reliabilities range from .72 to .90. Discriminant validity has been demonstrated in that a variety of cognitive, personality and developmental variables theoretically associated with ego identity have been found to be related to identity status among college students.

State-Trait Anxiety Inventory

The State-Trait Anxiety Inventory (Spielberger, Gorsuch & Lushene, 1970) consists of 40 brief items designed to measure trait anxiety, a stable condition of anxiety proneness, and state anxiety, a transitory condition of perceived tension (see Appendix D). College students usually require 6-8 minutes to complete either Form X-1, the state anxiety scale, or Form X-2, the trait anxiety scale, and less than 15 minutes to complete both. Repeated administrations of the state anxiety scale generally require 5 minutes or less. The test manual provides explicit instructions for administration and scoring, as well as norms for university undergraduates, high school students, neuro-

psychiatric patients, general medical and surgical patients, and inmates in a state prison.

The State-Trait Anxiety Inventory is considered to be one of the best standardized measures of anxiety. Test-retest reliability for the trait scale ranges from .76 to .77 and for the state scale from .16 to .31 for female college undergraduates. The low test-retest reliability for the state scale is to be expected since this is not a measure of a persistent characteristic. Internal consistency of the state scale as measured by the Kuder-Richardson formula 20, ranges from .83 to .92 and for the trait scale from .86 to .92.

Concurrent validity of the trait scale was estimated by correlating the trait anxiety scores of 126 college women with the scores obtained on the Institute for Personality and Ability Testing Anxiety Scale (Cattell & Scheier, 1963), the Taylor (1953) Manifest Anxiety Scale, and the Zuckerman (1960) Affect Adjective Check List. The coefficients were .75, .80, and .52. Predictive validity of the state anxiety scale was determined by comparing scores of undergraduate college students in different states of mental stress. The state scale was a reliable measure of increases in the state of anxiety resulting from experimental manipulation.

Institute for Personality and Ability Testing
Depression Scale

The Institute for Personality and Ability Testing

Depression Scale (Krug & Laughlin, 1976) is a 40 item questionnaire for use in psychological research on depression. The front cover of the depression scale test booklet is in Appendix E. The questionnaire takes 10 minutes to administer. The test manual provides instructions for administration and scoring, as well as norms for adult, college, prison and certain clinical populations.

Test-retest reliability is .93. Internal consistency based on alpha, the average of all possible split-half coefficients that might have been calculated from the test, and the parallel split-half is .91 for college students. Concurrent validity was estimated by correlating the Institute for Personality and Ability Testing Depression Scale scores of 57 individuals with the scores obtained on the Depression Scale of the Minnesota Multiphasic Personality Inventory. The coefficient was .31. Factor analysis and contrasted-groups were used to insure construct and empirical validity. A correlation of .88 was obtained between the Depression Scale and the pure depression factor. Normals and diagnosed depressives were found to differ significantly on each item of the scale and a test of the overall mean difference yielded a t of 13.52 ($df = 697$), which is highly significant. Sten scores of 8, 9 or 10 on the Depression Scale occur 4-30 times more frequently among depressive and other clinical cases than among normal adults.

Critical Incident Schedule

The Critical Incident Schedule is based on the Critical Incident Technique developed by Flanagan (1954) and utilized by Fox et al. (1965) in their stress-satisfaction study. Descriptions of any and all stressful situations which have occurred during the past week are elicited by a question (see Appendix F). In general, the format of the question corresponds closely with that used in the stress-satisfaction study. Stress is defined in terms of the words which nursing students reported most frequently as being characteristic of the way people feel or react to stressful situations (Fox & Diamond, 1959). It takes approximately 5 minutes to complete the description of one incident.

Responses are classified using the four categories, namely academic, social, personal and clinical stressors, developed by Fox et al. (1965) which can be found in Appendix F. Rater agreement as to category assignment is 100% (Davitz, 1972; Garrett et al., 1976). Fox and Diamond (1959) found that written descriptions of incidents elicited by the question on the schedule and oral descriptions requested in individual interviews did not differ in the stressors identified or the degree of specificity.

Procedure

The procedure will be presented by describing the pilot study, training of the interviewer and judges, and administration and scoring of the instruments.

Pilot Study

Before the investigation was undertaken, a pilot study was conducted following the procedure initially proposed for the two phases of the study. Ten junior baccalaureate nursing students participated. The purpose of the pilot study was to identify unforeseen problems and formulate tenable solutions. On the basis of the pilot study, two changes were made. Data for each phase of the study was collected over a period of 3 weeks instead of 4 weeks in order to accommodate the schedules of students; and an additional sub-category, loss or damage of personal property, was added to the personal stressors category (see Appendix F). This sub-category was necessary because students identified such stressors as "a flat tire" that could not be classified using the former categorical system.

Training of Interviewer and Judges

Since the interviewer and the judges responsible for rating responses in the Ego Identity Status Interview and the Critical Incident Schedule were unfamiliar with these instruments, a training period conducted by the author was necessary. The training period for the interviewer, a doctoral candidate in counseling psychology, consisted of three sessions which were each 4 hours in length. During the first session, copies of the Ego Identity Status Interview and the Manual for Ego Identity Status Types was given

to the interviewer. The questions in the interview and the information contained in the manual were discussed. The interviewer role-played an interview session with the author, and strengths and weaknesses of the session were discussed. In the last two training sessions, the interviewer tape recorded interviews with two baccalaureate nursing students not participating in the study. The interviewer's performance was evaluated by the author in order to insure that no further practice was necessary.

The training period for the three judges, each of whom has a masters degree in psychiatric-mental health nursing, consisted of five sessions which were each 3 hours in length. During the first session, an explanation was given as to the procedure to follow when rating ego identity status in each of the content areas. Copies of the Ego Identity Status Interview and the Manual for Ego Identity Status Types were given to each judge. The questions in the interview and the information contained in the manual were discussed. In the next two sessions, tape recorded identity status interviews, which were obtained from baccalaureate nursing students not participating in the study, were independently rated by each judge. Differences in assigned ratings were discussed. In the third training session, the judges were able to achieve 96% agreement as to the assignment of ratings.

During the fourth session, the categorization of responses in the Critical Incident Schedule was explained to the judges. Copies of the Critical Incident Schedule and the Types of Identified Stressors were given to each judge. The question on the schedule, the definition of each category, and examples of responses that would be appropriate in each category were discussed. In the last session, descriptions of stressful situations were independently categorized by each judge. There was 100% agreement as to the assignment of categories.

Administration and Scoring of Instruments

Subjects were individually interviewed for approximately 1 hour using the Ego Identity Status Interview. The day and time of the interview was arranged with each subject. All interviews were completed within 3 weeks. The interviews were held in a conference room so that privacy could be maintained, and every effort was made to establish and maintain rapport with the subjects in order to ensure their cooperation. Interviews were tape recorded, and the students were told beforehand:

This interview is being tape recorded so that three other persons, who are not connected with the school, can go over the data at a later time. After the data is reviewed, the tape recording will be erased. Everything that we talk about will be kept confidential. Do not mention any identifying information such as the names of persons. Write the last six numbers of your social security number on this tape. Please do not discuss this interview with anyone until the completion of the study.

The taped interviews were rated independently by two judges. The criteria, which were used by the judges to determine ego identity status in the content areas of occupation, religion, politics, sex role and sexual intercourse, are outlined in the Manual for Ego Identity Status Types (see Appendix C). The judges rated the responses of all the subjects to one content area at a time, instead of rating the responses of one subject to all the content areas at one time. The two judges achieved 100% agreement as to the assignment of ratings in the content areas of occupation, religion, politics, and sexual intercourse; and they achieved 92% agreement as to the assignment of ratings in the content area of sex role. When the judges disagreed as to ego identity status assignment, a third judge decided which one was the most appropriate.

Form X-1 of the State-Trait Anxiety Inventory, which measures state anxiety, was administered on Monday and Friday for 3 weeks. Form X-2 of the State-Trait Anxiety Inventory, which measures trait anxiety, was given on the first day of class. In accordance with the recommendation of Spielberger, Gorsuch, and Lushene (1970), the state anxiety scale (Form X-1) was administered before the trait anxiety scale (Form X-2). The rationale for doing this is that scores on the state anxiety scale could possibly be influenced by the emotional climate created if the trait anxiety scale is given first. The Institute for Personality

and Ability Testing Depression Scale was administered on Monday for 3 weeks, and the Critical Incident Schedule was given on Friday for 3 weeks. All of these instruments were administered by the author in a group setting. The subjects were told beforehand, "Please do not discuss the questionnaires or your responses with anyone until the completion of the study. In order to insure anonymity please write the last six numbers of your social security number on the completed forms instead of your name. Do not use any identifying information in the critical incidents such as the names of persons. The critical incidents will be read by three persons who are not connected with the school."

The State-Trait Anxiety Inventory and the Institute for Personality and Ability Testing Depression Scale were scored by the author. Stressors identified in the Critical Incident Schedule were classified independently by two judges using the four categories, namely academic, social, personal and clinical stressors, developed by Fox et al. (1965) which can be found in Appendix F. There was 100% agreement between the two judges as to category assignment of identified stressors in the Critical Incident Schedule.

Design and Statistical Analysis

A four group, ex post facto design was used. For hypothesis 1, the independent variables are ego identity status and curricular level of student, sophomore or senior, and the dependent variable is stressors. Each of the five

ego identity status content areas, occupational plans, religious beliefs, political attitudes, sex role attitudes, and personal standards for participation in sexual intercourse, and the data from sophomore and senior nursing students were analyzed separately.

The statistical analysis employed was analysis of variance with a repeated measures design. The significance level chosen was .05.

For hypotheses 2-4, the independent variables are ego identity status and curricular level of student, and the dependent variables are trait anxiety, state anxiety and depression. The five ego identity status content areas, occupational plans, religious beliefs, political attitudes, sex role attitudes, and personal standards for participation in sexual intercourse, were analyzed separately.

The statistical analysis employed was factorial analysis of variance for unequal frequencies in sub-classes, a two (sophomore and senior) by four (achievement, moratorium, foreclosure and diffusion) univariate ANOVA, with a significance level of .05. When significant differences were found for ego identity status groups, Scheffe's test of differences between means, with a significance level of .05, was used to determine which groups were significantly different from each other with regard to the dependent variables. Scheffe's test is considered to be a conservative

and stringent post-hoc comparison particularly when comparing data from groups of unequal size (Hays, 1973).

The Statistical Package for the Social Sciences, an integrated system of computer programs, was utilized to accomplish the statistical procedures in the study.

Summary

The hypotheses in Phase I of the study are concerned with whether or not there is a significant difference in stressors, trait anxiety, state anxiety and depression among sophomore and senior baccalaureate nursing students of different ego identity statuses. The subjects participating in this study were 42 sophomore and 34 senior baccalaureate nursing students in a private sectarian liberal arts college. They were individually interviewed using the Ego Identity Status Interview. Form X-1 of the State-Trait Anxiety Inventory, which measures state anxiety, was administered on Monday and Friday for 3 weeks; and Form X-2 of the State-Trait Anxiety Inventory, which measures trait anxiety, was given on the first day of class. The Institute for Personality and Ability Testing Depression Scale was administered on Monday for 3 weeks, and the Critical Incident Schedule was given on Friday for 3 weeks.

A four group, ex post facto design was used. The statistical analysis employed for the first hypothesis was analysis of variance with a repeated measures design; and for hypotheses 2-4 it was factorial analysis of variance for

unequal frequencies in sub-classes, a two (sophomore and senior) by four (achievement, foreclosure, moratorium and diffusion) univariate ANOVA. Post-hoc comparisons were made using Scheffe's test of differences between means. The level of significance chosen was .05.

Phase II

Hypotheses

The following null hypotheses were tested:

5. There is no significant difference in state anxiety, as assessed by Form X-1 of the State-Trait Anxiety Inventory, between sophomore and senior baccalaureate nursing students who received the stress management program and sophomore and senior baccalaureate nursing students who did not receive this program.
6. There is no significant difference in depression, as assessed by the Institute for Personality and Ability Testing Depression Scale, between sophomore and senior baccalaureate nursing students who received the stress management program and sophomore and senior baccalaureate nursing students who did not receive this program.

Selection of Subjects

The 76 subjects who took part in Phase I of the

study also participated in Phase II. Demographic data revealed that none of the students had previously utilized the coping strategies presented in the stress management program, namely relaxation skills and cognitive restructuring.

Instrumentation

The State-Trait Anxiety Inventory and the Institute for Personality and Ability Testing Depression Scale were described previously for Phase I of the study.

Procedure

The scores students received on Form X-1 of the State-Trait Anxiety Inventory and the Institute for Personality and Ability Testing Depression Scale during Phase I were utilized as pretest data for Phase II. Following Phase I of the study, subjects in each of the two groups of students, sophomores and seniors, were randomly assigned to either the group receiving the stress management program or the control group. The two experimental groups, one composed of sophomores and the other of seniors, were randomly divided further into sections so that stress management training was given to no more than nine subjects at any one time. The experimental groups convened in the same conference room at times convenient for the students. All instruction was provided by the author. The importance of not

discussing the study procedures prior to the completion of the investigation was emphasized.

The stress management program was divided into three phases: (a) education, (b) training, and (c) application. It consisted of six 50 minute sessions which convened twice a week over a period of three weeks (refer to Table 4).

The control group met with the experimental group during the education phase which consisted of the first 20 minutes of session 1. During this 20 minute period, each student received an envelope identified by her code number, which contained her own percentile ranks on the State-Trait Anxiety Inventory and the Institute for Personality and Ability Testing Depression Scale. The percentile ranks for undergraduate college students were derived from the subjects' raw scores on these instruments, which were acquired in Phase I of the study. These percentile ranks were discussed using the framework of the Schachter and Singer (1962) arousal-attribution model. It was explained that stress consists of physiological arousal; and that when an individual experiences stress, he/she attempts to identify the source of the arousal. Anxiety and depression were viewed as psychological responses to identified stressors, and were seen as being contingent upon appraising the situation as undesirable. The Schachter and Singer (1962) arousal-attribution model provided sound theoretical rationale for the stress management program. It concep-

Table 4
Stress Management Program

Phase	Session	Procedure	Rationale for Procedure
I. Education	1 (First 20 minutes)	<u>Discuss</u> percentile ranks on the State-Trait Anxiety Inventory and the Institute for Personality and Ability Testing Depression Scale using the framework of the Schachter and Singer (1962) arousal-attribution model.	Schachter and Singer's (1962) arousal-attribution model provides sound theoretical rationale for the stress management program. It conceptualizes stress from a psychological and physiological perspective. Application of the model is not limited to traumatic events, and it provides rationale for teaching relaxation skills and cognitive-restructuring as a means of reducing anxiety and depression resulting from identified stressors.
II. Training	1 (Last 30 minutes)	<u>Review</u> objectives and learning activities. <u>Explain</u> that relaxation training is aimed at control of physiological arousal and cognitive-restructuring involves substituting positive coping self-statements for anxiety and depression engendering	Orientation to the stress management program facilitates learning. Identification of own negative self-statements is essential before any attempt can be made to alter these anxiety and depression engendering thoughts.

Table 4 (cont'd)

Phase	Session	Procedure	Rationale for Procedure
		<p>thoughts. <u>Construct</u> personal stressor hierarchy. <u>Discuss</u> Ellis' (1962) formulation of irrational ideas. <u>Identify</u> own negative self-statements used in connection with identified stressors. <u>Discuss</u> why negative self-statements increase anxiety and depression.</p>	
	2	<p><u>Instruct</u> in breathing techniques and temperature biofeedback via audio cassettes developed by Procter (1977, 1978). <u>Monitor</u> peripheral body temperature with finger thermometer. <u>Identify</u> counter-arguments in connection with previously identified negative self-statements.</p>	<p>Shallow breathing and peripheral vasoconstriction are symptoms of stress. Full utilization of the lungs when breathing prevents short breaths. Monitoring peripheral body temperature, while utilizing such relaxation techniques as imagery, assists in acquiring the ability to relax smooth muscles and thus dilate peripheral blood vessels. Modifying negative self-statements tends to decrease anxiety and depression.</p>

Table 4 (cont'd)

Phase	Session	Procedure	Rationale for Procedure
3	<p><u>Instruct</u> in progressive muscle relaxation through tensing and releasing major muscle groups via audio cassette developed by Hartman (1976). <u>Identify</u> positive self-statements that would assist in preparing for a stressor, handling a stressor, coping with feelings of being overwhelmed, and reinforcing for coping.</p>	<p>Skeletal muscle tension is a symptom of stress. Tensing and releasing major muscle groups helps in recognizing when muscles are tense, and results in muscle relaxation. Identifying positive self-statements, which can be used in conjunction with stressful situations, is essential in preventing high levels of anxiety and depression.</p>	
4	<p><u>Instruct</u> in galvanic skin resistance biofeedback via audio cassette produced by Thought Technology Ltd. (1979). <u>Monitor</u> galvanic skin resistance.</p>	<p>Increased sweat gland activity and pore size are symptoms of stress. Monitoring galvanic skin resistance, while utilizing such relaxation techniques as autogenic phrases, aids in acquiring the ability to decrease perspiration and pore size.</p>	
5	<p><u>Instruct</u> in progressive muscle relaxation through mental command via audio</p>	<p>Relaxation of skeletal muscles through tension and release was presented</p>	

Table 4 (cont'd)

Phase	Session	Procedure	Rationale for Procedure
		cassette developed by Hartman (1976).	in session 3. Muscle relaxation through mental command is a more advanced and efficient procedure for achieving muscle relaxation.
	6 (First 30 minutes)	<u>Instruct</u> in combined <u>skeletal</u> and smooth muscle relaxation via audio cassette developed by Stroebel (1978).	Smooth muscle relaxation was presented in session 2, and skeletal muscle relaxation was taught in sessions 3 & 5. Combined skeletal and smooth muscle relaxation is an efficient procedure for achieving relaxation of both types of muscle.
III. Application	6 (Last 20 minutes)	<u>Visualize</u> least stressful situation identified in personal stressor hierarchy, and <u>use</u> cognitive-restructuring and relaxation coping skills at first sign of physiological arousal, anxiety, and/or depression. <u>Monitor</u> galvanic skin resistance to assist in identification of physiological arousal. <u>Repeat</u> this exercise until the situation	Systematic desensitization provides an effective means for practicing relaxation skills and cognitive-restructuring. Practice in applying acquired coping skills during the treatment session and to daily living situations results in the greatest benefit from stress management training.

Table 4 (cont'd)

Phase	Session	Procedure	Rationale for Procedure
		<p>can be imagined without experiencing stress reactions. <u>Repeat</u> this same procedure for each stressor identified in the hierarchy. <u>Apply</u> these coping strategies to real life situations.</p>	

tualized stress from a psychological and physiological perspective. Application of the model was not limited to traumatic events, and it provided rationale for teaching relaxation skills and cognitive-restructuring as a means of reducing anxiety and depression resulting from identified stressors.

The experimental group continued to meet for the training and application phases of the stress management program. The training phase consisted of the last 30 minutes of session 1, the total 50 minutes of sessions 2 through 5, and the first 30 minutes of session 6. During the last 30 minutes of session 1, the objectives and learning activities of the stress management program were reviewed in order to facilitate learning (see Appendix G). In addition, each participant was asked to construct her own personal stressor hierarchy, and identify negative self-statements (e.g., "I can't handle this.") used in connection with the identified stressors. In order to facilitate the identification of negative self-statements, Ellis' (1962) formulation of irrational ideas was discussed. Students were told that negative self-statements tend to increase anxiety and depression in response to a stressful situation. In addition, it was explained that relaxation training is aimed at control of physiological arousal, and that cognitive-restructuring involves substituting positive coping

self-statements for anxiety and depression engendering irrational thoughts.

During session 2, instruction was given in breathing techniques and temperature biofeedback via audio cassettes developed by Procter (1977, 1978). Each participant received a finger thermometer in order to monitor peripheral body temperature during the training session and for continued home practice. The students learned to fully utilize their lungs when inspiring in order to prevent shallow breathing, and they utilized imagery in conjunction with temperature biofeedback to acquire the ability to relax smooth muscles and thus dilate peripheral blood vessels.

Following this presentation, subjects were asked to identify counter-arguments in connection with the previously identified negative self-statements. Group discussion facilitated the identification of counter-arguments which could be used to decrease stress reactions.

In session 3, progressive relaxation through tension and relaxation of major muscle groups was presented by way of an audio cassette developed by Hartman (1976). Students learned to recognize when particular muscle groups were tense, and they were able to relax these muscles by tensing and releasing them. Each participant was encouraged to practice this relaxation technique at home. Following this instruction, group discussion focused on identifying positive self-statements that would assist each student in

preparing for a stressor, handling a stressor, coping with feelings of being overwhelmed, and reinforcing herself for coping.

During session 4, subjects received instruction in galvanic skin resistance biofeedback via an audio cassette produced by Thought Technology Ltd. (1979). Each participant received a galvanic skin resistance monitor which was used during the training session and for home practice. By monitoring galvanic skin resistance when utilizing autogenic phrases, students acquired the ability to decrease sweat gland activity and pore size.

In session 5, progressive muscle relaxation through mental command was presented by way of an audio cassette developed by Hartman (1976). The effective utilization of this technique to reduce physiological arousal and psychological responses to stressors was discussed by group members.

During the first 30 minutes of session 6, instruction was given in combined skeletal and smooth muscle relaxation via an audio cassette developed by Stroebel (1978). Through group discussion, students identified how they might utilize this technique.

The last 20 minutes of session 6 consisted of the application phase. Subjects were instructed to apply cognitive-restructuring and relaxation coping skills to stressful situations using systematic desensitization. Each

participant was asked to visualize the least stressful situation identified in her personal stressor hierarchy, and to use cognitive-restructuring and relaxation coping skills at the first sign of physiological arousal, anxiety and/or depression. Galvanic skin resistance was monitored to assist in the identification of physiological arousal. This exercise was repeated until the student could imagine the situation without experiencing stress reactions. The same procedure was repeated for each stressor identified in the hierarchy until the subject was able to visualize the most stressful situation without experiencing physiological arousal, anxiety and/or depression. Participants were also encouraged to apply cognitive-restructuring and relaxation coping skills in real life situations. Practice in applying acquired coping skills during the treatment session and to daily living situations assisted the students in utilizing these new skills.

Following the completion of the stress management program, Form X-1 of the State-Trait Anxiety Inventory (see Appendix D) was administered on Monday and Friday for 3 weeks, and the Institute for Personality and Ability Testing Depression Scale (see Appendix E) was given on Monday for 3 weeks. The procedure for administering and scoring these instruments was the same as that used in Phase I of the study (refer to the previous discussion concerning procedure for Phase I).

Design and Statistical Analysis

The randomized block, experimental group--control group, pretest-posttest design was used in Phase II. For hypotheses 5 & 6, the independent variable is treatment group, and the dependent variables are state anxiety and depression. The curricular level of the student was controlled through a randomized block design.

In order to determine if there was a significant difference between the pretest scores of the treatment group and the pretest scores of the control group, the pretest scores were statistically analyzed using analysis of variance. No significant difference was found between the pretest scores of the treatment group and the pretest scores of the control group. Therefore analysis of variance for the posttest scores was the method selected for statistical analysis. The level of significance used was .05.

Summary

The hypotheses in Phase II of the study are concerned with whether or not there is a significant difference in state anxiety and depression between sophomore and senior baccalaureate nursing students who received the stress management program and sophomore and senior baccalaureate nursing students who did not receive this program. The 76 subjects who took part in Phase I of the study also participated in Phase II. The scores students received on Form X-1

of the State-Trait Anxiety Inventory and the Institute for Personality and Ability Testing Depression Scale during Phase I were utilized as pretest data for Phase II.

Following Phase I of the study, subjects in each of the two groups of students, sophomores and seniors, were randomly assigned to either the experimental or the control group. The control group met with the experimental group during the education phase of the stress management program, but only the experimental group participated in the training and application phases of the program. Following the completion of the program, Form X-1 of the State-Trait Anxiety Inventory was administered to all of the subjects on Monday and Friday for 3 weeks, and the Institute for Personality and Ability Testing Depression Scale was given on Monday for 3 weeks.

The randomized block, experimental group--control group, pretest-posttest design was used in Phase II. The statistical analysis employed was analysis of variance for the posttest scores, with a significance level of .05.

CHAPTER IV

RESULTS

This chapter describes and summarizes the results of the statistical procedures employed in the study. For purposes of clarity, each hypothesis will be specified, followed by a presentation of the results. Additional findings will also be reported.

Hypothesis 1

- H₀ There is no significant difference in stressors, as assessed by the Critical Incident Schedule, among sophomore and senior baccalaureate nursing students of different ego identity statuses, as assessed by the Ego Identity Status Interview.

The results will be presented relative to the five identity content areas: religious beliefs, occupational plans, sex role attitudes, personal standards for participation in sexual intercourse, and political attitudes. Tables 5, 8, 10, 13 and 15 will be concerned with the mean and standard deviation of the stressor scores for each identity status: achievement, moratorium, foreclosure, and diffusion. Tables 6, 7, 9, 11, 12, 14, 16 and 17 will deal with the analysis of variance, with a repeated measures design, of the stressor scores.

The mean and standard deviation of the stressor scores of sophomores and seniors for each identity status related to religious beliefs are presented in Table 5. In the achievement status, sophomores had a mean academic stressor score of 2.238, a mean social stressor score of 2.143, a mean personal stressor score of 1.143, and a mean clinical stressor score of 0.000. Seniors in this identity status had a mean academic stressor score of 2.190, a mean social stressor score of 2.238, a mean personal stressor score of 1.190 and a mean clinical stressor score of 1.190. Moratorium sophomores had a mean academic stressor score of 2.357, a mean social stressor score of 2.929, a mean personal stressor score of 1.286, and a mean clinical stressor score of 0.071. Seniors in this identity status had a mean academic stressor score of 2.250, a mean social stressor score of 1.750, a mean personal stressor score of 0.500, and a mean clinical stressor score of 0.750. In the foreclosure status, sophomores had a mean academic stressor score of 2.714, a mean social stressor score of 3.000, a mean personal stressor score of 1.286, and a mean clinical stressor score of 0.286. Seniors in this identity status had a mean academic stressor score of 2.444, a mean social stressor score of 3.444, a mean personal stressor score of 1.111, and a mean clinical stressor score of 1.000. No student was in the diffusion status category.

Table 5
 Mean and Standard Deviation of the Stressor Scores
 of Sophomores and Seniors for Ego Identity: Religious Beliefs

Sophomore									
Ego Identity Status	N	Stressor							
		Academic		Social		Personal		Clinical	
		M	SD	M	SD	M	SD	M	SD
Achievement	21	2.238	1.411	2.143	1.740	1.143	0.910	0.000	0.000
Moratorium	14	2.357	1.336	2.929	2.303	1.286	0.914	0.071	0.267
Foreclosure	7	2.714	1.113	3.000	1.633	1.286	1.113	0.286	0.488
Diffusion	0								
Senior									
Achievement	21	2.190	1.123	2.238	1.411	1.190	1.289	1.190	0.873
Moratorium	4	2.250	2.062	1.750	0.957	0.500	1.000	0.750	0.957
Foreclosure	9	2.444	1.740	3.444	3.779	1.111	1.269	1.000	1.000
Diffusion	0								

Analysis of variance, with a repeated measures design and a significance level of .05, was used to test hypothesis 1. The results for sophomores are shown in Table 6. For the interaction effect between ego identity status and stressor, the F ratio was 0.37489 ($p = 0.894$) which is not significant. The results for seniors are reported in Table 7. For the interaction effect between ego identity status and stressor, the F ratio was 0.66292 ($p = 0.680$) which is not significant.

The mean and standard deviation of the stressor scores of subjects for each identity status related to occupational plans are presented in Table 8. In the achievement status, subjects had a mean academic stressor score of 2.234, a mean social stressor score of 2.702, a mean personal stressor score of 1.085, and a mean clinical stressor score of 0.447. Moratorium students had a mean academic stressor score of 3.500, a mean social stressor score of 2.500, a mean personal stressor score of 2.250, and a mean clinical stressor score of 0.750. In the foreclosure status, subjects had a mean academic stressor score of 2.280, a mean social stressor score of 2.200, a mean personal stressor score of 1.120, and a mean clinical stressor score of 0.640. No student was in the diffusion status category.

Analysis of variance, with a repeated measures design and a significance level of .05, was used to test

Table 6
 Analysis of Variance with Repeated Measures Design
 of the Stressor Scores of Sophomores
 for Ego Identity: Religious Beliefs

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Ego Identity Status	5.14881	2	2.57440	1.51048	0.233
Stressor	165.71429	3	55.23810	34.61693	0.000*
Ego Identity Status x Stressor	3.58929	6	0.59821	0.37489	0.894
Within Cell	66.47024	39	1.70437		
Error	186.69643	117	1.59570		
Total	427.61906	167	2.56059		

Note. (*) denotes F is statistically significant ($p \leq .05$).

Table 7
 Analysis of Variance with Repeated Measures Design
 of the Stressor Scores of Seniors
 for Ego Identity: Religious Beliefs

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Ego Identity Status	5.47356	2	2.73678	1.01609	0.374
Stressor	57.88235	3	19.29412	8.51979	0.000*
Ego Identity Status x Stressor	9.00753	6	1.50125	0.66292	0.680
Within Cell	83.49702	31	2.69345		
Error	210.61012	93	2.26462		
Total	366.47058	135	2.71460		

Note. (*) denotes F is statistically significant ($p \leq .05$).

Table 8
 Mean and Standard Deviation of the Stressor Scores
 for Ego Identity: Occupational Plans

Ego Identity Status	N	Stressor							
		Academic		Social		Personal		Clinical	
		M	SD	M	SD	M	SD	M	SD
Achievement	47	2.234	1.417	2.702	2.302	1.085	1.060	0.447	0.775
Moratorium	4	3.500	0.577	2.500	2.517	2.250	0.957	0.750	1.500
Foreclosure	25	2.280	1.208	2.200	1.500	1.120	1.054	0.640	0.757
Diffusion	0								

hypothesis 1. The results are shown in Table 9. Since there were only four subjects in the moratorium status, it was not possible to analyze sophomore and senior data separately. For the interaction effect between ego identity status and stressor, the F ratio was 0.81033 ($p = 0.563$) which is not significant.

The mean and standard deviation of the stressor scores of sophomores and seniors for each identity status related to sex role attitudes are presented in Table 10. In the achievement status, sophomores had a mean academic stressor score of 2.417, a mean social stressor score of 2.000, a mean personal stressor score of 1.417, and a mean clinical stressor score of 0.000. Seniors in this identity status had a mean academic stressor score of 2.286, a mean social stressor score of 2.905, a mean personal stressor score of 1.381, and a mean clinical stressor score of 1.048. Moratorium sophomores had a mean academic stressor score of 2.727, a mean social stressor score of 3.182, a mean personal stressor score of 1.545, and a mean clinical stressor score of 0.182. Seniors in this identity status had a mean academic stressor score of 3.000, a mean social stressor score of 2.000, a mean personal stressor score of 0.714, and a mean clinical stressor score of 1.143. In the foreclosure status, sophomores had a mean academic stressor score of 2.105, a mean social stressor score of 2.526, a mean personal stressor score of 0.895, and a mean clinical stressor

Table 9
 Analysis of Variance with Repeated Measures Design
 of the Stressor Scores
 for Ego Identity: Occupational Plans

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Ego Identity Status	6.67131	2	3.33566	1.55528	0.218
Stressor	206.31579	3	68.77193	36.03930	0.000*
Ego Identity Status x Stressor	9.27783	6	1.54630	0.81033	0.563
Within Cell	156.56553	73	2.14473		
Error	417.90638	219	1.90825		
Total	796.73684	303	2.62949		

Note. (*) denotes F is statistically significant ($p \leq .05$).

Table 10
 Mean and Standard Deviation of the Stressor Scores
 of Sophomores and Seniors for Ego Identity: Sex Role Attitude

Sophomore									
Ego Identity Status	N	Academic		Social		Personal		Clinical	
		M	SD	M	SD	M	SD	M	SD
Achievement	12	2.417	1.505	2.000	1.706	1.417	0.900	0.000	0.000
Moratorium	11	2.727	1.555	3.182	2.442	1.545	0.688	0.182	0.405
Foreclosure	19	2.105	1.049	2.526	1.712	0.895	0.994	0.053	0.229
Diffusion	0								
Senior									
Achievement	21	2.286	1.309	2.905	2.719	1.381	1.322	1.048	0.921
Moratorium	7	3.000	1.528	2.000	0.816	0.714	1.254	1.143	1.069
Foreclosure	6	1.333	1.033	1.667	1.211	0.500	0.548	1.167	0.753
Diffusion	0								

score of 0.895, and a mean clinical stressor score of 0.053. seniors in this identity status had a mean academic stressor score of 1.333, a mean social stressor score of 1.667, a mean personal stressor score of 0.500, and a mean clinical stressor score of 1.167. No student was in the diffusion status category.

Analysis of variance, with a repeated measures design and a significance level of .05, was used to test hypothesis 1. The results for sophomores are shown in Table 11. For the interaction effect between ego identity status and stressor, the F ratio was 0.71367 ($p = 0.639$) which is not significant. The results for seniors are reported in Table 12. For the interaction effect between ego identity status and stressor, the F ratio was 0.98462 ($p = 0.440$) which is not significant.

The mean and standard deviation of the stressor scores of subjects for each identity status related to personal standards for participation in sexual intercourse are presented in Table 13. In the achievement status, subjects had a mean academic stressor score of 2.053, a mean social stressor score of 2.111, a mean personal stressor score of 1.316, and a mean clinical stressor score of 0.763. Moratorium students had a mean academic stressor score of 3.200, a mean social stressor score of 3.800, a mean personal stressor score of 1.400, and a mean clinical stressor score of 0.600. In the foreclosure status, subjects had a

Table 11
 Analysis of Variance with Repeated Measures Design
 of the Stressor Scores of Sophomores
 for Ego Identity: Sex Role Attitudes

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Ego Identity Status	7.90812	2	3.95406	2.42044	0.102
Stressor	165.71429	3	55.23810	35.20700	0.000*
Ego Identity Status x Stressor	6.71833	6	1.11972	0.71367	0.639
Within Cell	63.71093	39	1.63361		
Error	183.56738	117	1.56895		
Total	427.61905	167	2.56059		

Note. (*) denotes F is statistically significant ($p \leq .05$).

Table 12
 Analysis of Variance with Repeated Measures Design
 of the Stressor Scores of Seniors
 for Ego Identity: Sex Role Attitudes

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Ego Identity Status	10.18487	2	5.09244	2.00373	0.152
Stressor	57.88235	3	19.29412	8.68936	0.000*
Ego Identity Status x Stressor	13.11765	6	2.18627	0.98462	0.440
Within Cell	78.78571	31	2.54147		
Error	206.50000	93	2.22043		
Total	366.47058	135	2.71460		

Note. (*) denotes F is statistically significant ($p \leq .05$).

Table 13
 Mean and Standard Deviation of the Stressor Scores
 for Ego Identity: Personal Standards for Participation in Sexual Intercourse

Ego Identity Status	N	Stressor							
		Academic		Social		Personal		Clinical	
		M	SD	M	SD	M	SD	M	SD
Achievement	38	2.053	1.272	2.111	2.232	1.316	1.165	0.763	0.943
Moratorium	5	3.200	1.789	3.800	2.683	1.400	0.894	0.600	0.894
Foreclosure	33	2.485	1.302	2.697	1.723	0.939	0.966	0.242	0.502
Diffusion	0								

mean academic stressor score of 2.485, a mean social stressor score of 2.697, a mean personal stressor score of 0.939, and a mean clinical stressor score of 0.242. No student was in the diffusion status category.

Analysis of variance, with a repeated measures design and a significance level of .05, was used to test hypothesis 1. The results are shown in Table 14. Since there were only five subjects in the moratorium status, it was not possible to analyze sophomore and senior data separately. For the interaction effect between ego identity status and stressor, the F ratio was 1.77311 ($p = 0.106$) which is not significant.

The mean and standard deviation of the stressor scores of sophomores and seniors for each identity status related to political attitudes are presented in Table 15. In the achievement status, sophomores had a mean academic stressor score of 2.778, a mean social stressor score of 1.889, a mean personal stressor score of 1.000, and a mean clinical stressor score of 0.000. Seniors in this identity status had a mean academic stressor score of 2.111, a mean social stressor score of 3.778, a mean personal stressor score of 1.556, and a mean clinical stressor score of 1.222. Foreclosed sophomores had a mean academic stressor score of 2.091, a mean social stressor score of 2.818, a mean personal stressor score of 1.364, and a mean clinical stressor score of 0.091. Seniors in this identity status had a mean

Table 14
 Analysis of Variance with Repeated Measures Design
 of the Stressor Scores
 for Ego Identity: Personal Standards for Participation in Sexual Intercourse

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Ego Identity Status	8.18959	2	4.09480	1.92793	0.153
Stressor	206.31579	3	68.77193	36.96928	0.000*
Ego Identity Status x Stressor	19.79047	6	3.29841	1.77311	0.106
Within Cell	155.04725	73	2.12393		
Error	407.39374	219	1.86025		
Total	796.73684	303	2.62949		

Note. (*) denotes F is statistically significant ($p \leq .05$).

Table 15
 Mean and Standard Deviation of the Stressor Scores
 of Sophomores and Seniors for Ego Identity: Political Attitudes

Sophomore									
Ego Identity Status	N	Academic		Social		Personal		Clinical	
		M	SD	M	SD	M	SD	M	SD
Achievement	9	2.778	1.481	1.889	1.616	1.000	0.866	0.000	0.000
Moratorium	1	3.000		0.000		1.000		0.000	
Foreclosure	11	2.091	1.375	2.818	1.250	1.364	1.206	0.091	0.302
Diffusion	21	2.286	1.271	2.810	2.272	1.238	0.831	0.095	0.301
Senior									
Achievement	9	2.111	1.453	3.778	3.866	1.556	1.130	1.222	0.972
Moratorium	0								
Foreclosure	14	2.357	1.393	2.143	1.099	0.500	0.760	0.857	0.770
Diffusion	11	2.273	1.421	1.909	1.136	1.455	1.572	1.273	1.009

academic stressor score of 2.357, a mean social stressor score of 2.143, a mean personal stressor score of 0.500, and a mean clinical stressor score of 0.857. In the diffusion status, sophomores had a mean academic stressor score of 2.286, a mean social stressor score of 2.810, a mean personal stressor score of 1.238, and a mean clinical stressor score of 0.095. Seniors in this identity status had a mean academic stressor score of 2.273, a mean social stressor score of 1.909, a mean personal stressor score of 1.455, and a mean clinical stressor score of 1.273. The one moratorium sophomore had an academic stressor score of 3.000, a social stressor score of 0.000, a personal stressor score of 1.000, and a clinical stressor score of 0.000. No senior was in this identity status.

Analysis of variance, with a repeated measures design and a significance level of .05, was used to test hypothesis 1. The results for sophomores are shown in Table 16. Since there was only one moratorium subject, the moratorium status category was eliminated from the data analysis. For the interaction effect between ego identity status and stressor, the F ratio was 0.88710 ($p = 0.507$) which is not significant. The results for seniors are reported in Table 17. For the interaction effect between ego identity status and stressor, the F ratio was 1.50258 ($p = 0.186$) which is not significant.

Table 16
 Analysis of Variance with Repeated Measures Design
 of the Stressor Scores of Sophomores
 for Ego Identity: Political Attitudes

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Ego Identity Status	0.96817	2	0.48408	0.26498	0.769
Stressor	165.60976	3	55.20325	35.72312	0.000*
Ego Identity Status x Stressor	8.22502	6	1.37084	0.88710	0.507
Within Cell	69.42208	38	1.82690		
Error	176.16522	114	1.54531		
Total	420.39025	163	2.57908		

Note. (*) denotes F is statistically significant ($p \leq .05$).

Table 17
 Analysis of Variance with Repeated Measures Design
 of the Stressor Scores of Seniors
 for Ego Identity: Political Attitudes

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Ego Identity Status	10.81474	2	5.40737	2.14480	0.134
Stressor	57.88235	3	19.29412	8.96239	0.000*
Ego Identity Status x Stressor	19.40841	6	3.23474	1.50258	0.186
Within Cell	78.15584	31	2.52116		
Error	200.20924	93	2.15279		
Total	366.47058	135	2.71460		

Note. (*) denotes F is statistically significant ($p \leq .05$).

These results indicate that there was no significant difference in stressors among students of different identity statuses in all of the content areas. Therefore, null hypothesis 1 is not rejected.

Hypothesis 2

H₀ There is no significant difference in trait anxiety, as assessed by Form X-2 of the State-Trait Anxiety Inventory, among sophomore and senior baccalaureate nursing students of different ego identity statuses, as assessed by the Ego Identity Status Interview.

The results will be presented relative to the five identity content areas: religious beliefs, occupational plans, sex role attitudes, personal standards for participation in sexual intercourse, and political attitudes. Tables 18, 20, 22, 25 and 27 will be concerned with the mean and standard deviation of the trait anxiety scores for each identity status: achievement, moratorium, foreclosure, and diffusion. Tables 19, 21, 23, 26 and 28 will deal with the analysis of variance of the trait anxiety scores. Table 24 will be related to a post-hoc comparison, Scheffe's test of differences between mean trait anxiety scores.

The mean and standard deviation of the trait anxiety scores of sophomores and seniors for each ego identity status related to religious beliefs are presented in Table 18. In the achievement status, for sophomores the mean was 34.000, for seniors it was 38.714. Foreclosed sophomores had a mean of 36.143, and for seniors it was 40.889. In the

Table 18
 Mean and Standard Deviation of the Trait Anxiety Scores
 of Sophomores and Seniors for Ego Identity: Religious Beliefs

Sophomore			
Ego Identity Status	N	Mean	Standard Deviation
Achievement	21	34.000	6.863
Moratorium	14	37.571	8.215
Foreclosure	7	36.143	6.842
Diffusion	0		
Senior			
Achievement	21	38.714	6.739
Moratorium	4	46.250	4.113
Foreclosure	9	40.889	10.612
Diffusion	0		

moratorium status, for sophomores the mean was 37.571, for seniors it was 46.250. No student was in the diffusion status category.

Analysis of variance, with a significance level of .05, was used to test hypothesis 2. The results are shown in Table 19. For identity status groups, the F ratio was 2.360 ($p = 0.102$) which is not significant.

The mean and standard deviation of the trait anxiety scores of subjects for each ego identity status related to occupational plans are presented in Table 20. Achieved subjects had a mean of 36.9574. Foreclosed students had a mean of 38.2000, and for moratorium subjects it was 41.7500. No student was in the diffusion status category.

Analysis of variance, with a significance level of .05, was used to test hypothesis 2. The results are shown in Table 21. The F ratio was 0.777 ($p = 0.4637$) which is not significant.

The mean and standard deviation of the trait anxiety scores of sophomores and seniors for each ego identity status related to sex role attitudes are presented in Table 22. In the achievement status, for sophomores the mean was 33.750, for seniors it was 38.619. Foreclosed sophomores had a mean of 34.105, and for seniors it was 36.833. In the moratorium status, for sophomores the mean was 40.000, for seniors it was 47.714. No student was in the diffusion status category.

Table 19
 Analysis of Variance of the Trait Anxiety Scores
 for Ego Identity: Religious Beliefs

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Ego Identity Status	267.083	2	133.542	2.360	0.102
Level of Student	516.318	1	516.318	9.126	0.004*
Ego Identity Status x Level of Student	40.052	2	20.026	0.354	0.703
Residual	3960.187	70	56.574		
Total	4669.910	75	62.265		

Note. (*) denotes F is statistically significant ($p \leq .05$).

Table 20
 Mean and Standard Deviation of the Trait Anxiety Scores
 for Ego Identity: Occupational Plans

Ego Identity Status	N	Mean	Standard Deviation
Achievement	47	36.9574	8.0783
Moratorium	4	41.7500	14.0801
Foreclosure	25	38.2000	6.3770
Diffusion	0		
Total	76	37.6184	7.8909

Table 21
 Analysis of Variance of the Trait Anxiety Scores
 for Ego Identity: Occupational Plans

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Between Groups	97.2969	2	48.6485	0.777	0.4637
Within Groups	4572.6577	73	62.6391		
Total	4669.9531	75			

Table 22
 Mean and Standard Deviation of the Trait Anxiety Scores
 of Sophomores and Seniors for Ego Identity: Sex Role Attitudes

Sophomore			
Ego Identity Status	N	Mean	Standard Deviation
Achievement	12	33.750	8.529
Moratorium	11	40.000	7.655
Foreclosure	19	34.105	5.415
Diffusion	0		
Senior			
Achievement	21	38.619	6.569
Moratorium	7	47.714	8.480
Foreclosure	6	36.833	7.026
Diffusion	0		

Analysis of variance, with a significance level of .05, was used to test hypothesis 2. The results are shown in Table 23. For identity status groups, the F ratio was 7.667 which is significant at 0.001.

The data was further analyzed using Scheffe's test of differences between means, with a significance level of .05. The results are reported in Table 24. The mean trait anxiety score of moratorium subjects is significantly higher than that of achieved and foreclosed subjects.

The mean and standard deviation of the trait anxiety scores of subjects for each ego identity status related to personal standards for participation in sexual intercourse are presented in Table 25. Achieved subjects had a mean of 36.3947. Foreclosed students had a mean of 38.3939, and for moratorium subjects it was 41.8000. No student was in the diffusion status category.

Analysis of variance, with a significance level of .05, was used to test hypothesis 2. The results are shown in Table 26. The F ratio was 1.330 ($p = 0.2708$), which is not significant.

The mean and standard deviation of the trait anxiety scores of sophomores and seniors for each ego identity status related to political attitudes are presented in Table 27. In the achievement status, for sophomores the mean was 31.556, for seniors it was 41.333. Foreclosed sophomores had a mean of 34.545, and for seniors it was 38.714. In the

Table 23
 Analysis of Variance of the Trait Anxiety Scores
 for Ego Identity: Sex Role Attitudes

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Ego Identity Status	756.912	2	378.456	7.667	0.001*
Level of Student	414.368	1	414.368	8.395	0.005*
Ego Identity Status x Level of Student	55.180	2	27.590	0.559	0.574
Residual	3455.230	70	49.360		
Total	4669.910	75	62.265		

Note. (*) denotes F is statistically significant ($p \leq .05$).

Table 24
 Scheffe's Test of Differences Between Mean Trait Anxiety Scores
 for Ego Identity: Sex Role Attitudes

Mean	Group	Group		
		3	1	2
34.7600	3			
36.8485	1			
43.0000	2	*	*	

Note. Group 1 is composed of subjects in the ego identity status of achievement, group 2 the moratorium status, and group 3 the foreclosure status. (*) denotes pairs of groups significantly different at the .05 level.

Table 25
 Mean and Standard Deviation of the Trait Anxiety Scores
 for Ego Identity: Personal Standards for Participation in Sexual Intercourse

Ego Identity Status	N	Mean	Standard Deviation
Achievement	38	36.3947	8.0322
Moratorium	5	41.8000	6.6231
Foreclosure	33	38.3939	7.7819
Diffusion	0		
Total	76	37.6184	7.8909

Table 26
 Analysis of Variance of the Trait Anxiety Scores
 for Ego Identity: Personal Standards for Participation in Sexual Intercourse

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Between Groups	164.1966	2	82.0983	1.330	0.2708
Within Groups	4505.7494	73	61.7226		
Total	4669.9453	75			

Table 27
 Mean and Standard Deviation of the Trait Anxiety Scores
 of Sophomores and Seniors for Ego Identity: Political Attitudes

Sophomore			
Ego Identity Status	N	Mean	Standard Deviation
Achievement	9	31.556	5.223
Moratorium	1	25.000	
Foreclosure	11	34.545	5.922
Diffusion	21	38.286	7.805
Senior			
Achievement	9	41.333	7.500
Moratorium	0		
Foreclosure	14	38.714	8.194
Diffusion	11	41.091	8.264

diffusion status, for sophomores the mean was 38.286, for seniors it was 41.091. The one moratorium sophomore had a score of 25.000. No senior was in this identity status.

Analysis of variance, with a significance level of .05, was used to test hypothesis 2. The results are shown in Table 28. Since there was only one moratorium subject, the moratorium status category was eliminated from the data analysis. For identity status groups, the F ratio was 1.989 ($p = 0.145$) which is not significant.

These results indicate that there was no significant difference in trait anxiety among students of different identity statuses in the content areas of religion, occupation, sexual intercourse, and politics. However, in the area of sex role, the mean trait anxiety score of moratorium subjects was significantly higher than that of achieved and foreclosed students. Therefore, null hypothesis 2 is rejected.

Hypothesis 3

- H₀. There is no significant difference in state anxiety, as assessed by Form X-1 of the State-Trait Anxiety Inventory, among sophomore and senior baccalaureate nursing students of different ego identity statuses, as assessed by the Ego Identity Status Interview.

The results will be presented relative to the five identity content areas: religious beliefs, occupational plans, sex role attitudes, personal standards for partici-

Table 28
 Analysis of Variance of the Trait Anxiety Scores
 for Ego Identity: Political Attitudes

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Ego Identity Status	218.643	2	109.322	1.989	0.145
Level of Student	452.347	1	452.347	8.229	0.005*
Ego Identity Status x Level of Student	141.737	2	70.868	1.289	0.282
Residual	3792.976	69	54.971		
Total	4508.563	74	60.927		

Note. (*) denotes F is statistically significant ($p \leq .05$).

pation in sexual intercourse, and political attitudes. Tables 29, 31, 33, 36 and 38 will be concerned with the mean and standard deviation of the state anxiety scores for each identity status: achievement, moratorium, foreclosure, and diffusion. Tables 30, 32, 34, 37 and 39 will deal with the analysis of variance of the state anxiety scores. Table 35 will be related to a post-hoc comparison, Scheffe's test of difference between mean state anxiety scores.

The mean and standard deviation of the state anxiety scores of sophomores and seniors for each ego identity status related to religious beliefs are presented in Table 29. In the achievement status, for sophomores the mean was 35.008, and for seniors it was 39.849. Foreclosed sophomores had a mean of 38.262, and for seniors it was 42.185. In the moratorium status, for sophomores the mean was 41.357, and for seniors it was 47.167. No student was in the diffusion status category.

Analysis of variance, with a significance level of .05, was used to test hypothesis 3. The results are shown in Table 30. The F ratio was 3.495 which is significant at 0.036.

The data was further analyzed using Scheffe's test of differences between means, with a significance level of .05. There was no significant difference in state anxiety among students of different identity statuses.

Table 29
 Mean and Standard Deviation of the State Anxiety Scores
 of Sophomores and Seniors for Ego Identity: Religious Beliefs

Sophomore			
Ego Identity Status	N	Mean	Standard Deviation
Achievement	21	35.008	6.783
Moratorium	14	41.357	7.339
Foreclosure	7	38.262	8.610
Diffusion	0		
Senior			
Achievement	21	39.849	10.638
Moratorium	4	47.167	8.416
Foreclosure	9	42.185	9.415
Diffusion	0		

Table 30
 Analysis of Variance of the State Anxiety Scores
 for Ego Identity: Religious Beliefs

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Ego Identity Status	524.258	2	262.129	3.495	0.036*
Level of Student	405.474	1	405.474	5.406	0.023*
Ego Identity Status x Level of Student	6.215	2	3.107	0.041	0.959
Residual	5250.066	70	75.001		
Total	6032.469	75	80.433		

Note. (*) denotes F is statistically significant ($p \leq .05$).

The mean and standard deviation state anxiety scores for each identity status related to occupational plans are presented in Table 31. Achieved subjects had a mean of 37.0886. Foreclosed students had a mean of 42.0799, and for moratorium subjects it was 48.000. No student was in the diffusion status category.

Analysis of variance, with a significance level of .05, was used to test hypothesis 3. The results are shown in Table 32. The F ratio was 4.992 which is significant at 0.0093.

The data was further analyzed using Scheffe's test of differences between means, with a significance level of .05. There was no significant difference in state anxiety among students of different identity statuses.

The mean and standard deviation of the state anxiety scores of sophomores and seniors for each ego identity status related to sex role attitudes are presented in Table 33. In the foreclosure status, for sophomores the mean was 33.860, for seniors it was 35.417. Achieved sophomores had a mean of 35.639, and for seniors it was 38.675. In the moratorium status, for sophomores the mean was 46.454, for seniors it was 54.357. No student was in the diffusion status category.

Analysis of variance, with a significance level of .05, was used to test hypothesis 3. The results are shown

Table 31
 Mean and Standard Deviation of the State Anxiety Scores
 for Ego Identity: Occupational Plans

Ego Identity Status	N	Mean	Standard Deviation
Achievement	47	37.0886	7.6785
Moratorium	4	48.0000	4.8419
Foreclosure	25	42.0799	10.2557
Diffusion	0		
Total	76	39.3048	8.9685

Table 32
 Analysis of Variance of the State Anxiety Scores
 for Ego Identity: Occupational Plans

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Between Groups	725.8149	2	362.9072	4.992	0.0093*
Within Groups	5306.7206	73	72.6948		
Total	6032.5352	75			

Note. (*) denotes F is statistically significant ($p \leq .05$).

Table 33
 Mean and Standard Deviation of the State Anxiety Scores
 of Sophomores and Seniors for Ego Identity: Sex Role Attitudes

Sophomore			
Ego Identity Status	N	Mean	Standard Deviation
Achievement	12	35.639	5.278
Moratorium	11	46.454	5.217
Foreclosure	19	33.860	6.027
Diffusion	0		
Senior			
Achievement	21	38.675	6.578
Moratorium	7	54.357	11.315
Foreclosure	6	35.417	6.237
Diffusion	0		

in Table 34. For identity status groups, the F ratio was 29.971 which is significant at 0.000.

The data was further analyzed using Scheffe's test of differences between means, with a significance level of .05. The results are reported in Table 35. The mean state anxiety score of moratorium subjects is significantly higher than that of achieved and foreclosed subjects.

The mean and standard deviation of the state anxiety scores of subjects for each ego identity status related to personal standards for participation in sexual intercourse are presented in Table 36. Achieved subjects had a mean of 38.4341. Foreclosed students had a mean of 39.0100, and for moratorium subjects it was 47.8667. No student was in the diffusion status category.

Analysis of variance, with a significance level of .05, was used to test hypothesis 3. The results are shown in Table 37. The F ratio was 2.579 ($p = 0.0827$), which is not significant.

The mean and standard deviation of the state anxiety score of sophomores and seniors for each ego identity status related to political attitudes are presented in Table 38. In the achievement status, for sophomores the mean was 35.037, for seniors it was 39.889. Foreclosed sophomores had a mean of 35.515, and for seniors it was 40.738. In the diffusion status, for sophomores the mean was 39.373, for

Table 34
 Analysis of Variance of the State Anxiety Scores
 for Ego Identity: Sex Role Attitudes

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Ego Identity Status	2620.748	2	1310.374	29.971	0.000*
Level of Student	249.294	1	249.294	5.702	0.020*
Ego Identity Status x Level of Student	99.270	2	49.635	1.135	0.327
Residual	3060.522	70	43.722		
Total	6032.469	75	80.433		

Note. (*) denotes F is statistically significant ($p \leq .05$).

Table 35
 Scheffe's Test of Differences Between Mean State Anxiety Scores
 for Ego Identity: Sex Role Attitudes

Mean	Group	Group		
		3	1	2
34.2333	3			
37.5706	1			
49.5277	2	*	*	

Note. Group 1 is composed of subjects in the ego identity status of achievement, group 2 the moratorium status, and group 3 the foreclosure status. (*) denotes pairs of groups significantly different at the .05 level.

Table 36
 Mean and Standard Deviation of the State Anxiety Scores
 for Ego Identity: Personal Standards for Participation in Sexual Intercourse

Ego Identity Status	N	Mean	Standard Deviation
Achievement	38	38.4341	7.0050
Moratorium	5	47.8667	7.3033
Foreclosure	33	39.0100	10.6145
Diffusion	0		
Total	76	39.3048	8.9685

Table 37
 Analysis of Variance of the State Anxiety Scores
 for Ego Identity: Personal Standards for Participation in Sexual Intercourse

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Between Groups	398.1793	2	199.0896	2.579	0.0827
Within Groups	5634.3246	73	77.1825		
Total	6032.5039	75			

Table 38
 Mean and Standard Deviation of the State Anxiety Scores
 of Sophomores and Seniors for Ego Identity: Political Attitudes

Sophomore			
Ego Identity Status	N	Mean	Standard Deviation
Achievement	9	35.037	5.777
Moratorium	1	49.167	
Foreclosure	11	35.515	8.344
Diffusion	21	39.373	7.540
Senior			
Achievement	9	39.889	7.075
Moratorium	0		
Foreclosure	14	40.738	13.617
Diffusion	11	43.257	7.061

seniors it was 43.257. The one moratorium sophomore had a score of 49.167. No senior was in this identity status.

Analysis of variance, with a significance level of .05, was used to test hypothesis 3. The results are shown in Table 39. Since there was only one moratorium subject, the moratorium status category was eliminated from the data analysis. For identity status groups, the F ratio was 1.461 ($p = 0.239$), which is not significant.

These results indicate that there was no significant difference in state anxiety among students of different identity statuses in the content areas of religion, occupation, sexual intercourse, and politics. However, in the area of sex role, the mean state anxiety score of moratorium subjects was significantly higher than that of achieved and foreclosed students. Therefore, null hypothesis 3 is rejected.

Hypothesis 4

H₀ There is no significant difference in depression, as assessed by the Institute for Personality and Ability Testing Depression Scale, among sophomore and senior baccalaureate nursing students of different ego identity statuses, as assessed by the Ego Identity Status Interview.

The results will be presented relative to the five identity content areas: religious beliefs, occupational plans, sex role attitudes, personal standards for participation in sexual intercourse, and political attitudes. Tables 40, 43, 46, 49 and 52 will be concerned with the mean

Table 39
 Analysis of Variance of the State Anxiety Scores
 for Ego Identity: Political Attitudes

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Ego Identity Status	229.153	2	114.577	1.461	0.239
Level of Student	376.517	1	376.517	4.803	0.032*
Ego Identity Status x Level of Student	6.367	2	3.184	0.041	0.960
Residual	5409.547	69	78.399		
Total	5933.918	74	80.188		

Note. (*) denotes F is statistically significant ($p \leq .05$).

and standard deviation of the depression scores for each identity status: achievement, moratorium, foreclosure, and diffusion. Tables 41, 44, 47, 50 and 53 will deal with the analysis of variance of the depression scores. Tables 42, 45, 48 and 51 will be related to a post-hoc comparison, Scheffe's test of differences between mean depression scores.

The mean and standard deviation of the depression scores of sophomores and seniors for each ego identity status related to religious beliefs are presented in Table 40. In the achievement status, for sophomores the mean was 8.9206, for seniors it was 11.2698. Foreclosed sophomores had a mean of 10.7143, and for seniors it was 19.1481. In the moratorium status, for sophomores the mean was 16.2143, for seniors it was 35.3333. No student was in the diffusion status category.

Analysis of variance, with a significance level of .05, was used to test hypothesis 4. The results are shown in Table 41. For identity status groups, the F ratio was 11.068 which is significant at 0.000.

The data was further analyzed using Scheffe's test of differences between means, with a significance level of .05. The results are reported in Table 42. The mean depression score of moratorium subjects is significantly higher than that of achieved subjects.

Table 40
 Mean and Standard Deviation of the Depression Scores
 of Sophomores and Seniors for Ego Identity: Religious Beliefs

Sophomore			
Ego Identity Status	N	Mean	Standard Deviation
Achievement	21	8.9206	5.5135
Moratorium	14	16.2143	8.6347
Foreclosure	7	10.7143	7.9196
Diffusion	0		
Senior			
Achievement	21	11.2698	5.1850
Moratorium	4	35.3333	10.7600
Foreclosure	9	19.1481	19.0606
Diffusion	0		

Table 41
 Analysis of Variance of the Depression Scores
 for Ego Identity: Religious Beliefs

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Ego Identity Status	1816.773	2	908.386	11.068	0.000*
Level of Student	784.801	1	784.801	9.562	0.003*
Ego Identity Status x Level of Student	690.445	2	345.222	4.206	0.019*
Residual	5744.973	70	82.071		
Total	8638.688	75	115.182		

Note. (*) denotes F is statistically significant ($p \leq .05$).

Table 42
 Scheffe's Test of Differences Between Mean Depression Scores
 for Ego Identity: Religious Beliefs

Mean	Group	Group		
		1	3	2
10.0952	1			
15.4583	3			
20.4629	2	*		

Note. Group 1 is composed of subjects in the ego identity status of achievement, group 2 the moratorium status, and group 3 the foreclosure status. (*) denotes pairs of groups significantly different at the .05 level.

The mean and standard deviation of the depression scores for each ego identity status related to occupational plans are presented in Table 43. Achieved subjects had a mean of 12.4822. Foreclosed students had a means of 13.8400, and for moratorium students it was 26.7500. No student was in the diffusion status category.

Analysis of variance, with a significance level of .05, was used to test hypothesis 4. The results are shown in Table 44. The F ratio was 3.477 which is significant at 0.0361.

The data was further analyzed using Scheffe's test of differences between means, with a significance level of .05. The results are reported in Table 45. The mean depression score of moratorium subjects is significantly higher than that of achieved subjects.

The mean and standard deviation of the depression scores of sophomores and seniors for each ego identity status related to sex role attitudes are presented in Table 46. In the foreclosure status, for sophomores the mean was 8.7719, for seniors it was 8.4444. Achieved sophomores had a mean of 9.4444, and for seniors it was 12.3492. In the moratorium status, for sophomores the mean was 19.0303, for seniors it was 34.3333. No student was in the diffusion status category.

Analysis of variance, with a significance level of .05, was used to test hypothesis 4. The results are shown

Table 43
 Mean and Standard Deviation of the Depression Scores
 for Ego Identity: Occupational Plans

Ego Identity Status	N	Mean	Standard Deviation
Achievement	47	12.4822	8.8051
Moratorium	4	26.7500	22.3994
Foreclosure	25	13.8400	10.8317
Diffusion	0		
Total	76	13.6798	10.7324

Table 44
 Analysis of Variance of the Depression Scores
 for Ego Identity: Occupational Plans

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Between Groups	751.3658	2	375.6829	3.477	0.0361*
Within Groups	7887.3948	73	108.0465		
Total	8638.7578	75			

Note. (*) denotes F is statistically significant ($p \leq .05$).

Table 45
 Scheffe's Test of Differences Between Mean Depression Scores
 for Ego Identity: Occupational Plans

Mean	Group	Group		
		1	3	2
12.4822	1			
13.8400	3			
26.7500	2	*		

Note. Group 1 is composed of subjects in the ego identity status of achievement, group 2 the moratorium status, and group 3 the foreclosure status. (*) denotes pairs of groups significantly different at the .05 level.

Table 46
 Mean and Standard Deviation of the Depression Scores
 of Sophomores and Seniors for Ego Identity: Sex Role Attitudes

Sophomore			
Ego Identity Status	N	Mean	Standard Deviation
Achievement	12	9.4444	5.7548
Moratorium	11	19.0303	8.7920
Foreclosure	19	8.7719	5.0308
Diffusion	0		
Senior			
Achievement	21	12.3492	6.6336
Moratorium	7	34.3333	17.7701
Foreclosure	6	8.4444	4.3750
Diffusion	0		

in Table 47. For identity status groups, the F ratio was 29.971 which is significant at 0.000.

The data was further analyzed using Scheffe's test of differences between means, with a significance level of .05. The results are reported in Table 48. The mean depression score of moratorium subjects is significantly higher than that of achieved and foreclosed subjects.

The mean and standard deviation of the depression scores of subjects for each ego identity status related to personal standards for participation in sexual intercourse are presented in Table 49. Achieved subjects had a mean of 12.0000. Foreclosed students had a mean of 13.3232, and for moratorium subjects it was 28.8000. No student was in the diffusion status category.

Analysis of variance, with a significance level of .05, was used to test hypothesis 4. The results are shown in Table 50. The F ratio was 6.201 which is significant at 0.0033.

The data was further analyzed using Scheffe's test for differences between means, with a significance level of .05. The results are reported in Table 51. The mean depression score of moratorium subjects is significantly higher than that of achieved and foreclosed subjects.

The mean and standard deviation of the depression scores of sophomores and seniors for each ego identity status related to political attitudes are presented in Table

Table 47
 Analysis of Variance of the Depression Scores
 for Ego Identity: Sex Role Attitudes

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Ego Identity Status	3172.736	2	1586.368	24.880	0.000*
Level of Student	450.511	1	450.511	7.066	0.010*
Ego Identity Status x Level of Student	616.186	2	308.093	4.832	0.011*
Residual	4463.270	70	63.761		
Total	8638.688	75	115.182		

Note. (*) denotes F is statistically significant ($p \leq .05$).

Table 48
 Scheffe's Test of Differences Between Mean Depression Scores
 for Ego Identity: Sex Role Attitudes

Mean	Group	Group		
		3	1	2
8.6933	3			
11.2929	1			
24.9814	2	*	*	

Note. Group 1 is composed of subjects in the ego identity status of achievement, group 2 the moratorium status, and group 3 the foreclosure status. (*) denotes pairs of groups significantly different at the .05 level.

Table 49
 Mean and Standard Deviation of the Depression Scores
 for Ego Identity: Personal Standards for Participation in Sexual Intercourse

Ego Identity Status	N	Mean	Standard Deviation
Achievement	38	12.0000	10.2054
Moratorium	5	28.8000	15.9958
Foreclosure	33	13.3232	8.8516
Diffusion	0		
Total	76	13.6798	10.7324

Table 50
 Analysis of Variance of the Depression Scores
 for Ego Identity: Personal Standards for Participation in Sexual Intercourse

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Between Groups	1254.5279	2	627.2639	6.201	0.0033*
Within Groups	7384.2317	73	101.1539		
Total	8638.7578	75			

Note. (*) denotes F is statistically significant ($p \leq .05$).

Table 51
 Scheffe's Test of Differences Between Mean Depression Scores
 for Ego Identity: Personal Standards for Participation in Sexual Intercourse

Mean	Group	Group		
		1	3	2
12.0000	1			
13.3232	3			
28.8000	2	*	*	

Note. Group 1 is composed of subjects in the ego identity status of achievement, group 2 the moratorium status, and group 3 the foreclosure status. (*) denotes pairs of groups significantly different at the .05 level.

52. In the achievement status, for sophomores the mean was 7.815, for seniors it was 15.963. Foreclosed sophomores had a mean of 9.636, and for seniors it was 12.524. In the diffusion status, for sophomores the mean was 14.127, for seniors it was 21.030. The one moratorium sophomore had a score of 16.333. No senior was in this identity status.

Analysis of variance, with a significance level of .05, was used to test hypothesis 4. The results are shown in Table 53. Since there was only one moratorium subject, the moratorium status category was eliminated from the data analysis. For identity status groups, the F ratio was 3.072 which is significant at 0.053.

The data was further analyzed using Scheffe's test of differences between means, with a significance level of .05. There was no significant difference in depression among students of different identity statuses.

These results indicate that there was no significant difference in depression among students of different identity statuses in the content area of politics. However, in the content areas of religion and occupation, the mean depression score of moratorium subjects was significantly higher than that of achieved students. In the content areas of sex role and sexual intercourse, the mean depression score of moratorium subjects was significantly higher than that of achieved and foreclosed students. Therefore, null hypothesis 4 is rejected.

Table 52
 Mean and Standard Deviation of the Depression Scores
 of Sophomores and Seniors for Ego Edentity: Political Attitudes

Sophomore			
Ego Identity Status	N	Mean	Standard Deviation
Achievement	9	7.815	5.145
Moratorium	1	16.333	
Foreclosure	11	9.636	6.069
Diffusion	21	14.127	8.660
Senior			
Achievement	9	15.963	10.024
Moratorium	0		
Foreclosure	14	12.524	9.763
Diffusion	11	21.030	18.317

Table 53
 Analysis of Variance of the Depression Scores
 for Ego Identity: Political Attitudes

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Ego Identity Status	665.796	2	332.898	3.072	0.053*
Level of Student	608.284	1	608.284	5.613	0.021*
Ego Identity Status x Level of Student	85.826	2	42.913	0.396	0.675
Residual	7478.121	69	108.379		
Total	8631.566	74	116.643		

Note. (*) denotes F is statistically significant ($p \leq .05$).

Hypothesis 5

- H₀ There is no significant difference in state anxiety, as assessed by Form X-1 of the State-Trait Anxiety Inventory, between sophomore and senior baccalaureate nursing students who received the stress management program and sophomore and senior baccalaureate nursing students who did not receive this program.

Table 54 will be concerned with the mean and standard deviation of the state anxiety scores at pretesting and posttesting for each treatment group: sophomore experimental, sophomore control, senior experimental, and senior control. Table 55 will deal with the analysis of variance for the state anxiety scores at pretesting, and Table 56 with the analysis of variance for the state anxiety scores at posttesting. Table 57 will be related to a correlated t-test for the mean state anxiety scores of each treatment group at pretesting and posttesting.

The mean and standard deviation of the state anxiety scores of each treatment group at pretesting and posttesting are presented in Table 54. The sophomore experimental group had a mean of 37.5475 at pretesting and 34.9761 at posttesting. The sophomore control group had a mean of 37.7856 at pretesting and 41.8888 at posttesting. The senior experimental group had a mean of 42.7549 at pretesting and 29.3627 at posttesting. The senior control group had a mean of 39.9019 at pretesting and 36.7368 at posttesting.

In order to determine if the experimental and control groups were comparable with regard to level of state

Table 54
 Mean and Standard Deviation of the State Anxiety Scores
 of Each Treatment Group at Pretesting and Posttesting

Treatment Group	N	Pretest		Posttest	
		M	SD	M	SD
Sophomore Experimental	21	37.5475	7.7885	34.9761	7.7027
Sophomore Control	21	37.7856	7.7226	41.8888	11.3248
Senior Experimental	17	42.7549	11.6382	29.3627	5.5968
Senior Control	17	39.9019	8.4321	39.9215	12.5280
Total	76	39.3048	8.9685	36.7368	10.6354

anxiety prior to the treatment, the pretest scores of the two groups were statistically analyzed using analysis of variance, with a significance level of .05. The results are shown in Table 55. For treatment groups the F ratio was 0.314 ($p = 0.577$), which is not significant. Therefore, no significant difference was found between the pretest scores of the experimental group and the pretest scores of the control group.

Analysis of variance for the posttest state anxiety scores, with a significance level of .05, was used to test hypothesis 5. The results are shown in Table 56. For treatment groups the F ratio was 14.763, which is significant at 0.000.

In order to examine the change scores for each group, the correlated t-test with a significance level of .05 was used. The results are presented in Table 57. The mean state anxiety score of the sophomore experimental group decreased, although not significantly, from pretesting to posttesting ($t = 1.47$, $p = 0.079$). There was a significant increase in the mean state anxiety score of the sophomore control group from pretesting to posttesting ($t = -2.44$, $p = 0.024$). The mean state anxiety score of the senior experimental group significantly decreased from pretesting to posttesting ($t = 6.76$, $p = 0.000$). There was no significant change in the mean state anxiety score of the senior control group from pretesting to posttesting ($t = -0.01$, $p = 0.994$).

Table 55
 Analysis of Variance for the State Anxiety Scores
 at Pretesting

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Treatment Group	24.903	1	24.903	0.314	0.577
Level of Student	251.928	1	251.928	3.176	0.079
Treatment Group x Level of Student	44.875	1	44.875	0.566	0.454
Residual	5710.762	72	79.316		
Total	6032.469	75	80.433		

Table 56
 Analysis of Variance for the State Anxiety Scores
 at Posttesting

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Treatment Group	1386.909	1	1386.909	14.763	0.000*
Level of Student	269.962	1	269.962	2.874	0.094
Treatment Group x Level of Student	62.457	1	62.457	0.665	0.418
Residual	6763.996	72	93.944		
Total	8483.328	75	113.111		

Note. (*) denotes F is statistically significant ($p \leq .05$).

Table 57
 Correlated T-Tests for the Mean State Anxiety Scores
 of Each Treatment Group at Pretesting and Posttesting

Sophomore Experimental Group						
	N	Mean	Standard Deviation	Degrees of Freedom	t-Ratio	Significance
Pretest	21	37.5476	7.789	20	1.47	0.079
Posttest	21	34.9762	7.703			
Sophomore Control Group						
Pretest	21	37.7857	7.723	20	-2.44	0.024*
Posttest	21	41.8889	11.325			
Senior Experimental Group						
Pretest	17	42.7549	11.638	16	6.76	0.000*
Posttest	17	29.3627	5.597			
Senior Control Group						
Pretest	17	39.9092	8.432	16	-0.01	0.994
Posttest	17	39.9216	12.528			

Note. (*) denotes t is statistically significant ($p \leq .05$).

These results indicate that the students who received the stress management program had a significantly lower mean state anxiety score than did subjects who did not receive the program. Therefore, null hypothesis 5 is rejected.

Hypothesis 6

- H₀ There is no significant difference in depression, as assessed by the Institute for Personality and Ability Testing Depression Scale, between sophomore and senior baccalaureate nursing students who received the stress management program and sophomore and senior baccalaureate nursing students who did not receive this program.

Table 58 will be concerned with the mean and standard deviation of the depression scores at pretesting and posttesting for each treatment group: sophomore experimental, sophomore control, senior experimental, and senior control. Table 59 will deal with the analysis of variance for the depression scores at pretesting, and Table 60 with the analysis of variance for the depression scores at posttesting. Table 61 will be related to a correlated t-test for the mean depression scores of each treatment group at pretesting and posttesting.

The mean and standard deviation of the depression scores of each treatment group at pretesting and posttesting are presented in Table 58. The sophomore experimental group had a mean of 11.6825 at pretesting and 7.4921 at posttesting. The sophomore control group had a mean of 11.6190

Table 58
 Mean and Standard Deviation of the Depression Scores
 of Each Treatment Group at Pretesting and Posttesting

Treatment Group	N	Pretest		Posttest	
		M	SD	M	SD
Sophomore Experimental	21	11.6825	8.4271	7.4921	6.7697
Sophomore Control	21	11.6190	7.0264	14.3968	12.3286
Senior Experimental	17	17.6078	14.1903	6.9020	6.1709
Senior Control	17	14.7647	12.6341	15.3912	14.7673
Total	76	13.6798	10.7323	11.0351	11.0568

at pretesting and 14.3968 at posttesting. The senior experimental group had a mean of 17.6078 at pretesting and 6.9020 at posttesting. The senior control group had a mean of 14.7647 at pretesting and 15.3912 at posttesting.

In order to determine if the experimental and control groups were comparable with regard to level of depression prior to the treatment, the pretest scores of the two groups were statistically analyzed using analysis of variance, with a significance level of .05. The results are shown in Table 59. For treatment groups the F ratio was 0.286 ($p = 0.595$), which is not significant. Therefore, no significant difference was found between the pretest scores of the experimental group and the pretest scores of the control group.

Analysis of variance for the posttest depression scores, with a significance level of .05, was used to test hypothesis 6. The results are reported in Table 60. For treatment groups the F ratio was 9.846, which is significant at 0.002.

In order to examine the change scores for each group, the correlated t-test with a significance level of .05 was used. The results are presented in Table 61. The mean depression score of the sophomore experimental group significantly decreased from pretesting to posttesting ($t = 5.06$, $p = 0.000$). There was no significant change in the mean depression score of the sophomore control group from

Table 59
 Analysis of Variance for the Depression Scores
 at Pretesting

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Treatment Group	32.461	1	32.461	0.286	0.595
Level of Student	386.497	1	386.497	3.400	0.069
Treatment Group x Level of Student	36.287	1	36.287	0.319	0.574
Residual	8183.441	72	113.695		
Total	8638.688	75	115.182		

Table 60
 Analysis of Variance for the Depression Scores
 at Posttesting

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Squares	F-Ratio	Significance
Treatment Group	1101.476	1	1101.476	9.846	0.002*
Level of Student	0.771	1	0.771	0.007	0.934
Treatment Group x Level of Student	11.810	1	11.810	0.106	0.746
Residual	8054.875	72	111.873		
Total	9168.934	75	122.252		

Note. (*) denotes F is statistically significant ($p \leq .05$).

Table 61
 Correlated T-Tests for the Depression Scores
 of Each Treatment Group at Pretesting and Posttesting

Sophomore Experimental Group						
	N	Mean	Standard Deviation	Degrees of Freedom	t-Ratio	Significance
Pretest	21	11.6825	8.427	20	5.06	0.000*
Posttest	21	7.4921	6.770			
Sophomore Control Group						
Pretest	21	11.6190	7.026	20	-1.53	0.142
Posttest	21	14.3968	12.329			
Senior Experimental Group						
Pretest	17	17.6078	14.190	16	5.22	0.000*
Posttest	17	6.9020	6.171			
Senior Control Group						
Pretest	17	14.7647	12.634	16	-0.41	0.686
Posttest	17	15.3922	14.767			

Note. (*) denotes t is statistically significant ($p \leq .05$).

pretesting to posttesting ($t = -1.53$, $p = 0.142$). The mean depression score of the senior experimental group significantly decreased from pretesting to posttesting ($t = 5.22$, $p = 0.000$). There was no significant change in the mean depression score of the senior control group from pretesting to posttesting ($t = -0.41$, $p = 0.686$).

These results indicate that the students who received the stress management program had a significantly lower mean depression score than subjects who did not receive the program. Therefore, null hypothesis 6 is rejected.

Additional Findings

The additional findings are concerned with ranking of identity content areas; stressors; and influence of curricular level on ego identity status, state-trait anxiety, depression, and treatment.

Ranking of Identity Content Areas

Each subject was asked to rank the five identity content areas from most to least important in terms of defining their own identity. The results are presented in Table 62. For the 1st rank, 53.9% of the students chose religion, 35.5% indicated occupation, 7.9% reported sex role, 2.6% stated sexual intercourse, and 0.0% noted politics. For the 2nd rank, 44.7% of the students chose occupation, 27.6% indicated sex role, 22.4% reported religion, 5.3% stated sexual intercourse, and 0.0% noted politics.

Table 62
 Percentage by Rank of Each Ego Identity Content Area
 for Sophomore and Senior Students

Ego Identity Content Area	Curricular Level of Student	Percentage Indicating Rank				
		1	2	3	4	5
Religious Beliefs	Sophomore	61.9	23.8	9.5	4.8	0.0
	Senior	44.1	20.6	23.5	8.8	2.9
	Total	53.9	22.4	15.8	6.6	1.3
Occupational Plans	Sophomore	35.7	45.2	14.3	4.8	0.0
	Senior	35.3	44.1	17.6	2.9	0.0
	Total	35.5	44.7	15.8	3.9	0.0
Sex Role Attitudes	Sophomore	2.4	23.8	47.6	26.2	0.0
	Senior	14.7	32.4	44.1	8.8	0.0
	Total	7.9	27.6	46.1	18.4	0.0
Personal Standards for Participation in Sexual Intercourse	Sophomore	0.0	7.1	28.6	52.4	11.9
	Senior	5.9	2.9	11.8	64.7	14.7
	Total	2.6	5.3	21.1	57.9	13.2
Political Attitudes	Sophomore	0.0	0.0	0.0	11.9	88.1
	Senior	0.0	0.0	2.9	14.7	82.4
	Total	0.0	0.0	1.3	13.2	85.5

For the 3rd rank, 46.1% chose sex role, 21.1% indicated sexual intercourse, 15.8% reported religion, 15.8% stated occupation, and 1.3% noted politics. For the 4th rank, 57.9% chose sexual intercourse, 18.4% indicated sex role, 13.2% reported politics, 6.6% stated religion, and 3.9% noted occupation. For the 5th rank, 85.5% chose politics, 13.2% indicated sexual intercourse, 1.3% reported religion, 0.0% stated sex role, and 0.0% noted occupation.

The overall ranking of the content areas from most to least important in terms of defining the identity of students is as follows: (a) religious beliefs, (b) occupational plans, (c) sex role attitudes, (d) personal standards for participation in sexual intercourse, and (e) political attitudes. It is interesting to note that the identity content area of politics was the only area in which any of the students were in the identity status of diffusion. Forty-two percent of the subjects were in this status.

Ego Identity Status and Ranking of Identity Content Areas

In order to determine if there was a significant difference between the mean ranking of identity content areas by subjects in each ego identity status, data was analyzed using Kruskal-Wallis one-way analysis of variance with a significance level of .05. The results for the ranking of religion are presented in Table 63. Achieved subjects had a mean ranking of 39.08. The mean ranking for

Table 63
 Kruskal-Wallis One-Way Analysis of Variance
 for Ranking of Religious Beliefs
 by Subjects in Each Ego Identity Status

Ego Identity Status for Content Area of Religious Beliefs	N	Mean Ranks
Achievement	42	39.08
Moratorium	18	42.22
Foreclosure	16	32.78
Total	76	

H = 1.614, p = 0.446

moratorium students was 42.22, and for foreclosed students it was 32.78. No student was in the diffusion status category. Analysis of the data yielded an H of 1.614 ($p = 0.446$), which is not significant.

The possible influence of the level of the student was also taken into consideration. The results for the ranking of religion by sophomore and senior subjects in each identity status are shown in Table 64. In the achievement status, for sophomores the mean ranking was 35.21, and for seniors it was 42.95. Moratorium sophomores had a mean of 34.04, and for seniors it was 70.88. In the foreclosure status, for sophomores the mean was 33.43, and for seniors it was 32.28. Analysis of the data yielded an H of 11.572 which is significant at 0.041. Seniors in the identity status of moratorium, for the content area of religion, ranked this area as significantly less important in terms of defining their own identity than did achieved and foreclosed seniors or sophomores in all three identity statuses.

The results for the ranking of occupation are reported in Table 65. Achieved subjects had a mean ranking of 35.76. The mean ranking for moratorium students was 35.00, and for foreclosed students it was 44.22. No student was in the diffusion status category. Analysis of the data yielded an H of 2.504 ($p = 0.286$), which is not significant.

The results for the ranking of sex role are presented in Table 66. Achieved subjects had a mean ranking of

Table 64
 Kruskal-Wallis One-Way Analysis of Variance
 for Ranking of Religious Beliefs by Sophomores and Seniors
 in Each Ego Identity Status

Sophomore		
Ego Identity Status for Content Area of Religious Beliefs	N	Mean Ranks
Achievement	21	35.21
Moratorium	14	34.04
Foreclosure	7	33.43
Senior		
Achievement	21	42.95
Moratorium	4	70.88
Foreclosure	9	32.28
Total	76	

H = 11.572, p = 0.041

Table 65
 Kruskal-Wallis One-Way Analysis of Variance
 for Ranking of Occupational Plans
 by Subjects in Each Ego Identity Status

Ego Identity Status for Content Area of Occupational Plans	N	Mean Ranks
Achievement	47	35.76
Moratorium	4	35.00
Foreclosure	25	44.22
Total	76	

H = 2.504, p = 0.286

Table 66
 Kruskal-Wallis One-Way Analysis of Variance
 for Ranking of Sex Role Attitudes
 by Subjects in Each Ego Identity Status

Ego Identity Status for Content Area of Sex Role Attitudes	N	Mean Ranks
Achievement	33	34.79
Moratorium	18	44.03
Foreclosure	25	39.42
Total	76	

H = 2.104, p = 0.345

$\bar{X} = 34.79$. The mean ranking for moratorium students was 44.03, and for foreclosed students it was 39.42. No student was in the diffusion status category. Analysis of the data yielded an H of 2.104 ($p = 0.345$), which is not significant.

The possible influence of the level of the student was also taken into consideration. The results for the ranking of sex role by sophomore and senior subjects in each identity status is shown in Table 67. In the achievement status, for sophomores the mean ranking was 36.00, and for seniors it was 34.10. Moratorium sophomores had a mean of 51.36, and for seniors it was 32.50. In the foreclosure status, for sophomores the mean was 44.26, and for seniors it was 24.08. Analysis of the data yielded an H of 9.090 ($p = 0.106$), which is not significant.

The results for the ranking of sexual intercourse are shown in Table 68. Achieved subjects had a mean ranking of 40.95. The mean ranking for moratorium students was 13.90, and for foreclosed students it was 39.41. No student was in the diffusion status category. Analysis of the data yielded an H of 6.727 which is significant at 0.035. Subjects in the identity status of moratorium, for the content area of sexual intercourse, ranked this area as significantly more important in terms of defining their own identity than did achieved and foreclosed students.

The results for the ranking of politics are reported in Table 69. Achieved subjects had a mean ranking of 32.44.

Table 67
 Kruskal-Wallis One-Way Analysis of Variance
 for Ranking of Sex Role Attitudes by Sophomores and Seniors
 in Each Ego Identity Status

Sophomore		
Ego Identity Status for Content Area of Sex Role Attitudes	N	Mean Ranks
Achievement	12	36.00
Moratorium	11	51.36
Foreclosure	19	44.26
Senior		
Achievement	21	34.10
Moratorium	7	32.50
Foreclosure	6	24.08
Total	76	

H = 9.090, p = 0.106

Table 68
 Kruskal-Wallis One-Way Analysis of Variance
 for Ranking of Personal Standards for Participation in Sexual Intercourse
 by Subjects in Each Ego Identity Status

Ego Identity Status for Content Area of Personal Standards for Participation in Sexual Intercourse	N	Mean Ranks
Achievement	38	40.95
Moratorium	5	13.90
Foreclosure	33	39.41
Total	76	

H = 6.727, p = 0.035

Table 69
 Kruskal-Wallis One-Way Analysis of Variance
 for Ranking of Political Attitudes
 by Subjects in Each Ego Identity Status

Ego Identity Status for Content Area of Political Attitudes	N	Mean Ranks
Achievement	18	32.44
Foreclosure	25	35.60
Diffusion	32	43.00
Total	75	

H = 3.157, p = 0.206

H = 9.088 (corrected for ties), p = 0.011

The mean ranking for foreclosed students was 35.60, and for diffused students it was 43.00. The one moratorium sophomore had a ranking of 6.50. No senior was in this identity status. Since there was only one moratorium subject, the moratorium status category was eliminated from the data analysis. Analysis of the data yielded an H of 9.088 (corrected for ties) which is significant at 0.011. Subjects in the identity status of diffusion, for the content area of politics, ranked this area as significantly less important in terms of defining their identity than did achieved and foreclosed students.

The possible influence of the level of the student was also taken into consideration. The results for the ranking of politics by sophomore and senior subjects in each identity status are shown in Table 70. In the achievement status, for sophomores the mean ranking was 34.78, and for seniors it was 30.11. Foreclosed sophomores had a mean of 36.27, and for seniors it was 35.07. For both sophomores and seniors in the identity status of diffusion, the mean was 43.00. Analysis of the data yielded an H of 3.382 ($p = 0.641$), which is not significant.

These results indicate that seniors in the identity status of moratorium, for the content area of religion, ranked this area as significantly less important in terms of defining their own identity than did achieved and foreclosed seniors or sophomores in all three identity statuses.

Table 70
 Kruskal-Wallis One-Way Analysis of Variance
 for Ranking of Political Attitudes by Sophomores and Seniors
 in Each Ego Identity Status

Sophomore		
Ego Identity Status for Content Area of Political Attitudes	N	Mean Ranks
Achievement	9	34.78
Foreclosure	11	36.27
Diffusion	21	43.00
Senior		
Achievement	9	30.11
Foreclosure	14	35.07
Diffusion	11	43.00
Total	75	

H = 3.382, p = 0.641

Subjects in the identity status of moratorium, for the content area of sexual intercourse, ranked this area as significantly more important in terms of defining their own identity than did achieved and foreclosed students. Students in the identity status of diffusion, for the content area of politics, ranked this area as significantly less important in terms of defining their identity than did achieved and foreclosed subjects.

Ego Identity Status and Curricular Level

In order to determine if there was significant relationship between the frequency of subjects in each ego identity status and the curricular level of students, data was analyzed using chi square with a significance level of .05. Due to an insufficient number of subjects in each identity status, the only content area which could be analyzed was sex role.

The results are presented in Table 71. Chi square was 9.36509 with 2 degrees of freedom, which is significant at 0.0093. It should be noted that 45.2% of the sophomores were foreclosed, whereas 17.6% of the seniors were in this identity status. In addition, 61.8% of the seniors were achieved, whereas 28.6% of the sophomores were in this identity status. Approximately the same percentage of sophomores and seniors were in the identity status of moratorium, 26.2% of the sophomores and 20.6% of the seniors.

Table 71
 Frequency of Subjects in Ego Identity Statuses:
 Sex Role Attitudes

Level	Count	Achieved	Moratorium	Foreclosure	Raw Total
	Raw Percent				
	Column Percent				
	Total Percent				
Sophomore		12	11	19	42
		28.6	26.2	45.2	55.3
		36.4	61.1	76.0	
		15.8	14.5	25.0	
Senior		21	7	6	34
		61.8	20.6	17.6	44.7
		63.6	38.9	24.0	
		27.6	9.2	7.9	
	Column Total	33	18	25	76
		43.4	23.7	32.9	100.0

Note. Chi Square = 9.36509 with 2 d.f., p = 0.0093

Therefore, there was a significant relationship between the frequency of subjects in each ego identity status and the curricular level of students. For the content area of sex role, a higher percentage of seniors as compared to sophomores were in the identity status of achievement, and a higher percentage of sophomores as compared to seniors were in the identity status of foreclosure.

Curricular Level, Ego Identity Status and Stressors

A number of additional findings should be noted which are based on prior analysis of the data. The mean and standard deviation of the stressor scores of subjects for each identity status related to the five content areas were presented in Tables 5, 8, 10, 13 and 15. The results of the analysis of variance for the stressor scores of sophomores in the content area of religion were shown in Table 6. For ego identity status, the F ratio was 1.51048 ($p = 0.233$) which is not significant. The results of the analysis of variance for the stressor scores of seniors in this content area were reported in Table 7. For ego identity status, the F ratio was 1.01609 ($p = 0.374$) which is not significant.

The results of the analysis of variance for the stressor scores in the content area of occupation were shown in Table 9. For ego identity status, the F ratio was 1.55528 ($p = 0.218$) which is not significant.

In the content area of sex role attitudes, the results of the analysis of variance for the stressor scores

of sophomores were presented in Table 11. For ego identity status, the F ratio was 2.42044 ($p = 0.102$) which is not significant. The results of the analysis of variance for the stressor scores of seniors in this content area were shown in Table 12. For ego identity status, the F ratio was 2.00373 ($p = 0.152$) which is not significant.

The results of the analysis of variance for the stressor scores in the content area of sexual intercourse were reported in Table 14. For ego identity status, the F ratio was 1.92793 ($p = 0.153$) which is not significant.

In the content area of political attitudes, the results of the analysis of variance for the stressor scores of sophomores were shown in Table 16. For ego identity status, the F ratio was 0.26498 ($p = 0.769$) which is not significant. The results of the analysis of variance for the stressor scores of seniors in this content area were presented in Table 17. For ego identity status, the F ratio was 2.14480 ($p = 0.134$) which is not significant.

These results indicate that there was no significant difference in the level of stressors among sophomore and senior students of different identity statuses.

Stressors

The mean academic, social, personal, and clinical stressor scores are as follows: 2.3158, 2.5263, 1.1579, and 0.5263. The results of the analysis of variance for the stressor scores of sophomores in the content area of reli-

gion were shown in Table 6. For stressor, the F ratio was 34.61693, which is significant at 0.000. The results of the analysis of variance for the stressor scores of seniors in this content area were reported in Table 7. For stressor, the F ratio was 8.51979, which is significant at 0.000.

The results of the analysis of variance for the stressor scores in the content area of occupation were shown in Table 9. For stressor, the F ratio was 36.03930, which is significant at 0.000.

In the content area of sex role attitudes, the results of the analysis of variance for the stressor scores of sophomores were presented in Table 11. For stressor, the F ratio was 35.20700, which is significant at 0.000. The results of the analysis of variance for the stressor scores of seniors in this content area were shown in Table 12. For stressor, the F ratio was 8.68936, which is significant at 0.000.

The results of the analysis of variance for the stressor scores in the content area of sexual intercourse were reported in Table 14. For stressor, the F ratio was 36.96928, which is significant at 0.000.

In the content area of political attitudes, the results of the analysis of variance for the stressor scores of sophomores were shown in Table 16. For stressor, the F ratio was 35.72312, which is significant at 0.000. The results of the analysis of variance for the stressor scores

of seniors in this content area were presented in Table 17. For stressor, the F ratio was 8.96239, which is significant at 0.000.

The data was further analyzed using the correlated t-test, with a significance level of .05. The results are reported in Table 72. The t-ratio for academic and social stressors was -0.75 ($p = 0.455$) which is not significant. For academic and personal stressors, the t-ratio was 6.06 which is significant at 0.000. The t-ratio for academic and clinical stressors was 10.05 which is significant at 0.000. For social and personal stressors, the t-ratio was 5.22 which is significant at 0.000. The t-ratio for social and clinical stressors was 7.75 which is significant at 0.000. For personal and clinical stressors, the t-ratio was 4.78 which is significant at 0.000.

These results indicate that the students experienced significantly more academic and social stressors than personal and clinical stressors, and they identified significantly fewer clinical stressors than any of the other stressor types.

It is interesting to note that sophomores identified only 3 clinical stressors, whereas seniors identified 37 clinical stressors.

Curricular Level, Ego Identity Status and Trait Anxiety

The sophomores had a mean trait anxiety score of

Table 72
Correlated T-Tests for Mean Stressor Scores

Stressor	N	Mean	Standard Deviation	Degrees of Freedom	T-Ratio	Significance
Academic	76	2.3158	1.339	75	-0.75	0.455
Social		2.5263	2.069			
Academic	76	2.3158	1.339	75	6.06	0.000*
Personal		0.5263	1.808			
Academic	76	2.3158	1.339	75	10.05	0.000*
Clinical		1.1579	1.071			
Social	76	2.5263	2.069	75	5.22	0.000*
Personal		1.1579	1.071			
Social	76	2.5263	2.069	75	7.75	0.000*
Clinical		0.5263	0.808			
Personal	76	0.1579	1.071	75	4.78	0.000*
Clinical		0.5263	0.808			

Note. (*) denotes t is statistically significant ($p \leq .05$).

35.5476, and the seniors had a mean of 40.1765. The results of the analysis of variance for the trait anxiety scores in the content area of religion were shown in Table 19. For curricular level of student, the F ratio was 9.126 which is significant at 0.004. For the interaction effect between identity status group and curricular level of student, the F ratio was 0.354 ($p = 0.703$) which is not significant.

The results of the analysis of variance for the trait anxiety scores in the content area of sex role were reported in Table 23. For curricular level of student, the F ratio was 8.395 which is significant at 0.005. For the interaction effect between identity status group and curricular level of student, the F ratio was 0.559 ($p = 0.574$) which is not significant.

The results of the analysis of variance for the trait anxiety scores in the content area of politics were shown in Table 28. For curricular level of student, the F ratio was 8.229 which is significant at 0.005. For the interaction effect between identity status group and curricular level of student, the F ratio was 1.289 ($p = 0.282$) which is not significant.

These results indicate that the senior students had a significantly higher mean trait anxiety score than did the sophomore subjects, but there was no significant interaction effect between ego identity status and curricular level of student with regard to trait anxiety.

Curricular Level, Ego Identity Status and State Anxiety

The sophomores had a mean state anxiety score of 37.6664, and the seniors had a mean of 41.3294. The results of the analysis of variance for the state anxiety scores in the content area of religion were shown in Table 30. For curricular level of student, the F ratio was 5.406 which is significant at 0.023. For the interaction effect between identity status group and curricular level of student, the F ratio was 0.041 ($p = 0.959$) which is not significant.

The results of the analysis of variance for the state anxiety scores in the content area of sex role were reported in Table 34. For curricular level of student, the F ratio was 5.702 which is significant at 0.020. For the interaction effect between identity status group and curricular level of student, the F ratio was 1.135 ($p = 0.327$) which is not significant.

The results of the analysis of variance for the state anxiety scores in the content area of politics were shown in Table 39. For curricular level of student, the F ratio was 4.803 which is significant at 0.032. For the interaction effect between identity status group and curricular level of student, the F ratio was 0.041 ($p = 0.960$) which is not significant.

These results indicate that the senior students had a significantly higher mean state anxiety score than did the

sophomore subjects, but there was no significant interaction effect between ego identity status and curricular level of student with regard to state anxiety.

Curricular Level, Ego Identity Status and Depression

The sophomores had a mean depression score of 11.6510, and the seniors had a mean of 16.1794. The results of the analysis of variance for the depression scores in the content area of religion were shown in Table 41. For curricular level of student, the F ratio was 9.562 which is significant at 0.003. For the interaction effect between identity status group and curricular level of student, the F ratio was 4.206 which is significant at 0.019. The data was further analyzed using Scheffe's test of differences between means, with a significance level of .05. The results are reported in Table 73. The mean depression score of moratorium seniors is significantly higher than that of achieved seniors or sophomores in all three identity statuses.

The results of the analysis of variance for the depression scores in the content area of sex role were shown in Table 47. For curricular level of student, the F ratio was 7.066 which is significant at 0.010. For the interaction effect between identity status group and curricular level of student, the F ratio was 4.832 which is significant at 0.011. The data was further analyzed using Scheffe's test of differences between means, with a significance level of .05. The results are reported in Table 74. The mean

Table 73
 Scheffe's Test of Differences Between Mean Depression Scores
 of Groups, Based on Curricular Level and Ego Identity Status:
 Religious Beliefs

Mean	Group	Group					
		1	3	4	2	6	5
8.9206	1						
10.7143	3						
11.2698	4						
16.2143	2						
19.1481	6						
35.3333	5	*	*	*	*		

Note. Group 1 is composed of sophomores in the ego identity status of achievement, group 2 are sophomores in the moratorium status, group 3 are sophomores in the foreclosure status, group 4 are seniors in the achievement status, group 5 are seniors in the moratorium status, and group 6 are seniors in the foreclosure status. (*) denotes pairs of groups significantly different at the .05 level.

Table 74
 Scheffe's Test of Differences Between Mean Depression Scores
 of Groups, Based on Curricular Level and Ego Identity Status:
 Sex Role Attitudes

Mean	Group	Group					
		6	3	1	4	2	5
8.444	6						
8.7719	3						
9.4444	1						
12.3492	4						
19.0303	2						
34.3333	5	*	*	*	*	*	

Note. Group 1 is composed of sophomores in the ego identity status of achievement, group 2 are sophomores in the moratorium status, group 3 are sophomores in the foreclosure status, group 4 are seniors in the achievement status, group 5 are seniors in the moratorium status, and group 6 are seniors in the foreclosure status. (*) denotes pairs of groups significantly different at the .05 level.

depression score of moratorium seniors is significantly higher than that of achieved and foreclosed seniors or sophomores in all three identity statuses.

The results of the analysis of variance for the depression scores in the content area of politics were presented in Table 53. For curricular level of student, the F ratio was 5.613 which is significant at 0.021. For the interaction effect between identity status group and curricular level of student, the F ratio was 0.396 ($p = 0.675$) which is not significant.

These results indicate that the senior students had a significantly higher mean depression score than did the sophomore subjects; and in the content areas of religion and sex role, there was a significant interaction effect between ego identity status and curricular level of student with regard to depression. In the content area of religion, moratorium seniors had a significantly higher mean depression score than did achieved seniors or sophomores in all three identity statuses. In the content area of sex role, moratorium seniors had a significantly higher mean depression score than did achieved and foreclosed seniors or sophomores in all three identity statuses.

Treatment and Curricular Level

The results of the analysis of variance for the state anxiety scores at posttesting were shown in Table 56. For the interaction effect between treatment group and

curricular level of student, the F ratio was 0.665 ($p = 0.418$) which is not significant. Therefore there was no significant interaction effect between treatment and curricular level of student with regard to state anxiety.

The results of the analysis of variance for the depression scores at posttesting were reported in Table 60. For the interaction effect between treatment group and curricular level of student, the F ratio was 0.106 ($p = 0.746$) which is not significant. Therefore there was no significant interaction effect between treatment and curricular level of student with regard to depression.

Summary

Major and additional findings of the study are delineated below.

Major Findings

1. There was no significant difference in stressors among students of different identity statuses in all of the content areas.
2. There was no significant difference in trait and state anxiety among students of different ego identity statuses in the content areas of religion, occupation, sexual intercourse, and politics.
3. In the content area of sex role, the trait and state anxiety of moratorium students was sig-

nificantly higher than that of achieved and foreclosed subjects.

4. There was no significant difference in depression among students of different ego identity statuses in the content area of politics.
5. In the content areas of religion and occupation, the depression of moratorium students was significantly higher than that of achieved subjects.
6. In the content areas of sex role and sexual intercourse, the depression of moratorium students was significantly higher than that of achieved and foreclosed subjects.
7. Sophomore and senior baccalaureate nursing students who received the stress management program experienced significantly less anxiety and depression than did students who did not receive this program.

Additional Findings

1. The overall ranking of the identity content areas from most to least important in terms of defining the identity of students is as follows: (a) religious beliefs, (b) occupational plans, (c) sex role attitudes, (d) personal standards for participation in sexual intercourse, and (e) political attitudes.

2. The identity content area of politics was the only area in which any of the students were in the ego identity status of diffusion.
3. Seniors in the identity status of moratorium, for the content area of religion, ranked this area as significantly less important in terms of defining their own identity than did achieved and foreclosed seniors or sophomores in all three identity statuses.
4. Subjects in the identity status of moratorium, for the content area of sexual intercourse, ranked this area as significantly more important in terms of defining their own identity than did achieved and foreclosed students.
5. Students in the identity status of diffusion, for the content area of politics, ranked this area as significantly less important in terms of defining their identity than did achieved and foreclosed students.
6. For the content area of sex role, a significantly higher percentage of seniors as compared to sophomores were in the identity status of achievement, and a significantly higher percentage of sophomores as compared to seniors were in the identity status of foreclosure.

7. There was no significant difference in the level of stressors among sophomore and senior students of different identity statuses.
8. The students experienced significantly more academic and social stressors than personal and clinical stressors, and they identified significantly fewer clinical stressors than any of the other stressors.
9. The senior students experienced significantly greater trait anxiety, state anxiety, and depression than did the sophomore students.
10. There was no significant interaction effect between ego identity status and curricular level of student with regard to trait and state anxiety.
11. In the content area of politics, there was no significant interaction effect between ego identity status and curricular level of student with regard to depression.
12. In the content area of religion, moratorium seniors experienced significantly greater depression than did achieved seniors or sophomores in all three identity statuses.
13. In the content area of sex role, moratorium seniors experienced significantly greater depression than did achieved and foreclosed

seniors or sophomores in all three identity statuses.

14. There was no significant interaction effect between treatment and curricular level of student with regard to state anxiety and depression.

CHAPTER V

CONCLUSIONS, IMPLICATIONS

AND RECOMMENDATIONS

This chapter will include a discussion of the conclusions of the study, implications, recommendations for further research, and summary.

Conclusions of the Study

Erikson (1963) felt that searching for identity was the most important developmental crisis. If it is assumed that the late adolescent strives toward achieving a sense of identity, one would expect more senior nursing students than sophomores to be in the ego identity status of achievement and the reverse to be true for the identity status of foreclosure. This in fact was the case for the identity content area of sex role. It was not feasible to determine if this was true for the remainder of the content areas, because of an insufficient number of subjects in each identity status.

According to Schenkel and Marcia (1972), identity formation among women is more related to issues of sexuality and religion than to those of occupation and politics. In this study, the nursing students ranked the identity content areas from most to least important in terms of defining

their identity as follows: (a) religion, (b) occupation, (c) sex role, (d) sexual intercourse, and (e) politics. Why is occupation ranked second? An obvious explanation for this finding is the fact that these students have elected a career oriented major in nursing. Occupational plans therefore hold great significance for them in terms of their professional identity as a nurse.

In this study, the identity content area of politics was the only area in which any of the students were in the ego identity status of diffusion. Almost half, 42.1%, of the students were in this identity status. Since students who are in the identity status of diffusion for politics are not concerned about political or social issues, one would expect them to rank politics as less important in terms of defining their identity than achieved and foreclosed students. Such was the case in this study.

One might ask why none of these students were in the ego identity status of diffusion in the content areas of religion, occupation, sex role, and sexual intercourse. One possible explanation is provided by the finding that identity achieved and foreclosed students tend to choose more difficult college majors than do moratorium and diffused students (Cross & Allen, 1970). The nursing curriculum is a challenging and difficult course of study.

There was no significant interaction effect between ego identity status and stressor, and there was no signifi-

cant difference in the level of stressors among subjects of different identity statuses. Apparently, students in the different identity statuses experience the same stressors.

The senior students had higher levels of trait anxiety, state anxiety, and depression than did the sophomore students. This could be due to the fact that seniors experienced more clinical stressors than did sophomores. Elfert (1976) found that nursing students at the University of British Columbia in Canada did not identify clinical stressors at the beginning of their program. However, later in the nursing program, students perceived the greatest source of stress to be that of clinical practice. Davitz (1972) also found that Nigerian students viewed clinical experience as most stressful.

It might be helpful at this point to contrast the clinical experience of the sophomore subjects with that of the seniors. Sophomores conducted psychological, social and spiritual assessment interviews with well individuals in the community. Seniors were responsible for providing total nursing care to emotionally disturbed patients in an acute psychiatric hospital setting. They functioned in a variety of roles: teacher, counselor, collaborator, change agent, client advocate, and leader. It is not surprising that the seniors would identify more clinical stressors than the sophomores, because they have increased responsibility in an acute care setting. The additional stress caused by this

could explain why seniors experienced higher levels of anxiety and depression than did sophomores.

Schenkel and Marcia (1972) found that in the content areas of religion and sexual intercourse, female students in the identity statuses of achievement and foreclosure experienced less trait anxiety than did students in the moratorium and diffusion identity statuses. In this study, there was no significant difference in either trait or state anxiety among students of different identity statuses in the content areas of religion, occupation, sexual intercourse, and politics. However, in the content area of sex role, the students in the identity status of moratorium experienced more trait and state anxiety than achieved and foreclosed subjects. This finding points out the importance of sex role attitudes in the nursing student's identity. The need to integrate one's role as a nurse with one's sense of identity as a woman is important in making the transition from a student to a professional nurse. As a nursing student, one is expected to be assertive and to assume a leadership role in managing clinical situations competently and maturely. Such expectations may contrast with the view of appropriate feminine behavior with which the student was raised. Is it any wonder that a nursing student experiencing conflict in this area would have high levels of anxiety.

The content area of politics was the only area in which there was no significant difference in depression among students of different identity statuses. This could be due to the fact that students viewed politics as least important in defining their identity, and almost half of the subjects were in the identity status of diffusion. In addition, since only one student was moratorium in this area, it was impossible to determine if students in conflict with regard to politics experience high levels of depression.

In the content area of occupation, the students in the identity status of moratorium experienced more depression than that of achieved subjects. The nursing student must be committed to becoming a professional nurse if she is to manage the quantity of material to be learned and the responsibility of providing quality nursing care. Questioning one's career choice could engender feelings of doubt and resentment. The student has already devoted 2 or more years of college to completing the liberal arts sequence required for the nursing major. She has been labeled by family, friends, peers and instructors as a "nursing student". In a special ceremony, she was officially recognized as having entered the nursing major. At this point, to consider changing one's career choice would mean losing professional role identity. This potential loss clearly

explains why the nursing student would experience depression if in conflict over occupational plans.

In the content area of sexual intercourse, the students in the identity status of moratorium experienced more depression than that of achieved and foreclosed subjects. Religion generally plays a significant role in defining standards for participation in sexual intercourse. The students in this study elected to attend a Christian college, and 97.4% of the subjects identified themselves as Protestant or Catholic. Of these students, 81.1% stated they were currently practicing their religion. In addition, the subjects ranked religion as most important in defining their identity. Premarital sexual intercourse is not viewed favorably by the school or the Protestant and Catholic churches. However, societal values tend to be more liberal in this regard. The student experiencing conflict in this area might be concerned about possible rejection from significant others. She could be uncertain about putting aside important religious values, and she might be afraid that a future marital partner would not respect her. This conflict could explain why the moratorium student would experience depression.

It is interesting to note that moratorium subjects in the area of sexual intercourse ranked this area as more important in terms of defining their identity than did achieved and foreclosed students. The most obvious reason

for this would be that sexual intercourse is an area of conflict for the moratorium student, and issues involved with sexuality would therefore be viewed as significant.

In the content area of sex role, seniors in the moratorium status experienced more depression than achieved and foreclosed seniors or sophomores in all three identity statuses. The seniors are at a point in which they are contemplating graduation, assuming a position as a professional nurse, and perhaps eventual marriage. If the student is experiencing a crisis in regard to sex role, she may be uncertain of her ability to function as a competent professional and as a wife. This could lead to a sense of helplessness and depression.

In the content area of religion, seniors in the moratorium status experienced more depression than achieved seniors or achieved, foreclosed and moratorium sophomores. Contrary to what might be expected, moratorium seniors ranked this area as less important in terms of defining their own identity than did achieved and foreclosed seniors or sophomores in all three identity statuses. Sophomore students can look forward to the opportunity which college provides for exploring alternatives with regard to religion. This is encouraged by the school. The expectation, however, is that by the time a student is a senior she will have acquired a deep and abiding religious belief system. What happens if a senior nursing student is experiencing a crisis

in this area? She may view religion as less important in defining her identity than other students, but she is bound to realize that a discrepancy exists between the college norm and her own situation. According to Festinger's (1957) theory of cognitive dissonance, dissonance may be produced when a person knows that others hold an opinion that is contrary to her own. The experience of dissonance is psychologically uncomfortable, which could explain why moratorium seniors experience high levels of depression.

Research, which was conducted in the laboratory with a variety of non-nursing subjects, found that cognitive-restructuring and relaxation approaches to stress management were effective in decreasing depression and specific types of anxiety such as test anxiety (Elkins, Anchor & Sandler, 1978; Fremouw & McCroskey, 1978; Glass, Gottman & Schmurak, 1976; Green, 1973; Meichenbaum, 1972; Wilson & Krane, 1980). A limited number of studies dealt specifically with stress management programs for student nurses. Donovan and Gershman (1979) found that systematic desensitization significantly reduced the physiological responses of nursing students to anxiety provoking slides, and Charlesworth, Murphy, and Beutler (1981) effectively reduced test anxiety through relaxation and systematic desensitization. In this study, a stress management program for student nurses was developed that encompassed elements of cognitive-restructuring, relaxation, biofeedback, and systematic desensiti-

zation. This program proved to be effective in reducing the level of state anxiety and depression experienced by students while in their usual environment. It should be noted that there was no significant interaction effect between the treatment and the curricular level of the student. This finding points out that sophomores and seniors were equally responsive to the stress management program in terms of reducing state anxiety and depression.

Implications

Results of this study indicate that nursing students experiencing an identity crisis are more anxious and depressed than those in committed identity statuses. This situation may make it difficult for the student to meet the emotional and physical demands of a baccalaureate nursing program. Student advisors and curriculum planners could effectively introduce measures to assist the student in dealing with identity conflict. Students could be given the opportunity to discuss issues related to religion, occupation, sex role, sexual intercourse, and politics. A variety of concerns could be dealt with in issue-oriented group sessions, which could be made an integral part of the nursing curriculum, or in individual counseling provided by advisors.

Identity crisis is but one area of concern. Another is the fact that almost half of the students were in the identity status of diffusion for the content area of poli-

tics. The American Nurses Association has repeatedly stressed the importance of political involvement for the nursing profession, which is essential to create an impact for needed changes in the health care delivery system. Yet, many of the students, who are the potential leaders of the profession, apparently are not concerned about political or social issues. They share this perspective with a large number of female undergraduates in other majors (Schenkel & Marcia, 1972). This points out the need for nursing educators to include content in the curriculum related to political and social issues of importance to health care. Students must also be taught how to become politically active, and they should be given the opportunity to do so. Hopefully, this approach would awaken in students an interest in political and social issues.

Since nursing students experience high levels of anxiety and depression in response to stressors (Birch, 1979; Gunter, 1969), nursing educators need to implement interventions aimed at assisting students to cope with identity crisis and the stress inherent in nursing education. The stress management program developed in this study combines cognitive-restructuring, relaxation, biofeedback, and systematic desensitization in a short module which is feasible for use in nursing curriculums. Since the program proved to be effective in reducing the level of anxiety and depression experienced by sophomore and senior nursing

students in their usual environment, it would be advisable to consider incorporating such a program within the nursing curriculum.

The stress management program could easily be presented to beginning nursing students in a series of clinical seminars. Several potential benefits could result from teaching students early in the nursing curriculum how to control physiological arousal and decrease anxiety and depression. Academic and clinical performance might improve due to increased ability to acquire and recall knowledge. The high attrition rate could be reduced if students are better able to cope with the stress of nursing education. Professional assertive behavior could be facilitated by decreasing anxiety about possible negative consequences of such behavior. The student could utilize stress management skills after she has graduated to prevent professional burnout, and patients could be taught these skills in order to promote their optimal level of health.

Recommendations for Further Research

Recommendations for further research are as follows:

1. This study should be replicated in a number of representative schools of nursing in order to control for the interaction effects of selection biases and the experimental variable. This would make it feasible to include as independent variables age, sex, ethnic group

and educational nursing program, namely diploma, associate degree and baccalaureate.

2. A political education program, suitable for the nursing curriculum, should be developed and evaluated in terms of decreasing the number of nursing students who are unconcerned about political or social issues.
3. It would be of interest to conduct a follow-up study in order to determine if sophomore nursing students, who received the stress management program, continue to benefit from the program in terms of decreased levels of anxiety and depression during their junior and senior years of college.
4. Further research could determine if the stress management program would benefit registered nurses in baccalaureate nursing programs, as well as nurses working in a variety of settings.

Summary

Possible implications of the results of the study for nursing education are summarized as follows:

1. Nursing students should be given the opportunity to discuss issues related to religion, occupation, sex role, sexual intercourse, and politics. A variety of concerns could be dealt

with in issue-oriented group sessions or in individual counseling.

2. Nursing educators should include political education in the nursing curriculum in order to facilitate the interest of students in political and social issues.
3. Since the stress management program proved to be effective in reducing the level of anxiety and depression experienced by nursing students, it would be advisable to consider incorporating such a program within the nursing curriculum.

CHAPTER VI

SUMMARY

The purposes of this two phase study were (1) to determine if there was a significant difference in stressors, state-trait anxiety and depression among sophomore and senior baccalaureate nursing students of different ego identity statuses and (2) to design and evaluate the effectiveness of a stress management program in reducing state anxiety and depression experienced by sophomore and senior baccalaureate nursing students. This study was designed to investigate an area of importance to nursing in which very little research had been conducted.

Of the various stress models presented, the Schachter and Singer (1962) arousal-attribution model appears to be the most comprehensive, and was therefore chosen as the framework within which the variables of concern in this study could be discussed. Stress is viewed as physiological arousal and a stressor is a perceived explanation of stress. When a situation is appraised as undesirable, anxiety and/or depression will be experienced. Nursing students have attributed stress to academic, social, personal and clinical stressors (Fox et al., 1963). They experience high levels of anxiety and depression in response

to these identified stressors (Birch, 1979; Gunter, 1969; Rosenberg & Fuller, 1955). Nursing students might also be experiencing ego identity crisis which is characteristic of late adolescence. However, no research to date has studied the relationship between stress and ego identity status among student nurses. Research findings with female undergraduates seem to indicate that achieved students are probably best able to cope with stress, and that moratorium and diffused students most likely experience more anxiety and depression than do achieved and foreclosed students.

Even though it is recognized that stress management programs need to be instituted that will assist nursing students in coping with identity crisis and stress inherent in nursing education, only a few such programs have been developed and assessed. The majority of research evaluating different stress training approaches has been conducted in the laboratory with a variety of non-nursing subjects. This research demonstrated the effectiveness of cognitive-restructuring, relaxation, biofeedback and systematic desensitization approaches (DiLoreto, 1971; Elkins et al., 1978; Green et al., 1970; Meichenbaum, 1972).

Method and Results

The subjects participating in this study were 42 sophomore and 34 senior baccalaureate nursing students in a private sectarian liberal arts college. During Phase I of the study, they were individually interviewed using the

Ego Identity Status Interview. Form X-1 of the State-Trait Anxiety Inventory, which measures state anxiety, was administered on Monday and Friday for 3 weeks; and Form X-2 of the State-Trait Anxiety Inventory, which measures trait anxiety, was given on the first day of class. The Institute for Personality and Ability Testing Depression Scale was administered on Monday for 3 weeks, and the Critical Incident Schedule was given on Friday for 3 weeks.

A four group, ex post facto design was used in Phase I. The statistical analyses employed were analysis of variance with a repeated measures design and factorial analysis of variance for unequal frequencies in sub-classes, a two (sophomore and senior) by four (achievement, foreclosure, moratorium and diffusion) univariate ANOVA. Post-hoc comparisons were made using Scheffe's test of differences between means. The level of significance chosen was .05.

The scores students received on Form X-1 of the State-Trait Anxiety Inventory and the Institute for Personality and Ability Testing Depression Scale during Phase I were utilized as pretest data for Phase II. Following Phase I of the study, subjects in each of the two groups of students, sophomores and seniors, were randomly assigned to either the experimental or the control group. The control group met with the experimental group during the education phase of the stress management program, but only the experi-

mental group participated in the training and application phases of the program. Following the completion of the program, Form X-1 of the State-Trait Anxiety Inventory was administered to all of the subjects on Monday and Friday for 3 weeks, and the Institute for Personality and Ability Testing Depression Scale was given on Monday for 3 weeks.

The randomized block, experimental group--control group, pretest-posttest design was used in Phase II. The statistical analysis employed was analysis of variance for the posttest scores, with a significance level of .05.

There was no significant difference in stressors among students of different identity statuses. In the area of sex role, moratorium students experienced significantly more state-trait anxiety than achieved and foreclosed subjects. In the areas of religion and occupation, moratorium students felt significantly more depressed than achieved subjects; and in the areas of sex role and sexual intercourse, moratorium students reported significantly more depression than achieved and foreclosed subjects. Students who received the stress management program experienced significantly less anxiety and depression than did subjects who did not receive the program.

Additional findings were related to the curricular level of the student and the importance of each content area in terms of defining the student's identity. The overall ranking of the identity content areas from most to least

important in terms of defining the identity of students is as follows: (a) religious beliefs, (b) occupational plans, (c) sex role attitudes, (d) personal standards for participation in sexual intercourse, and (e) political attitudes. Moratorium seniors, in the area of religion, ranked this area as significantly less important in terms of defining their own identity than did achieved and foreclosed seniors or sophomores in all three identity statuses. Moratorium subjects, in the area of sexual intercourse, ranked this area as significantly more important than did achieved and foreclosed students. Subjects in the identity status of diffusion, for the area of politics, ranked this areas as significantly less important than did achieved and foreclosed students.

In the area of sex role, a significantly higher percentage of seniors as compared to sophomores were achieved, and a significantly higher percentage of sophomores as compared to seniors were foreclosed. Politics was the only area in which any of the students were in the identity status of diffusion.

There was no significant difference in the level of stressors among sophomores and seniors of different identity statuses. The students experienced significantly more academic and social stressors than personal and clinical stressors, and they identified significantly fewer clinical stressors than any of the other stressors.

The seniors experienced significantly greater state-trait anxiety and depression than did the sophomores. There was no significant interaction effect between identity status and level of student with regard to state-trait anxiety. Moratorium seniors, in the area of religion, experienced significantly greater depression than did achieved seniors or achieved, foreclosed and moratorium sophomores. Moratorium seniors, in the area of sex role, experienced significantly greater depression than did achieved and foreclosed seniors or sophomores in all three identity statuses. There was no significant interaction effect between treatment and level of student with regard to state anxiety and depression.

Conclusion

There are several possible implications of the results of the study for nursing education. Nursing students experiencing an identity crisis were found to be more anxious and depressed than other students. This situation may make it difficult for the student to meet the demands of the nursing program. Nursing students should be given the opportunity to discuss issues related to religion, occupation, sex role, sexual intercourse, and politics. A variety of concerns could be dealt with in issue-oriented group sessions or in individual counseling.

Almost half of the students were in the identity status of diffusion for the content area of politics. This

is an appalling situation when you consider that political involvement is essential in order to effect needed change in the health care delivery system. Nursing educators need to develop and evaluate a political education program, suitable for the nursing curriculum, that would facilitate the interest of students in political and social issues.

Since nursing students experience high levels of anxiety and depression in response to stressors, nursing educators need to implement interventions to assist students in coping with identity crisis and the stress inherent in nursing education. Since the stress management program proved to be effective in reducing the level of anxiety and depression experienced by nursing students, it would be advisable to consider incorporating such a program within the nursing curriculum.

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APPENDIX A

CONSENT FORM

Project Title: The Relationship Between Ego Identity Status and Level of State-Trait Anxiety, Level of Depression, and Frequency of Identified Stressors Among Baccalaureate Nursing Students and the Effectiveness of a Stress Management Program in Reducing State Anxiety and Depression of Baccalaureate Nursing Students

I, _____, state that I am over 18 years of age and that I wish to participate in a program of research being conducted by Noreen Johansson.

Description of purpose and explanation of procedure:

The purpose of this study is (a) to determine if there is a significant difference in anxiety, depression and frequency of identified stressors among sophomore and senior baccalaureate nursing students of different ego identity statuses and (b) to determine the effectiveness of a stress management program in reducing anxiety and depression experienced by sophomore and senior baccalaureate nursing students.

The procedure to be used in this study consists of three parts. During the first part, students will be individually interviewed for 45 to 60 minutes in order to assess ego identity status. In addition, Form X-1 of the State-Trait Anxiety Inventory will be administered on Monday and Friday for 3 weeks, Form X-2 of the State-Trait Anxiety Inventory will be given on the first day of class, the Institute for Personality and Ability Testing Depression Scale will be administered on Monday for 3 weeks, and the Critical Incident Schedule will be given on Friday for 3 weeks. College students usually require 6 to 8 minutes to complete either Form X-1 or Form X-2 of the State-Trait Anxiety Inventory, and repeated administrations of Form X-1 generally require 5 minutes or less. The Institute for Personality and Ability Testing Depression Scale takes 10 minutes to administer, and it takes approximately 5 minutes to complete the description of one incident on the Critical Incident Schedule. In the second part, randomly assigned students will meet in small groups for six 50 minute sessions which will convene twice a week over a period of 3 weeks in order to receive instruction related to stress management. In the third part, Form X-1 of the State-Trait

Anxiety Inventory will be administered on Monday and Friday for 3 weeks, and the Institute for Personality and Ability Testing Depression Scale will be administered on Monday for 3 weeks. The data collected during this study will be kept confidential. Students will be asked to write the last six numbers of their social security number on completed forms instead of their name. After the completion of the investigation, an abstract of the study will be made available to those students requesting it.

Risks and discomforts:

No known potential risks are involved.

Potential benefits:

Research has demonstrated that considerable stress is involved in nursing education. In addition, nursing students experience ego identity problems characteristic of the college age population. Unfortunately, no research to date has investigated the relationship between stress and ego identity status among nursing students. Stress is detrimental to learning and clinical performance. In spite of this fact, nursing educators have made minimal efforts to assist students in coping with stress, and the stress involved in nursing education and practice has not been of interest to many investigators. Research needs to be undertaken that will focus on (a) increasing knowledge about the developing nursing student so that the nursing educator is better able to understand and counsel the student, and (b) developing and evaluating a program aimed at assisting the nursing student to more effectively cope with stress. This study will attempt to speak to these issues.

Benefits of the investigation for the baccalaureate nursing student volunteering as a participant in this study include: (a) the opportunity to learn more about oneself in terms of ego identity issues, the identification of those experiences that are personally stressful, and becoming aware of physiological and psychological responses to stress, (b) the potential opportunity to acquire new coping skills for dealing with stress, and (c) the opportunity to participate in a research study which will be a unique experience.

Alternatives:

No alternative procedures will be provided.

I acknowledge that Noreen Johansson has fully explained to me the need for the research and that no known risks are involved; has informed me that I may withdraw from participation at any time without prejudice; has offered to

answer any inquiries which I may make concerning the procedure to be followed; and has informed me that I will be given a copy of this consent form. I freely and voluntarily consent to my participation in the research project.

(Signature of Volunteer)

(Signature of Investigator)

(Date)

APPENDIX B

DEMOGRAPHIC DATA

	<u>Page</u>
I. Demographic Questionnaire	227
II. Demographic Data.	229

APPENDIX B

I. DEMOGRAPHIC QUESTIONNAIRE

Code # _____

It is very important that you respond to each statement.
Please check or fill in the appropriate space.

1. Age: _____
2. Grade Point Average: _____
3. Religion: _____

Are you currently practicing?

- Yes
- No

4. Racial Background: _____

5. Where and with whom are you currently living?
- North Park College dormitory with roommate(s)
 - North Park College apartment with roommate(s)
 - At home with parents
 - Other
- If you checked other, please specify where and with whom you live: _____

6. Marital Status
- Single
 - Married
 - Separated
 - Divorced

7. Do you have any dependents?
- No
 - Yes, children
 - Yes, siblings
 - Yes, other Please specify: _____

8. How are you financially supported?
- Self supporting
 - Parental support
 - Other Please specify: _____

9. Are you currently employed?
 No
 Yes
If yes, approximately how many hours a week do you work? _____
What is your approximate income per year? _____
10. What is your parents approximate yearly income? _____
11. If you are married, what is the approximate combined yearly income of you and your husband? _____
12. Are you receiving any financial assistance for tuition?
 No
 Parents pay tuition
 Scholarship
 Other Please specify: _____
13. During the last three weeks, did you do anything to help yourself cope with stressful events?
 No
 Yes
If yes, please specify what you did:

APPENDIX B

II. DEMOGRAPHIC DATA

	<u>Sophomore Students</u>	<u>Senior Students</u>
Age		
Range	19-40	20-37
Mode	19	21
Median	20	21.5
Mean	21.4	22.5
Grade Point Average		
Range	2.00-3.79	2.00-3.99
Mode	3.00	3.00
Median	2.79	3.00
Mean	2.83	3.05
Religion		
Catholic	9 (21.4%)	4 (11.8%)
Protestant	32 (76.2%)	29 (85.3%)
None	1 (2.4%)	1 (2.9%)
Practicing	31 (75.6%)	29 (87.9%)
Non-Practicing	10 (24.4%)	4 (12.1%)
Racial Background		
Asian	2 (4.8%)	0 (0.0%)
Black	0 (0.0%)	4 (11.8%)
Caucasian	40 (95.2%)	30 (88.2%)
Living Arrangement		
Dormitory	23 (54.8%)	12 (35.3%)
School Apartment	2 (4.8%)	9 (26.5%)
Own Apartment	4 (9.5%)	8 (23.5%)
Parents' Home	13 (31.0%)	5 (14.7%)
Marital Status		
Single	39 (92.9%)	29 (85.3%)
Married	2 (4.8%)	5 (14.7%)
Divorced	1 (2.4%)	0 (0.0%)
Parental Status		
Yes	3 (7.1%)	2 (5.9%)
No	39 (92.9%)	32 (94.1%)

II. DEMOGRAPHIC DATA (cont'd)

	<u>Sophomore Students</u>	<u>Senior Students</u>
Financial Support		
Parents	29 (69.0%)	24 (70.6%)
Spouse	0 (0.0%)	3 (8.8%)
Self	13 (31.0%)	7 (20.6%)
Financial Assistance		
With Tuition		
Yes	39 (92.9%)	30 (88.2%)
No	3 (7.1%)	4 (11.8%)
Loan	15 (35.7%)	10 (29.4%)
Scholarship or Grant	30 (71.4%)	24 (70.6%)
Parents	14 (33.3%)	11 (32.4%)
Social Security	1 (2.4%)	1 (2.9%)
Employment		
Yes	32 (76.2%)	24 (70.6%)
No	10 (23.8%)	10 (29.4%)
Work Hours/Week		
Range	4-40	5-24
Mode	16	16
Median	11	16
Mean	12.9	13.8
Employment Income		
Range	900-12000	500-25000
Mode	2000	2000
Median	3000	3500
Mean	3521	4363
Income of Family		
of Origin		
Range	7000-70000	10000-87000
Mode	30000	30000
Median	26000	28000
Mean	28820	29968

APPENDIX C

EGO IDENTITY STATUS MEASUREMENT

	<u>Page</u>
I. Ego Identity Status Interview	232
II. Manual for Ego Identity Status Types.	235

APPENDIX C

I. EGO IDENTITY STATUS INTERVIEW

Introduction:

What year are you in?
Where are you from? Living at home?
How did you happen to come to (name of school)?
Did your father go to college? Where? What does he do now?
Did your mother go to college? Where? What does she do now?

Occupation:

You are majoring in nursing; what do you plan to do with it?
When did you come to decide on nursing? Did you ever consider anything else?
What seems attractive about nursing?
Most parents have plans for their children, things they'd like them to go into or do--did yours have any plans like that for you?
How do your folks feel about your plans now?
How willing do you think you'd be to change this if something better came along? (If S responds: "What do you mean by better?") Well, what might be better in your terms?

Religion:

Do you have any particular religious affiliation or preference?
How about your folks?
Ever very active in church? How about now? Get into many religious discussions?
How do your parents feel about your beliefs now? Are yours any different from theirs?
Was there any time when you came to doubt any of your religious beliefs? When? How did it happen? How did you resolve your questions? How are things for you now?

Politics:

Do you have any particular political preference?
 How about your parents?
 Ever take any kind of political action--join
 groups, write letters, participate in demonstra-
 tions--anything at all like that?
 Any issues you feel pretty strongly about?
 Any particular time when you decided on your
 political beliefs?
 What did you think of the past election?

Sex Role:

I'd like to find out something about how you think
 and feel about yourself as a male (female).
 What characteristics do you associate with mas-
 culinity (femininity)?
 Do you think that there are psychological differ-
 ences between men and women? If so, what are
 they? If no, do you see any differences in be-
 havior between the sexes? If so, how do you
 account for them?
 How does all of this apply to you? What difference
 has it made in things that you do? Can you give
 me some examples.
 Where do you think that your ideas on this come
 from?
 Have they always been pretty much the same?
 How about your parents, what do they think? Do you
 discuss this with them?
 Are there any areas of uncertainty remaining for
 you? What do you think may resolve them?
 Can you see your ideas changing substantially in
 the future or are they pretty stable?

Sexual Intercourse:

Finally, I'd like to ask you about your beliefs
 regarding your own sexual behavior. (Check on
 sexual preference and frame questions appropri-
 ately.) What are your attitudes concerning
 sexual intercourse--when do you think it's all
 right? When not?
 How do these ideas apply to you yourself? Does it
 make a difference in what you do? How?
 Have you always felt this way? If not, how have
 your ideas changed?
 How about your parents, what do they think?

Do you discuss your views with them?
How likely do you think you are to change your
views in the future?

In this interview, we've covered 5 areas: occupational plans, religious beliefs, political attitudes, sex role attitudes, and personal standards for participation in sexual intercourse. Which of these areas do you think is most important in defining who you are? That is, if you could pick only one area upon which to base your identity, which would you pick? Which would be next in importance? Which is the least important? Which is next least in importance?

Developed by James Marcia (1964), Matteson (1974), and Schenkel and Marcia (1972). Reproduced by special permission from the authors.

APPENDIX C

II. MANUAL FOR EGO IDENTITY STATUS TYPES

The main objective of rating each interview is to locate the individual in one of four "identity statuses," each status being a mode of coping with the identity crisis - a particular life crisis faced by older adolescents in our culture. Elements in this crisis include deciding upon and committing oneself to what one is "to be" in terms of an occupation, as well as formulating and taking action on what one "believes" in terms of an ideology. In a more formal sense, the achievement of ego identity involves the synthesis of childhood identifications in the individual's own terms, so that she/he establishes a reciprocal relationship with society and maintains a feeling of continuity between self and her/his past. Elaborating further, childhood can be viewed as a period when society provides the materially and emotionally nutritive milieu for survival of the almost wholly dependent child. Adulthood involves a shift in responsibility, so that the individual is expected to contribute to the previously nurturant environment in a more mutual relationship. Adolescence, in particular, late adolescence, is the period during which this shift takes place. The achievement of an ego identity at this time represents the reformulation of all that the individual was into the core of what she/he is to be.

The four identity statuses are: Identity Achievement, Moratorium, Foreclosure, and Identity Diffusion.

The two referents for determining Identity Status are "crisis" and "commitment" in the areas of occupation, religion, politics, sex role, and sexual intercourse. The term, crisis, was chosen less for its sense of immediacy than for its connotation of struggle, or more accurately, of a period of decision. Commitment refers to a certain unwaveringness of choice, a reluctance to abandon a path set out upon. Although these two referents are separately assessed, some overlap occurs. For example, when a subject says that she/he decided to go into [nursing] as a result of scanning the college catalogue, one does not get a sense of either an active selection among personally meaningful alternatives (crisis) or an unswerving investment in a course of action (commitment).

Instructions for Rating

The following is a description of the way in which these two criteria are combined to yield an identity status and a short sketch of how each type might appear.

1. Identity Achievement

Criteria: The individual has passed through a decision period or crisis and appears committed to her/his occupation and/or ideology.

Sketch:

Occupation - The subject has seriously considered several occupational choices or deviated from what parents had planned for her/him. The subject is reluctant to switch fields and seems to think of herself/himself as a [nurse], engineer, etc. (Being a something meaning the difference between "taking courses in [nursing]" and seeing oneself as "a [nurse].") Although the subject's ultimate choice may be a variation of the parental wishes, she/he seems to have experienced a crisis period and made a resolution on her/his own terms.

1. Has tried business--focused on general medical profession--tried dentistry, tried pharmacy--now in optometry. Likes it because it's in the area of helping people medically and has variety. (willing to change?) "I really like what I'm doing. I have too much investment in it now to do anything else."
2. Came from farm background and likes farming, but being a farmer not too interesting or feasible. Decided to go into agricultural economics which is sort of an over-all business manager for farmers. Somewhat defensive about farming as a viable career.
3. When first went to college felt no sense of purpose. Left and joined the Army. Came back with renewed interest. Finds present choice interesting and would be willing to change only routine functions, not the general area.
4. Father was a farmer and wanted him to be one; mother and townspeople wanted him to be a minister; he decided to be a veterinarian. "I would rather have my DVM than a Ph.D. in anything."

Religion - The subject appears to have gone through a period of doubt--either of past belief or unbelief--with a resulting re-evaluation of faith and commitment to some action (church-going, religious discussions, etc.). Whether the subject ends up as religious or not religious (in the conventional sense) is not important--only that she/he seems to have rethought childhood concepts and achieved a resolution that leaves the subject free to act.

1. Gotten further away from religion. At one time, 10-11 years old, wanted to be a rabbi. Goes to Hillel sometimes now. Disputes religious questions with Christian friends--tried to convert a Roman Catholic nurse.

2. Went through a period of rejecting father's religion. Period of atheism followed disillusionment with a God that would permit an evil world. Resolved by deciding that amount of good balanced evil. Is active in church and plans to raise his children in it.

3. Parents were fundamentalist; they think man shouldn't explore space. He's more liberal, thinks they're old-fashioned--doesn't like denominational splits. Active in church.

Politics - The presence of this crisis period is probably more difficult to ascertain here than in the other two areas. The subject shows some difference from parents' political opinions; for example, the subject may see herself/himself as more liberal than they are. Evidence of commitment is usually seen in the affective nature of the subject's pronouncements, her/his tendency to dispute political questions with others, and any political action-taking whatsoever.

1. No affiliation with any one party. Argues with parents about particular candidates and issues.

2. Period in Army angered him at being given things and being reacted to according to group membership rather than as an individual. Attracted to the individualism of conservatism and is anti-social welfare. Applies principles learned in college classes about human nature to his political beliefs.

Sex Role - The occurrence of clearly demarked crisis is less important than the sense that alternatives regarding relationships with the other sex have been weighed and decisions have been made.

1. Feels it most important that a husband and wife be able to express themselves as equals, to "clear the air," regardless of the differences in sexual roles. Presents a well formulated and somewhat original view.

2. She has given much thought to how to mix work and childrearing. She used to feel that she should give up working when a baby arrives. Now she hopes she can convince her future husband to take that role.

Sexual Intercourse - The subject has definite standards to which she/he adheres, without regard to conservativeness or liberality of views, and has acquired these standards through an active decision-making process in which the subject has considered seriously alternatives and their implications for her/his life.

2. Moratorium

Criteria: The individual is presently in a crisis period--trying to make up her/his mind. Commitments are likely to be vague and general. An important quality here is a sense of active struggle among alternatives.

Sketch:

Occupation - The subject is dealing with issues often described as "adolescent." The subject is concerned less with preparing for a specific career than with choosing that career. Parents' plans are still important to her/him and the subject must somehow achieve a compromise among them, society's demands, and her/his own capabilities. It is not that the subject feels totally bewildered and all at sea, but that she/he is vitally concerned and somewhat preoccupied with resolving what at times seem to be unresolvable questions.

1. "Other people think I'm jolly and free-lancing. Inside, I'm a big knot. I'd just like some peace and quiet." "The future seems better than the past, though." "I'm not so concerned about what people think, and I can control my temper better." Majoring in Speech, wants to work for degree in Psychology and Sociology while in Army. In general, wants to do something to help people.

2. Has considered rabbinate, law, and teaching. Present major is philosophy and religion.

Thinks now that he wants to teach--struggling with parents' demands that he choose a career more financially rewarding.

3. Chemistry--physics--biology major. Considers teaching high school and then going into industry. Also in the back of his mind is the ministry--still considering it. Seems to be an idealistic vs. economic conflict. "I can go into teaching, industrial chemistry, the ministry. I can see myself in any of those three fields."

Religion - The subject seems to be dealing with fundamental religious questions, not just mere "shopping around" among denominations.

1. Doubts existence of God and wonders whether there is a Supreme Being. Scares him when he thinks about it, but he still does. Has tentatively decided there is a God.

2. Articulates pseudo-solution to science-religion conflict by deciding that "what I believe and what I study are two different things--just keep them separate."

Politics - Although the subject is in doubt about political and religious commitment, she/he seems dissatisfied with the doubt and is trying to effect a resolution.

1. Leans towards democrats--still votes for the best man. Maybe later he'll turn toward Republicans.

2. "I just don't want to define myself in terms of reactions against things." Sometimes the whole political realm seems sort of futile."

3. Confused about politics. Is a Democrat, but has heard about Conservatism and is questioning it. But then Rhodes disenchants him. Doesn't really know.

Sex Role - Though the subject is attempting to formulate a position, lack of experience leaves her/him unclear. The subject is more than superficially affected by the alternatives available.

1. It's OK with her if others wish for equality in sex roles, but personally she is in doubt about it. Sometimes she is very pleased that

boys take the initiative--it makes her feel more feminine. She implies that when she grows more self-assured regarding her own femininity, she may be more willing to take initiative.

2. In his first responses, he seemed to have a clear position, but the interviewer's questions made him uncertain. He suggested that he can't develop firm views until he's had more experience.

Sexual Intercourse - The subject was in the process of trying to formulate some standards for herself/himself. Typically the subject expressed a conflict between own needs and parental values, and between desire and fear of consequences.

General Comments - Some subjects may show two or three different identity statuses for one of the main areas. That is, occupational choice may have elements of Identity Achievement, Moratorium, and Foreclosure. Although these cases are rare, when one status does not predominate, a scoring of Moratorium is given.

3. Foreclosure

Criteria: The individual does not seem to have passed through any real decision period, but nevertheless, appears committed to occupation and/or ideology. In this case, the individual's choices very likely coincide with those of parents or parent surrogates whom she/he does not seriously question.

Sketch:

Occupation - It is difficult to distinguish where parents' goals for the subject leave off and the subject's own goals begin. The subject seems to have experienced either no choice period, or only brief and inconsequential ones. She/he is becoming what others have influenced the subject or intended the subject to become as a child. In addition, all of this seems ego-syntonic. Childhood identification figures ("like my father," "like my mother," etc.) keep cropping up in the interview.

1. "I'm not in any mood to leave home. I'm not tied to my mother's apronstrings, but all my friends are there." Wants to go into a large corporation where "they'll run me through training and tell me how they want things done." Is also considering being a fireman like father was. Went home

every weekend through college and maintained membership in social groups there (e.g., Kiwanis, Ashville Fire Dept.).

2. Father was a farmer, he'll be a farmer. "I plan to go back and help dad farm." Took agriculture at college because "that's all I knew." Although he gave some consideration to other fields, "farming was always at the top of the list." "I was brought up like my family was--I was with them so long I just stayed that way."

Religion - The subject's faith (or lack of it) is virtually "the faith of her/his fathers (or mothers, as the case may be) living still." College experiences serve only as confirmation of childhood beliefs. Dissonance seems absent, and the subject participates in religious or anti-religious activities.

1. Although in science, sees no conflict with religion. "Just helps strengthen the belief I grew up with." Goes to church several times a week.

2. Parents were Lutheran and so is he. No doubting of religion during college. Got a girl pregnant and prayed--everything turned out all right. "Hand of God was there; I'm not smart enough to figure it all out, but I believe."

3. "Same as my parents." (any doubts?) "My beliefs are the same as they were--only stronger since I've been out in the world."

4. Religion is the same as parents. "Maybe it's a habit with me, I don't know." "I've thought a lot and you meet all kinds of people here. But I really haven't changed any basic beliefs. Just have more understanding than I did before." "I plan to bring my children up in the church--just the way my dad did with me."

Politics - Again, the subject is what his parents are with little or not personal stamp of her/his own.

1. His parents were Republican and so is he. "There was a lot of influence from my parents."

2. He and parents are Republican. "I guess it stems from the family. Both Mom and Pop are Republicans."

3. "I'm a Democrat and so are they (parents)--so that's why, I guess."

4. Referring to him and parents both being Republican: "You still pull that way, Republican, if your parents are that way. You feel like it's where you should be."

Sex Role - The subject has a clear view in relation to sex roles, but seems not to have considered alternatives.

1. My mother holds that husband and wife should be equal, but when a baby arrives it is the mother's duty to stay home. She has told me that this is right, and I feel myself that it is right.

2. Both of his parents have always worked and shared responsibilities and it has functioned well; thus he expects to do the same.

Sexual Intercourse - The subject unquestioningly accepts the standards (usually parental) with which she/he has been brought up; when pressured by boyfriend/girlfriend or own impulses, the subject clings to rules and authority to guide conduct.

4. Identity Diffusion

Criteria: The individual has either experienced no crisis or has passed through a crisis--in either case, there is little, if any, commitment.

Sketch: There appear to be two types of Diffusion. One is a pre-crisis lack of commitment. The individual might have been a Foreclosure if strong enough parental values had been established. However, it is likely that the parental attitude was one of "it's up to you; we don't care what you do." Under the guise of democratic childrearing, the parents have really provided no consistent structure which could be a guide for the growing individual and later on, an image against which to compare herself/himself. Because the individual never really was anything, it is almost impossible for the individual to conceive of herself/himself as being anything. The problems that are so immediate and self-consuming for the Moratorium never really occur to this "pre-crisis Diffuse" person.

The second type of Diffuse is the "post-crisis Diffuse" who seems committed to a lack of commitment. This individual actively seeks to avoid entangling alliances; his

motto: "Play the field." No area of potential gratification is really relinquished; all things are possible, and must be kept that way. The main element that both pre- and post-crisis Diffuse persons have in common is a lack of commitment.

Occupation - No one occupational choice is really decided upon, nor is there much real concern about it (as contrasted with the Moratorium). There is sometimes little conception of what a person in the stated preferred occupation does in a day-to-day routine. The occupation would be readily disposed of should opportunities arise elsewhere. There is sometimes an "external" orientation, so that what happens to the subject is seen as a result of luck or fate.

1. Has considered priesthood, law, and teaching math. Sees himself as "bouncing around" from one thing to another. Language is strange and answers oblique. Takes roles of others and speaks to himself during the interview in admonishing tones as they would speak to him. Although there is some closure on choice of teaching, the whole interview is pretty bizarre. E.g., regarding leaving seminary: "It was shown to me not to be my vocation. Some people have desire, some don't. I didn't."

2. Going into optometry--likes it because there's not too much work, make money at it, and doesn't take too long to study for it. If something better came along, he'd change "quite easily."

3. Claims greater maturity after having flunked out of school and gone to service. Major in marketing, interested in business, also in being a golf pro. Main focus of interest in life is playing golf. Emphasis not on what his father wants him to "be" but on what his father gives him. "Very apt" to give up occupational choice for something better.

4. Major is engineering. In response to "willingness to change?": "Oh, I can change. I want to travel, want to try a lot of things, don't want to get stuck behind a drawing board. Want a degree mainly as an 'in' to production or something else. Don't want to get tied down."

Religion - The subject is either uninterested in religious matters or takes a smorgasbord approach, in which one religious faith is as good as any other and the subject is not adverse to sampling from all. The subject

will sometimes state her/his denomination as being the same as parents, yet show little commitment to it. In this case, the identity status has elements of both Foreclosure and Diffusion.

1. "Don't believe in any one particular religion. All of them have something to offer, I guess. I like to look around a little and see what each has to offer."

2. "Haven't picked one religion. Not interested in any. Guess it's all right for some people. Just don't care a whole lot about it."

Politics - Both political and social interest are low. Little idea or no concern where she/he stands vis a vis society, as if the world went its way and the subject went her/his way with little intercourse between the two.

1. "Politics just doesn't interest me." Doesn't vote. Doesn't discuss politics at home. Would probably vote for Kennedy.

2. No interest. Never discusses it with parents. "Not much concerned with politics." Unable, in the interview to verbalize a choice between Rockefeller and Kennedy.

Sex Role - Though the subject may be articulate about sexual roles, the subject does not appear to have invested self in the possibilities she/he considers, and few commitments have been made, few seem likely.

1. Spoke at length of many possibilities for sex role combinations, but his discussion seemed totally intellectualized, a philosophic problem; no sense of movement toward a personal decision.

Sexual Intercourse - Although the subject is not necessarily promiscuous, she/he expresses no commitment to any standards.

1. "Oh, I just do what I feel like doing at the moment."

Summary

This, then, is the plan for rating the interview. There are five main areas covered: occupation, religion, politics, sex role, and sexual intercourse. Each area is

assessed according to two criteria; the presence or absence of a crisis period, and the degree of commitment. According to the subject's standing on these two criteria, she/he is to be assigned to one of the four categories of identity status for each of the five main areas.

A sample of a complete interview rating follows.

Subject # _____

Ego Identity Status Interview
Rating Sheet

Content Area	Ego Identity Status
Occupation:	_____
Religion:	_____
Politics:	_____
Sex Role:	_____
Sexual Intercourse:	_____

Comments:

Use this space for note-taking and demurrers.

Developed by James Marcia (1964), Matteson (1974), and Schenkel and Marcia (1972). Reproduced by special permission from the authors.

APPENDIX D

STATE-TRAIT ANXIETY INVENTORY

	<u>Page</u>
I. State Anxiety Scale (Form X-1)	247
II. Trait Anxiety Scale (Form X-2)	249

APPENDIX D

I. STATE ANXIETY SCALE (FORM X-1) OF THE
STATE-TRAIT ANXIETY INVENTORY

Subject Number _____ Date _____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement 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 feelings best.

	Not at all	Somewhat	Moder- ately so	Very much so
1. I feel calm	1	2	3	4
2. I feel secure	1	2	3	4
3. I am tense	1	2	3	4
4. I am regretful	1	2	3	4
5. I feel at ease	1	2	3	4
6. I feel upset	1	2	3	4
7. I am presently worrying over possible mis- fortunes	1	2	3	4
8. I feel rested	1	2	3	4
9. I feel anxious	1	2	3	4
10. I feel comfortable	1	2	3	4
11. I feel self- confident	1	2	3	4

		Not at all	Somewhat	Moder- ately so	Very much so
12.	I feel nervous	1	2	3	4
13.	I am jittery	1	2	3	4
14.	I feel "high strung"	1	2	3	4
15.	I am relaxed	1	2	3	4
16.	I feel content	1	2	3	4
17.	I am worried	1	2	3	4
18.	I feel over-excited and "rattled"	1	2	3	4
19.	I feel joyful	1	2	3	4
20.	I feel pleasant	1	2	3	4

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APPENDIX D

II. TRAIT ANXIETY SCALE (FORM X-2) OF THE
STATE-TRAIT ANXIETY INVENTORY

Subject Number _____ Date _____

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement 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 your present feelings best.

	Almost Never	Some- times	Often	Almost Always
21. I feel pleasant	1	2	3	4
22. I tire quickly	1	2	3	4
23. I feel like crying	1	2	3	4
24. I wish I could be as happy as others seem to be	1	2	3	4
25. I am losing out on things because I can't make up my mind soon enough	1	2	3	4
26. I feel rested	1	2	3	4
27. I am "calm, cool, and collected"	1	2	3	4
28. I feel that diffi- culties are piling up so that I can- not overcome them	1	2	3	4

	Almost Never	Some- times	Often	Almost Always
29. I worry too much over something that really doesn't matter	1	2	3	4
30. I feel happy	1	2	3	4
31. I am inclined to take things hard	1	2	3	4
32. I lack self- confidence	1	2	3	4
33. I feel secure	1	2	3	4
34. I try to avoid facing a crisis or difficulty	1	2	3	4
35. I feel blue	1	2	3	4
36. I am content	1	2	3	4
37. Some unimportant thought runs through my mind and bothers me	1	2	3	4
38. I take disap- pointments so keenly that I can't put them out of my mind	1	2	3	4
39. I am a steady person	1	2	3	4
40. I get in a state of tension or tur- moil as I think over my recent concerns and in- terests	1	2	3	4

APPENDIX E

It will take only ten minutes or so to finish. Hand in the booklet when you're through, unless told to do otherwise. If you have any questions, ask them now. As soon as you're told to, turn the page and begin.

STOP HERE--WAIT FOR SIGNAL

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APPENDIX F

MEASUREMENT OF IDENTIFIED STRESSORS

	<u>Page</u>
I. Critical Incident Schedule.	255
II. Types of Identified Stressors	256

APPENDIX F

I. CRITICAL INCIDENT SCHEDULE

Subject Number _____ Date _____

DIRECTIONS: Sometimes things happen which are stressful to us. We feel nervous, tense, fearful, rushed, anxious, confused, excited or tired. Of course all people feel and react differently and, when you are in stressful situations, you may experience one or more of these feelings. Recall incidents that occurred during the last week that were stressful to you. These incidents are not limited to school experiences but may have occurred in any area of your life. Describe the incidents. Please be specific and tell exactly what happened.

Adapted from Fox, Diamond, Walsh, Knopf, and Hodgen (1963).

APPENDIX F

II. TYPES OF IDENTIFIED STRESSORS

ACADEMIC (Stressors related to the classroom)

Evaluation of academic progress (grades)
Interpersonal relationships with academic instructors
Pressure involved in examinations, schedules, papers, and homework assignments

SOCIAL (Events related to extraprofessional relationships and extra-academic activities)

Extracurricular activities
Family and/or marital problems
Interpersonal relationships with boyfriends
Interpersonal relationships with other students and friends

PERSONAL (Events involving personal values and the emotional and physical state of students)

Self-image
Professional image
Adjustment to school
Financial problems
Future plans
Health problems
Loss or damage of personal property

CLINICAL (Events related to the delivery of health care)

Initial clinical experiences
Client care
Interpersonal relationships with clinical staff
Interpersonal relationship with clinical instructor
Formal or informal clinical evaluation
Quality of client care

Adapted from Fox, Diamond, Walsh, Knopf, and Hodgen (1963).

APPENDIX G

STRESS MANAGEMENT PROGRAM

OBJECTIVES AND LEARNING ACTIVITIES

STRESS MANAGEMENT PROGRAM OBJECTIVES

1. Conceptualize stress in terms of the Schachter and Singer (1962) arousal-attribution model.
2. Identify personal stressors experienced during the school term.
3. Recognize and reduce physiological arousal through relaxation techniques.
4. Modify anxiety and depression engendering thoughts or self-statements.
5. Apply techniques of stress reduction to real life situations.

LEARNING ACTIVITIES

The stress management program teaches you cognitive and physical relaxation skills which can be used to reduce stress. In order to avoid contamination of the research results, please do not discuss or demonstrate stress reduction skills to be learned in the stress management program until the research study has been completed.

The first phase of the stress management program was educational. Stress was conceptualized in terms of the Schachter and Singer (1962) arousal-attribution model. Stress involves two major elements: (1) heightened biological arousal such as shallow breathing, increased sweat gland activity, muscular tension, and peripheral vasoconstriction; and (2) your set of anxiety and depression engendering thoughts or self-statements. The stress management program is directed toward helping you control your anxiety and/or depression by learning how to physically relax and modify self-statements along productive lines.

In the second phase of the stress management program, you will develop and practice physical relaxation and positive self-statements. The self-statements consist of a series of internal dialogues that help you: (1) prepare for a stressor (e.g., "Here it comes. Now, what can I expect and what is it I have to do?"), (2) handle a stressor (e.g.,

"Stay calm. One step at a time."), (3) cope with possible feelings of being overwhelmed (e.g., "When I become afraid, just pause, rate it from 0 to 10. It won't be the worst thing to happen, but probably will be manageable although uncomfortable"), and (4) reinforce yourself for coping (e.g., "There. You did it. Good job."). The physical relaxation will consist of breathing techniques, progressive muscle relaxation, imagery, and autogenic training. Temperature and galvanic skin resistance biofeedback will be used to help monitor your progress in achieving relaxation. In order to develop the ability to use cognitive restructuring, the modification of maladaptive self-statements, and relaxation skills, you will need to practice these skills on a daily basis.

In the final phase of the stress management program, you will visualize stressors and utilize cognitive restructuring and relaxation skills to cope with and reduce anxiety and/or depression. Through imagery you will appraise, label, and attribute the arousal to a stressor; and control your thoughts and use relaxation skills to cope with your anxiety and depression. You can utilize what you will learn in the stress management program to reduce personal stress experienced in everyday life situations.

APPROVAL SHEET

The dissertation submitted by Noreen Johansson has been read and approved by the following Committee:

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The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Education.

April 18, 1983
Date

Anne M. Juhasz
Director's Signature